2021 Stock Market Outlook

Introduction

Thank you for purchasing the 2021 Market Outlook.

I hope this 2021 outlook can serve as a resourceful guide all year to target best in class names in these industries when trends are favorable. I do not expect you to blindly follow the ideas presented in this report as every investor has his/her own style of investing, different risk parameters and timeframes, as well as each individual's personal outlooks that may differ with my views. The goal here is to open your eyes to names I favor in 2021 for various reasons, a guide to some key trends and themes in investing, and likely introduce you to some exciting stocks that were not on your watchlist as I have always thrived in discovering under-followed stocks that become superstar performers.

The best piece of simple advice is to buy stocks in quality companies growing both the top and bottom line in attractive industries with positive tailwinds for growth. Quality meaning companies that have consistently exceeded earnings expectations in previous quarters, strong management, positive margins and efficiency ratios (ROE, ROA, ROIC), and healthy balance sheets. Attractive industry meaning an industry showing growth that has meaningful available market remaining, being involved in the secular shifts seen in economies. The 2021 themes section of this report will be helpful for finding those industries. It is important to learn sector specific ratios which I try and present in more detail in the Sector Breakdowns section.

I did a post a few years ago this on the 7 classes of great investments to pay attention to and that includes pure revenue growth stories in growing markets, sustainable MOAT, market share takers and disruptors in large TAMs, product mix shift and margin expansion stories, accelerating growth causing multiple re-ratings, new product and replacement/upgrade cycles, and consolidator stories with synergies and growth.

I do not expect you to enter all of these names on day one of 2021 and sit and wait, instead, be active and strategic in entries/exits whether taking a fundamental or technical approach, or even better, a combination. Paying attention to options flow has single-handedly been the greatest tool allowing me to succeed in markets, and something we provide insight on every day at OptionsHawk. One fairly simple rule I like to use is to avoid longs in names where the 8 week EMA has crossed below the 21 week EMA, and vice versa for shorts, it will keep you on the right side of the trade more often than not. Each name mentioned in this report should also be researched further as these are brief views as I am a firm believer that less is more, and you should be able to lay out an investment thesis concisely, but more in depth due diligence always adds value and confidence to the view.

At OptionsHawk we perform fundamental, technical, ownership trends, and options activity analysis while also discovering the likely catalyst for a move, and when all of these individual analyses give the same signal, it is a worthy trade/investment. If you are interested in receiving daily research and live market coverage from OptionsHawk, please visit the website at OptionsHawk.com. For those interested in having accounts managed I recently started a new venture at Relativity Capital where I will be providing my services for stock selection, portfolio management, and risk management. For further details please visit RelativityCap.com.

Thank you again and I hope you enjoy this year's report, it is the most extensive to date. Best of luck to everyone in 2021!

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OPTIONSHAWK'S TOP STOCKS FOR 2021

Below you will find the various portfolios for 2021 after screening each industry group across various metrics looking for companies in growing industries with a history of strong execution (management), reasonable valuation for the growth prospects and overall healthy financial metrics. The portfolios have been trimmed down to find the cream of the crop.

Top 25 Long Investment Ideas for 2021 in Large/Mid Cap Stocks

Overview: Snapshot of Top 25 with Entry Levels for 1/2 and Full Positions as Well as a Target, and Stop. These are optimal levels for those who are price sensitive, but the charts are always changing.

2021 Desired Weightings: *Energy/Metals/Chemicals 15%, Tech 20%, Financials 10%, Utility/Telecom 5%, Consumer Staples 5%, Consumer Discretionary 15%, Industrials 15%, Healthcare 15%*

Portfolio

Ticker	Company	MARKET CAP	EV TO EBITDA	EBITDA MARGINS	ROCE	EV/FCF	FCF YIELD	DEBT TO EBITDA	ENTRY 1/2	ENTRY 2/2	TARGET	STOP
NEE	NextEra Energy	145,971	18.4x	48.48%	5.15%	(40.7x)	(3.32%)	4.3x	$73.00	$69.00	$100.00	$59.00
JD	JD.com, Inc.	127,295	35.4x	2.39%	7.40%	26.1x	3.48%	0.9x	$80.00	$73.00	$140.00	$60.00
AMD	Advanced Micro	115,364	61.0x	15.78%	23.73%	150.5x	0.66%	0.8x	$90.00	$82.00	$150.00	$70.00
NOW	ServiceNow, Inc.	110,315	75.5x	28.66%	268.61%	78.7x	1.26%	0.7x	$540.00	$500.00	$1,000.00	$430.00
BLK	BlackRock, Inc.	106,564	16.9x	40.97%	2.65%	22.4x	4.45%	0.8x	$660.00	$630.00	$985.00	$525.00
SQ	Square Inc	106,173	256.5x	15.02%	13.82%	1,240.6x	0.08%	2.2x	$225.00	$200.00	$375.00	$165.00
SE	Sea Ltd	102,017	(7,606.9x)	(8.21%)	-16.48%	106.7x	0.92%	(6.9x)	$190.00	$170.00	$375.00	$150.00
ABNB	Airbnb, Inc.	93,770	(393.0x)	(4.99%)	-22.02%			0.0x	$150.00	$125.00	$300.00	$100.00
UBER	Uber Technologies, Inc	89,282	(34.9x)	(19.26%)	-37.70%	(20.8x)	(4.90%)	(2.5x)	$48.00	$40.00	$75.00	$32.00
MELI	MercadoLibre	85,799	279.5x	(3.48%)	-11.97%	96.1x	1.02%	(9.7x)	$1,600.00	$1,400.00	$2,250.00	$1,175.00
SNAP	Snap Inc	78,954	6,466.8x	(11.79%)	-8.63%	(308.6x)	(0.32%)	(2.2x)	$48.00	$42.00	$100.00	$35.00
ZTS	Zoetis Inc	77,768	29.1x	41.65%	20.13%			2.5x	$160.00	$150.00	$250.00	$130.00
SHW	Sherwin Williams	66,123	21.4x	17.08%	14.07%	33.4x	3.34%	2.9x	$685.00	$650.00	$950.00	$550.00
ICE	Intercontinental Exchange, Inc.	63,330	16.7x	64.71%	9.09%	26.8x	3.73%	2.3x	$105.00	$98.00	$155.00	$85.00
SPOT	Spotify Technology SA	62,964	(270.2x)	0.21%	-4.25%	376.1x	0.26%	22.5x	$325.00	$300.00	$450.00	$250.00
LULU	lululemon athletica inc.	51,246	49.9x	26.41%	30.13%	152.2x	0.65%	0.0x	$355.00	$325.00	$550.00	$270.00
MNST	Monster Beverage Corp	47,581	27.5x	34.94%	26.30%			0.0x	$87.00	$84.00	$125.00	$75.00
TTD	Trade Desk, Inc.	44,686	177.3x	32.36%	29.92%	747.3x	0.13%	0.0x	$900.00	$825.00	$1,500.00	$650.00
U	Unity Software Inc.	42,720	(955.9x)	(13.55%)	-32.46%	(468.0x)	(0.20%)	0.0x	$150.00	$120.00	$325.00	$90.00
ALGN	Align Tech	41,784	81.4x	25.81%	30.05%	93.9x	1.05%	0.0x	$500.00	$470.00	$800.00	$375.00
MTCH	Match Group, Inc.	40,901	49.3x	38.00%	13.79%	66.2x	1.63%	2.8x	$145.00	$130.00	$250.00	$118.00
SNPS	Synopsys, Inc.	39,023	28.2x	31.21%	20.35%	36.5x	2.66%	0.1x	$245.00	$225.00	$400.00	$190.00
MSCI	MSCI Inc.	36,727	37.9x	54.60%	25.60%	48.6x	2.06%	3.3x	$400.00	$370.00	$575.00	$325.00
FCX	Freeport-McMoRan Inc	35,784	14.0x	16.20%	-1.61%	61.2x	2.36%	4.5x	$23.00	$20.00	$35.00	$16.50
CSGP	CoStar Group Inc	35,662	61.9x	36.20%	11.13%	72.7x	1.26%	0.0x	$845.00	$815.00	$1,250.00	$680.00
DHI	D. R. Horton Inc	26,684	7.2x	14.92%	13.64%			1.3x	$73.00	$65.00	$120.00	$57.50
ZS	Zscaler Inc	26,286	308.7x	11.05%	3.49%	326.9x	0.30%	9.0x	$175.00	$160.00	$335.00	$120.00
NET	Cloudflare, Inc.	25,732	1,242.7x	(14.58%)	-14.63%	(313.8x)	(0.31%)	(0.3x)	$80.00	$70.00	$150.00	$57.50
URI	United Rentals, Inc.	16,414	6.8x	46.57%	11.59%	11.6x	13.85%	2.7x	$225.00	$185.00	$300.00	$165.00
SEDG	Solaredge Technologies Inc	16,106	60.6x	20.52%	24.79%	144.1x	0.67%	0.1x	$270.00	$230.00	$375.00	$180.00
WIX	Wix.com Ltd.	15,215	(741.9x)	16.42%	7.37%	138.1x	0.69%	2.8x	$270.00	$250.00	$500.00	$200.00
PENN	Penn National Gaming, Inc	14,281	17.2x	30.28%	3.17%	40.9x	3.29%	5.1x	$85.00	$77.00	$150.00	$52.00
GNRC	Generac	13,623	25.0x	20.38%	15.78%	40.8x	2.53%	2.0x	$210.00	$190.00	$300.00	$160.00
RH	RH	9,350	14.6x	18.71%	21.45%	40.7x	2.74%	2.8x	$440.00	$395.00	$750.00	$320.00
ACAD	Acadia Pharma	8,784	(27.8x)	(71.90%)	-41.63%	(45.3x)	(2.04%)	0.0x	$52.00	$45.00	$85.00	$38.00

Below I provide a brief synopsis of each stock in more of an elevator pitch format. This is a diversified portfolio across sectors though a common theme is companies having strong moats and technological advantages. Many of these stocks have gained sharply in 2020 with overall market strength but one of the worst mistakes an investor can make is avoiding a stock on valuation or because "it has moved up too much", the top operators tend to remain the top operators, and in turn provide the best returns while many of these names also will outperform and out-execute in a weaker Macro environment due to much stronger underlying secular growth themes. I am not going to discuss valuation or other metrics that can easily be found but focus more on the story and why these companies will outperform. I highly recommend reading conference calls for the companies to get a deeper understanding of business trends and future opportunities. Key management commentary highlights from many of these names will be provided in the Industry Breakdown section of the report.

NextEra Energy (NEE) is the best Utility company in the US that has benefitted from being an early mover to renewables as well as its positioning in Florida where population continues to rise, and the rate environment is favorable. NEE is positioned well for the new administration's focus on renewable energy and also for flows into ESG investing as a Utility that scores high and likely to be favored by allocators. NEE has been in pursuit of a large M&A deal with Evergy and Duke Energy which could add some execution risk but also allows it to expand its footprint and I trust in this management team to deliver synergies. In a sector lacking growth, NEE stands out and has a major head start on peers in renewables which will driver much of the future growth opportunities in the Utility industry.

JD.com (JD) is the preferred way to participate in the strong growth for ecommerce in China, a name that sees a lot of bullish longer-dated options activity consistently. JD continues to win market share and penetration remains low with a long runway for further growth. JD has been active reshuffling its structure via separations of JD Health and JD Logistics and now the focus will be on the strong Retail business. JD fits the topline growth category but also sets up for margin expansion in 2021. JD has several growth initiatives and I see it continuing to provide investors with strong returns as it exceeds estimates.

Advanced Micro (AMD) has been one of the great comeback stories and its momentum continues into 2021. AMD has been taking share from Intel in the Server market and although some risk in that vertical from large cap tech taking chipmaking in-house, AMD is positioned strongly at the intersection of key growth markets such as AI, Gaming, Crypto, and Data Center. AMD is launching several key products with strong momentum into 2021 and also did a key deal in 2020 for Xilinx which will pay-off over the long-run, a former favorite that was seeing strong growth from new products. AMD is also benefitting from work-from-home demand in the resurgent PC space. I expect AMD to continue to close the valuation gap with NVIDIA (NVDA) in 2021.

ServiceNow (NOW) has always been a favorite Software name and continues to be one of the most consistent performers in the space with top-notch management and reminds me of what Salesforce (CRM) was seven years ago. NOW operates as a leader in ITSM, ITOM and custom application markets that is a $60B opportunity and has a large installed base with penetration still in the early innings. NOW is a clear winner from the digital transformation trend with Workflow Automation a priority for firms and has a sustainable strong growth outlook as well as long-term upside to margins.

Blackrock (BLK) has made this list multiple years as it remains the clear winner in Asset Management from the top secular themes like ESG investing and Passive investing. BLK is also expanding its offerings into areas like active equity ETFs and making some strategic acquisitions to further expand its impenetrable moat. BLK also gained approval this year to launch a mutual fund business in China. BLK is the perfect combination of seeing massive asset inflows and utilizing Technology to set itself apart and win market share in the competitive space of asset gathering. BLK share performance is often correlated closely to equity markets but offers a combination of growth at attractive valuation that is tough to find as it is a hybrid FinTech play.

Square (SQ) has become a major player in digital payments and continues to expand its offerings entering large and growing markets. Cash App has been a major success as it takes on PayPal's Venmo and continues to add users at a rapid pace while offering the ability to participate in Bitcoin. SQ will be able to monetize its growing user based while the Merchant business will face easy comps in 2021 and the company has global growth as a priority that will continue to fuel its expansion. The addition of Credit Karma Tax was a smart move and tax refund season should drive strong trends. SQ is a valuation agnostic name as it is only in the early stages of its potential and management has shown an ability to capture key trends with new feature launches.

Sea Ltd. (SE) is one of the top growth stories in the market with ecommerce, online gaming and fintech all positive thematic drivers. SE is positioned in thriving growth markets across Asia where Shopee is a market leader and Free Fire a top game and its digital payments platform recently secure a digital banking license from Singapore. SE will face very tough comps in 2021 for topline growth but a source of upside is the potential to close the gap to peers with better take rates and margins. Although SE benefitted from the stay at home economy the push to digital across its major verticals is a much larger trend that still has a long runway for further penetration.

Airbnb (ABNB) was one of the most widely anticipated IPOs of 2020 as a category leader and a large and growing short-term rental market. Alternative accommodations and private rentals are still just a tiny fraction of a massive lodging industry and with my view that leisure travel rebounds more strongly than business travel, it puts ABNB in prime position to capture more market share. ABNB has not even tapped into a massive potential market of Experiences and it is also quietly expanding into Hotels with its deal for HotelTonight. ABNB will be a top growth name for many years to come and deserves to be valued at a premium along with other disruptive category leaders.

Uber (UBER) navigated an impossible environment so well in 2020 and moves into 2021 with a perfect set-up of its core ride-hailing business while capturing multiple growth vectors of a larger mobility trend. UBER also became more focused in 2020 selling off some units and acquired Postmates. UBER has massive scale with large opportunities globally in delivery that is a trend that will stick around long after COVID. UBER should be able to hit profitability in 2021 ahead of schedule and with the majority of the population expected to be vaccinated in 2021 the mobility business will recover strong. UBER is the best way to play ride-sharing & delivery and valuation much more attractive than recent IPO Doordash.

MercadoLibre (MELI) has been a top pick for many years as the Latin America ecommerce opportunity is massive and I have always seen it as a small version of Amazon. MELI has also become a major player in Fintech through its payments platform, while take rates continue to improve on the ecommerce side. MELI is positioned favorably for several emerging trends shifting consumer behavior and is a dominant player in its markets. MELI remains the best way to gain exposure to strong growth in Latin America.

Snap (SNAP) emerged in 2020 as a true winner in the shift to digital advertising with very favorable demographics causing a shift in ad budgets to its platform. SNAP is in the early stages of monetization and has a long way to expand ARPU and turn into a true category leader. A recovery in advertising demand in 2021 should fuel another strong year and SNAP continues to be on the leading edge of technology with all of its AR features and owns strong engagement in the key Millennial and Generation Z groups which is where the spending power is shifting so advertisers want to target those groups for the best ROI. SNAP will become a profitability and FCF inflection story over the next few years and has the potential to be a leader for many years.

Zoetis (ZTS) is the best way to keep exposure to the Animal Health industry which continues to thrive in all kinds of macroeconomies. The livestock business should see a strong turnaround in 2021 and face easy comps while companion sets up for further growth as it builds out its point-of-care and diagnostics businesses and benefits from the growing pet ownership rates. ZTS offers best-in-class execution in a strong growth category and Simparica Trio along with other key portfolio launches should continue to deliver solid numbers.

Sherwin Williams (SHW) is a best-in-class operator that has posted strong numbers in 2020 yet shares are only +25% YTD. SHW saw impressive growth trends in the Consumer business with its exposure to renovation and remodeling which are likely to face tough comps in 2021 but a positive housing backdrop should offset some of the challenges. SHW's Industrial businesses should see a strong improvement in 2021 and it has shown the ability to pass through commodity price increases. SHW is an excellent capital allocator and expect it to sustain strong earning growth and outperform the market.

Intercontinental Exchange (ICE) is a $63.5B exchange operator that has been a steady performer and announced a key $11B deal for Ellie Mae in 2020 that expands its reach into Mortgage Tech. ICE's top revenue exposure is the Energy market so a volatile energy market in 2021 would be a positive while Fixed Income and Credit its other largest contributor. Like other exchanges ICE is making moves into the Data & Analytics segment of Fintech which is contributing solid growth along with a strong IPO market boosting the Listings segment. ICE sees a huge addressable market opportunity in the analog to digital conversion as the way fixed income is trading is changing. ICE is a combination of multiple strong businesses and faces very little competitive risk.

Spotify (SPOT) is the global leader in streaming music and has quickly become a force in the fast-growing Podcast market. SPOT has been signing key exclusive deals like Joe Rogan and positioning itself as one of the stickiest subscriptions in technology while also having very favorable demographic trends and room for significant expansion Internationally, particularly in Asia. It is estimated that paid streaming is still just 10% penetrated globally and SPOT is also working on further monetization such as Two-Sided Marketplace. SPOT is in the early innings of becoming a dominant global media name and has room for margin expansion and ARPU growth in 2021. SPOT will unlock a lot of online advertising potential as podcasting continues to gain popularity.

Lululemon (LULU) despite its strong multi-year trend remains at just a market cap of $48B and has laid out how early it is for its share of the massive apparel addressable market and in 2020 it continued to win market share while also moving into the Fitness at Home market via its acquisition of Mirror. LULU is targeting a major International expansion as it aims to triple revenues outside the US. LULU has a strong online business and a near unmatched comp growth story in the consumer discretionary sector. The athletic apparel market shows signs of being in the early stages of a long mega-trend of gaining share from traditional apparel. Product innovation and category expansion are also seen to be future growth drivers and LULU is set up to be a long-term winner.

Monster Beverage (MNST) is a frequent flier on the annual top picks list as one of the few excellent growth stories in the consumer staples sector. It starts with realizing the trends in consumer habits and Energy drinks remains one of the fastest growing categories. The set-up for MNST into 2021 seems favorable with convenience stores a key channel for its sales (68%) and miles driven is expected to recover as things return to normal. MNST rolled out new products in 2020 that were disrupted by COVID but should see traction into 2021 while its scale is expanding due to the relationship with Coca Cola. MNST is seen as potentially entering the hard seltzer category in 2021 and could be a nice added sales driver. MNST also has scarcity value as the only pure-play on the growing Energy market and overall rising demand for caffeine consumption.

Trade Desk (TTD) is simply one of the greatest growth companies on the planet as it disrupts the massive adverting market. TTD has laid out its vision for years and executed every step of the way while still being in the very early innings of a major transformation of the industry. It's data-driven advertising solution provides a high ROI service in a $725B global ad spend market and seeing record spending trends from connected TV. TTD has been on a meteoric rise but still sports just a $45B market cap and is a top way to capitalize on the ongoing shift to streaming. The CTV revolution is in the early innings and TTD is set up to become one of the great Tech companies.

Unity Software (U) came public in 2020 and immediately became a must-own name, a "pick & shovel" way to all the strong trends in gaming and 2021 likely a big year as all the new consoles launch and new games are created. U is the leading platform for creating and operating interactive, real-time 3D content and over 50% of games on PC, Mobile and Consoles are made with Unity. It sees the current addressable market at $29B but room to expand into other industries and use cases to address a much larger market potential. U is generating rapid revenue growth while having a strong moat due to its technology and data advantage while the CEO is the former CEO of Electronic Arts. U is set to embark on a decade or more journey of strong growth on the shift to 3D digital experiences.

Align Tech (ALGN) screened well in the med-tech group and the growth story reinvigorated in 2020 and its November Investor Day showed the opportunity for further growth. ALGN sees an enormous market potential utilizing AI/Machine Learning to become a digital orthodontic leader with current market share only around 10%. ALGN also has a large opportunity to expand to International markets. It wants to unlock a 500M population of candidates for its technology and utilization rates have been strongly improving in North America the last four years. ALGN's deal for Exocad was a sharp move with a 30%+ global market share in dental software. ALGN is a leader in a rapidly expanding market seeing accelerated adoption and maintains a strong competitive advantage to allow it to generate strong returns for many years.

Match Group (MTCH) is a consistent grower as a dominant platform for online dating which continues to gain market share from traditional dating and once again captures the theme of the younger demographics disrupting all sorts of markets. MTCH was able to maintain strong user activity and engagement despite challenges in 2020 and a return to normal in 2021 should accelerate its platform growth from pent-up demand from daters. MTCH is seeing stronger uptake from its newer brands that target younger daters as well as its international brands. MTCH's new features such as streaming video and communications are also likely upside drivers to engagement. MTCH is a proven winner and will continue to lead in this very resilient category.

Synopsys (SNPS) is one of the great companies that most investors still do not understand. SNPS makes the software that semiconductor companies need to make the chips and thus operates at high margins while taking on no real risk of competition across the semiconductor industry. With news this year of Google, Apple, Amazon and others making their own chips, they will rely on software from SNPS to design these chips, so it is insulated from that risk that the semiconductor companies have. Design activity remains robust and SNPS is a key beneficiary of the higher chip complexity trend while thematic growth trends such as AI, 5G, high performance computing, and cloud are driving strong demand for its services. The EDA industry should continue to flourish and SNPS is a best-in-class operator.

MSCI (MSCI) is a favorite Fintech name that is seeing similar growth drivers as Blackrock (BLK) such as ESG/Climate index products and custom index products. MSCI delivers impressive results every quarter as it executes on its strategic initiatives in an expansive investment industry. It operates a business model with 75% recurring revenues and has generated 24% CAGR for FCF since 2015. It provides vital portfolio construction, performance and risk management tools to asset managers and sees a $20B TAM in analytics due to investment innovation, regulation, and technology adoption. ESG has been a major growth driver and continues to see strong trends while MSCI also has a portfolio of real estate investment tools. In an age of data being the new currency MSCI is positioned to grow at a high rate.

Freeport McMorran (FCX) is the favored metals name for 2021 due to the positive dynamics seen in the Copper market stemming from China demand with upside from electronics and EV growth. FCX's Grasberg mine is the largest gold mine in the world, and management noted recently it could fund the entire mine just with gold sales at recent gold prices, despite it also being one of the world's largest copper mines. FCX should see several positive developments in 2021 including reinstating its dividend and resuming buybacks while there also has been speculation it could be an acquisition target. FCX expects Copper volumes at +20% in 2021 and should see strong cash flows allow for further flexibility and return it to being a leading Metals performer.

CoStar Group (CSGP) is another name that has been a top pick previously and continues to be a fantastic company disrupting the massive commercial real estate market. CSGP has a dominant market position providing information services to commercial and multi-family real estate markets with a long runway for growth and margin expansion. CSGP continues to collect key assets as well with strategic tuck-in deals such as HomeSnap and RentPath. Its LoopNet product is disrupting the Office building industry and is a dominant player in this growing online real estate market. CSGP is also seeing strong growth via Apartments.com. It has a very defensible moat after spending more than 30 years building out its highly complex database. CSGP is also showing signs of making a move into Residential markets which would unlock a massive new market after it bought the Houses.com domain that can be another major growth driver.

DR Horton (DHI) is the best-in-class homebuilder, a group I like having exposure to despite a strong run in 2020 the dynamics of the US housing market remain favorable with crimped supply and a wave of new demand from favorable demographic tailwinds as well as technology allowing people to move out of cities and work in better areas to live. I also expect a favorable low mortgage rate environment to continue. DHI has been heavily investing in single-family and multi-family rentals as well as its Forestar investment, a residential lot manufacturer. DHI is a strong play on the first-time entry-level home buyer that is a group with a lot of pent-up demand. Strong pricing across the industry will allow for margin expansion and DHI trades just 8.2X Earnings and 2.2X Book. DHI has the best operating model in the business and expect another couple years of a favorable housing environment to allow its stock to outperform.

Zscaler (ZS) screened best in a cyber-security group running hard into year-end after the latest round of hacking news. ZS has been delivering stellar numbers and captures the key trends for cloud-based security with zero trust and has expanded its sales force significantly in 2020. ZS will continue to steal market share from legacy network security providers and has the global scale to be a leader in security in the digital transformation age. ZS is in the early innings of its growth as it expects to further pursue opportunities in SD-WAN, Work from Anywhere, and IaaS & Public Cloud. Its deal pipeline is strengthening and is seeing customers do much larger deals. ZS has a comprehensive solution that is resonating well with customers and is the best pure-play on the rise in cloud applications/customers requiring a security solution.

Cloudflare (NET) has been a great performer in 2020 as a leader in edge computing. The Network-as-a-Service industry is an estimated $47B TAM while Enhanced Enterprise & Expansion a $66B TAM. It estimates its current TAM at $32B. NET has posted a 65% CAGR in large customer growth since 2018, and has competitive advantages to the On-Premise, Point Solutions, and Public Cloud providers. It sees incremental growth opportunities in Serverless, IoT, 5G and Remote Work. NET's long-term model sees 20%+ operating margins, currently at (10%). NET continues to launch innovative products and enter larger markets such as Workers, a serverless product that is competing with AWS Lambda. NET is positioned to post very strong growth the next few years with new services and increased enterprise adoption. NET is disrupting large and growing markets and seeing rapid customer growth while having a highly efficient business model with a low-cost structure. I expect NET to continue to be a winner in the evolving network infrastructure landscape.

United Rental (URI) is the value name to make the list as it continues to trade far too cheap at 6.5X EBITDA while being the industry leader in equipment rental despite just a 13% market share in the highly fragmented industry. URI has an even split between Industrial and Non-Residential Construction verticals and there has been an overall shift to rent versus buy for the several benefits such as expense/inventory control, no need for maintenance, conserving capital and save on storage. URI has also invested in digital technologies, Telematics, and sees growth opportunity across several specialty services. URI has some risk as non-residential has not seen a strong recovery but expect improving utilization and pricing in 2021 to boost shares and it remains a long-term winner in the larger rent vs. own shift. With industrial production set to rebound in 2021 and pricing markets improving it should be a strong performer in the economic recovery.

Solaredge Tech (SEDG) remains my preferred avenue into the growth of the Solar industry as a maker of optimized inverter systems. Solar is seen reaching 17% share of the energy market in 2030 from its current around 6%. SEDG offers a complete residential solution for PV, storage, smart energy, and EV charging. SEDG's new 2 GW factory will come online in early 2022 to increase capacity which can translate into $500M additional revenues in 2023. Solar installations continue to grow across the globe and a more favorable US administration should accelerate growth. SEDG will also see margin expansion as it benefits from a decreasing cost curve and sees higher average revenue per installation. Its opportunities in energy storage and EV are in the nascent stages and likely drive another wave of growth for this long-term winner as it has made a number of strategic intriguing acquisitions in uninterrupted power supply, e-mobility, and energy storage. SEDG is positioned as a market leader in an industry in the early innings of adoption.

Wix.com (WIX) is a strong growth story with its cloud-based platform enabling website creation and has a surprisingly low market cap of just $15B. WIX has been expanding from its core products and capitalizing on all the needs of small and medium businesses to have a website presence as well as all the required features such as payments. WIX has opportunities across ecommerce tools, payments, coding and more while also starting to expand Internationally. All of WIX's financial metrics are trending in the right direction and monetization efforts are improving. WIX is positioning itself to become a one-stop shop for building an internet business and has a long runway for further growth. WIX is building out a large ecosystem of subscribers that will allow it to cross-sell and up-sell to drive further upside.

Penn National Gaming (PENN) has established itself as a leader in gaming in 2020 following its brilliant deal with Barstool Sports and its marketing prowess. In gaming we want to be positioning in the areas of growth which are sports betting and iGaming, and PENN is a good play on both of these themes. PENN's rollout of betting apps in a few states has seen strong adoption and has further tailwinds ahead with more states legalizing sports betting. Meanwhile, in 2021 PENN should benefit from a return to normalization with vaccine rollouts for its core gaming markets and should emerge stronger after implementing new technology while it continues to digitize offerings allowing for new products. PENN sees a massive opportunity to win market share and convert the Barstool audience to sports betting and iCasino customers. PENN should continue to thrive the next few years as these growth themes expand across new state legalizations.

Generac (GNRC) is another long-time favorite that has thrived from the demand for home generators over the last few years due to increasing prevalence of weather disasters such as hurricanes and wildfires. GNRC still sees itself in the very early innings of the home standby market with every 1% of penetration equating to a $2.5B opportunity and sees current penetration just over 5% and sees key megatrends driving these rates higher over the next decade. GNRC is also a clean energy play with its Grid 2.0 presence and sees opportunity for an investment cycle in legacy infrastructure and Telecommunications, the latter with 5G driving requirements for increased network uptime. The energy storage & monitoring opportunity is massive and one where GNRC expects to be a leader. GNRC fits the mold of what we look for in top picks, winners in categories of large and growing markets driven by multi-year secular growth trends that remain in the early adoption phase.

RH (RH) performed very well in 2020 with shares +115% YTD and I stated to start the year it was one of the most mis-priced (too cheap) stocks in the entire market and that has now corrected, but the growth story and visionary management make it a longer term investment idea. As a leader in home furnishings it stands to benefit from the improving housing backdrop while its higher-end focus also captures the more resilient spending from the top income earners. RH is also a beneficiary of the urban to suburban shift and the shift from spending on experiences to things as people spend more time at home, although that shift could slow in 2021. RH expects an extended period on spending to continue for a few years and has opportunities for expansion. RH is a luxury brand and is seeing significant margin expansion along with strong topline growth.

Acadia Pharma (ACAD) is the smallest name to make the list and wanted to have a Biotech name with upside potential and this is one I also believe to be a likely M&A target in the neurological space. ACAD fits the mold of my favorite Biotech investments, a fresh commercial launch story with Nuplazid while having plenty of upside pipeline catalysts. ACAD has a PDUFA for dementia-related psychosis in April which is a $3B opportunity in an $8B market cap name that already is approved in Parkinson's. I see ACAD's Nuplazid being a big success story as it expands into much larger opportunities and think it is undervalued and a prime acquisition target if it receives approval in April.

Top 25 Short Investment Ideas for 2021

With Each Short I Provide a "Better Option" of a Similar Market Cap Stock in a Related Industry for those Interested in a Pairs Trades. These are all names that screened poorly versus peers on various financial metrics and mostly in industries with multiple headwinds leading to weaker growth in 2021 and facing competitive threats. These are not the sexy high valuation shorts and focus more on secular losers

Ticker	Company	MARKET CAP	EV TO EBITDA	EBITDA MARGINS	ROCE	EV/FCF	FCF YIELD	DEBT TO EBITDA	ENTRY 1/2	ENTRY 2/2	TARGET	STOP	BETTER OPTION
PM	Philip Morris International Inc.	134,069	12.8x	42.69%	38.71%	19.2x	6.23%	2.5x	$87.00	$90.00	$65.00	$106.00	TPB
IBM	IBM	112,140	10.9x	23.65%	10.89%	14.2x	10.21%	3.0x	$127.00	$135.00	$90.00	$148.00	ACN
BDX	Becton Dickinson and Co	73,321	15.4x	35.87%	7.50%			3.0x	$255.00	$265.00	$175.00	$285.00	WST
KMB	Kimberly Clark Corp	45,946	11.9x	22.75%	31.42%	20.7x	5.59%	1.8x	$140.00	$145.00	$110.00	$155.00	EL
GD	General Dynamics Corporation	43,812	11.1x	13.92%	12.29%	21.4x	5.95%	2.3x	$155.00	$165.00	$115.00	$180.00	LHX
AEP	American Electric	41,344	12.4x	34.96%	4.68%			5.1x	$83.00	$89.00	$65.00	$95.00	XEL
RSG	Republic Services	30,846	13.2x	28.25%	7.75%	33.4x	3.81%	2.9x	$98.00	$102.00	$75.00	$115.00	CWST
PRU	Prudential Financial Inc	30,298		10.61%	0.61%			3.1x	$80.00	$86.00	$60.00	$97.00	MET
DLTR	Dollar Tree, Inc.	26,313	11.2x	9.51%	8.78%	29.4x	3.71%	1.8x	$112.00	$120.00	$85.00	$130.00	FIVE
HRL	Hormel Foods Corp	25,884	18.1x	13.59%	11.64%			0.6x	$48.00	$51.00	$40.00	$55.00	NOMD
SNN	Smith & Nephew	18,276	19.4x	29.62%	13.18%			1.2x	$41.00	$46.00	$34.00	$51.00	EW
AKAM	Akamai	17,432	12.1x	41.86%	14.37%	31.2x	3.08%	1.4x	$110.00	$120.00	$80.00	$130.00	NET
CHKP	Check Point	17,139	14.7x	51.11%	19.41%	12.3x	6.31%	0.0x	$125.00	$132.00	$100.00	$145.00	PANW
ESS	Essex Property Trust Inc	15,282	20.6x	66.08%	3.84%			5.9x	$235.00	$265.00	$165.00	$300.00	SUI
PKG	Packaging Corp Of America	12,789	11.6x	20.75%	12.97%			1.7x	$135.00	$150.00	$100.00	$165.00	BLL
NLOK	NortonLifeLock Inc.	12,571	11.6x	45.02%	7.10%	25.3x	4.76%	3.9x	$22.00	$25.00	$15.00	$28.00	QLYS
OTEX	Open Text Corp (USA)	12,309	11.8x	36.92%	9.43%	16.3x	7.32%	3.0x	$45.00	$50.00	$35.00	$58.00	BILL
UHS	Universal Health	11,667	8.0x	15.84%	10.23%	7.3x	16.64%	2.2x	$138.00	$148.00	$105.00	$165.00	HCA
UDR	UDR, Inc.	10,899	21.3x	68.21%	2.50%			5.3x	$37.00	$41.00	$25.00	$44.00	CPT
WLK	Westlake Chemical	10,430	11.2x	17.32%	5.01%	23.5x	5.47%	2.2x	$82.00	$90.00	$60.00	$105.00	PPG
TAP	Molson Coors Beverage Co	10,029	8.1x	22.35%	3.02%	15.7x	11.36%	4.1x	$46.00	$52.00	$30.00	$58.00	SAM
DOX	Amdocs	9,078	9.4x	20.04%	13.25%	18.7x	5.23%	0.4x	$69.00	$74.00	$50.00	$80.00	BKI
ALV	Autoliv	8,025	12.3x	13.16%	13.45%	44.3x	2.70%	1.9x	$92.00	$103.00	$70.00	$112.00	GNTX
JLL	Jones Land LaSalle	7,610	13.4x	11.13%	10.51%			1.3x	$150.00	$160.00	$105.00	$177.00	CSGP
RL	Ralph Lauren	7,399	16.3x	14.63%	10.10%	31.6x	2.90%	1.3x	$102.00	$110.00	$70.00	$130.00	CPRI

I decided to add this at the last minute as some higher risk shorts, names where valuation is high along with expectations where I think the market is overly optimistic. I have always hesitated to short on valuation alone and more looking at names that may have risen with the tide but are not preferred quality owns and have company-specific risks

Ticker	Company	MARKET CAP	EV TO EBITDA	EBITDA MARGINS	ROCE	EV/FCF
MRNA	Moderna, Inc.	49,812	-93	-854.9%	-3421.48%	-169.741
PLTR	Palantir Technologies Inc.	46,216	324	-40.2%	-3602.77%	
FNV	Franco Nevada	24,582	30	79.8%	686.29%	39.003
ABMD	Abiomed	13,662	50	32.1%	1938.06%	
BYND	Beyond Meat	8,689	455	8.5%	-19.09%	-71.643
NYT	New York Times Co	8,247	31	13.7%	1017.18%	43.6963
VERX	Vertex, Inc.	5,327	65	23.2%	-8873.60%	173.102
ALRM	AlarmCom Hldg Inc	4,926	42	21.6%	2147.14%	
RPD	Rapid7, Inc.	4,798	270	3.8%	68.48%	-390.325
NEWR	NEW RELIC, INC.	4,301	61	16.5%	302.62%	150.862
OSTK	Overstock.com Inc	2,527	25	-6.3%	-5859.31%	9.9766
IRBT	I-Robot	2,463	10	13.2%	1175.94%	

Top 35 Small Cap ($2B to $6B) Longs for 2021

Ticker	Company	MARKET CAP	EV to Sales	EBITDA MARGINS	ROCE	EV/FCF	FCF YIELD	DEBT TO EBITDA	ENTRY 1/2	ENTRY 2/2	TARGET	STOP
SDGR	Schrodinger Inc	5,549	44.1x	(40.99%)	-37.54%			0.0x	$75.00	$66.00	$150.00	$50.00
VRNS	Varonis Systems	5,113	17.7x	(8.21%)	-18.87%	(292.1x)	(0.34%)	0.0x	$150.00	$135.00	$210.00	$110.00
MEDP	Medpace Holdings, Inc.	5,012	5.3x	17.37%	15.13%	30.5x	3.13%	0.3x	$135.00	$125.00	$220.00	$105.00
UPWK	Upwork Inc.	4,909	13.1x	2.47%	-6.69%			2.8x	$35.00	$29.00	$65.00	$25.00
DSGX	Descartes Systems Group Inc (USA)	4,880	13.9x	37.63%	5.60%	39.4x	2.49%	0.1x	$57.00	$55.00	$90.00	$45.00
SAIA	SAIA INC	4,807	2.7x	15.21%	11.27%	98.7x	1.03%	0.5x	$170.00	$155.00	$250.00	$130.00
GSHD	Goosehead Insurance, Inc.	4,728	41.7x	22.62%	26.10%			2.7x	$125.00	$110.00	$225.00	$90.00
HLI	Houlihan Lokey	4,722	4.3x	25.37%	13.92%			0.1x	$66.00	$63.00	$120.00	$55.00
ASGN	ASGN Inc	4,494	1.4x	11.44%	10.96%	16.3x	7.24%	2.4x	$80.00	$73.00	$145.00	$60.00
BE	Bloom Energy Corp	4,373	6.5x	12.39%	2.87%	(98.4x)	(1.20%)	11.5x	$23.00	$20.00	$60.00	$16.00
BAND	Bandwidth Inc	4,363	13.3x	(0.45%)	0.80%	(814.6x)	(0.12%)	0.0x	$170.00	$160.00	$300.00	$135.00
VVV	Valvoline	4,328	2.1x	21.67%	14.74%	27.0x	4.79%	3.3x	$23.00	$21.00	$30.00	$19.50
PRLB	Proto Labs Inc	4,279	9.5x	26.47%	12.38%	72.3x	1.32%	0.0x	$150.00	$135.00	$275.00	$115.00
DAVA	Endava plc	4,136	7.2x	23.97%	26.00%			0.3x	$70.00	$64.00	$120.00	$55.00
SSD	Simpson Manufacturing Co, Inc.	4,057	3.1x	18.82%	15.07%	21.2x	4.44%	0.0x	$92.00	$85.00	$165.00	$75.00
GTLS	Chart Industries, Inc.	4,038	3.9x	15.80%	6.17%	35.5x	3.23%	3.2x	$102.00	$90.00	$165.00	$70.00
APAM	Artisan Partners Asset Management Inc.	3,934	4.5x	36.55%	29.24%			0.7x	$47.00	$44.00	$80.00	$35.00
TRNO	Terreno Realty Corp	3,914	22.7x	60.14%	3.02%			4.6x	$57.00	$51.00	$80.00	$45.00
CRNC	Cerence Inc.	3,781	10.4x	34.85%	5.87%	78.9x	1.31%	1.2x	$95.00	$80.00	$150.00	$70.00
KRNT	Kornit Digital Ltd	3,768	18.3x	12.10%	6.26%			0.0x	$80.00	$73.00	$150.00	$63.00
SHAK	Shake Shack Inc.	3,743	6.9x	13.77%	3.47%	(376.6x)	(0.25%)	0.2x	$83.00	$77.00	$145.00	$63.00
SAFE	Safehold Inc.	3,718	33.0x	80.72%	3.72%			12.7x	$67.00	$58.00	$120.00	$52.00
CRSR	Corsair Gaming, Inc.	3,557	2.3x	6.02%	5.43%	40.7x	2.64%	7.0x	$35.00	$27.00	$80.00	$22.00
NARI	Inari Medical Inc	3,496	25.6x	4.02%	4.77%			7.1x	$70.00	$58.00	$155.00	$50.00
AIMC	Altra Industrial Motion Corp.	3,465	2.8x	20.66%	6.75%	23.7x	5.75%	4.3x	$50.00	$45.00	$85.00	$37.00
JMIA	Jumia Technologies AG	3,447	15.0x	(113.90%)	-190.09%	(13.1x)	(7.27%)	(0.0x)	$35.00	$27.00	$95.00	$18.00
FOCS	Focus Financial Partners Inc	3,301	2.5x	22.15%	27.20%			3.9x	$43.00	$40.00	$70.00	$33.00
IBP	Installed Building Products, Inc.	3,192	2.1x	13.02%	15.16%	30.6x	3.58%	2.6x	$102.00	$90.00	$170.00	$78.00
REGI	Renewable Energy Group Inc	2,973	1.3x	17.28%	39.84%			0.4x	$70.00	$55.00	$120.00	$48.50
PTVE	Pactiv Evergreen Inc.	2,967			#VALUE!				$16.00	$14.00	$30.00	$11.50
SPT	Sprout Social, Inc.	2,806	20.1x	(16.62%)	-23.45%	(149.3x)	(0.63%)	0.0x	$50.00	$42.00	$120.00	$30.00
SONO	Sonos Inc	2,747	1.6x	8.18%	-6.97%	15.0x	5.73%	0.3x	$22.00	$18.00	$35.00	$15.00
ACA	Arcosa, Inc.	2,605	1.4x	13.86%	6.01%	16.9x	6.06%	0.6x	$51.00	$47.00	$85.00	$43.00
STOK	Stoke Therapeutics, Inc.	2,172			-21.64%			0.0x	$52.00	$41.00	$120.00	$35.00
AVAV	AeroVironment Inc	2,076	4.3x	15.79%	9.06%	23.7x	3.51%	0.0x	$83.00	$78.00	$125.00	$65.00

Schrodinger (SDGR) is one of the most exciting stories in the market, as it transforms the discovery of therapeutics and materials. Its software platform enables discovery of high-quality, novel molecules for drug development and materials applications more rapidly, at lower cost, and with, a higher likelihood of success compared to traditional methods. Its software is used by biopharmaceutical and industrial companies, academic institutions, and government laboratories around the world. SDGR is providing a means for more effective and cheaper drug discovery in an era with a lot of new biopharmaceutical R&D. SDGR also has a drug discovery business it operates with several key partners and in November announced a major deal with Bristol

Myers with $55M upfront and potential to receive $2.7B in milestone payments. It has a great business model and in the early innings of a massive opportunity to transform the drug discovery industry.

Varonis (VRNS) was a misunderstood story early in 2020 as it transitions to a subscription model, but shares are closing the year very strong. VRNS will be able to accelerate revenues post-transition and is seeing an expanding TAM. It sees an opportunity to take a large share of security spend with a data-centric approach noting sensitive and regulated data is more exposed than ever before. VRNS should continue to win new customers with the latest hacking news with a focus by companies on compliance and governance. VRNS profitability is ramping with the model shift and it is seeing accelerated wallet share from CSO budgets. It is a strong thematic play on data growth and the hybrid cloud and is targeting a $20B opportunity across IT and Security.

Medpace (MEDP) remains a favorite play in one of my favorite industries, CRO, and a direct beneficiary of all the investments in biopharmaceutical research. MEDP has one of the strongest growth and margin profiles in the industry with smaller biopharma accounting for 60% of customers and sees its penetration well below 10%. It offers a full-service approach and Oncology accounts for 30% of revenues while having relatively low customer concentration. MEDP sees the small and mid-sized CRO market TAM at $16B and has maintained a strong book to bill ratio but has declined in recent quarters and want to see it turn back higher. Biotech funding remains very strong and MEDP is a good way to play the growth in small Biotech without the blow-up risk that Biotech stocks carry.

Upwork (UPWK) has been a strong 2H20 story as it catches up to the move by closest peer **Fiverr (FVRR)** as the strength of the gig economy theme is likely to benefit multiple players. UPWK has grown into the world's largest work marketplace by GSV and seeing record adoption in Q3 as more businesses look to remote work solutions. UPWK has seen strong growth in 2020 as their offering gives large companies more flexibility, accelerates time to market on projects, and allows them to invest in highly specialized labor. UPWK has shifted a lot of their sales force in recent months towards their Enterprise plan and catalysts into early 2020 as they launch new products like Virtual Talent Bench and Project Catalog, the latter a curated collection of projects which will officially move out of beta in February. UPWK continues to execute well on platform upgrades and expanding SEM on mobile and better international reach positions them for continued records on the client adds side in 2021. UPWK will be a key winner in the revolution of the global labor market as freelancing gains more share of the market. UPWK has a strong moat with its data algorithms and machine learning power offering a valuable service. It has opportunities to grow its client base significantly, grow spend from existing clients, expand into new categories, and focus on the large opportunity in Enterprise.

Descartes (DSGX) continues to screen attractive in the software space at 14.6X EV/Sales with its niche focus on the logistics area. Secular drivers such as increased automation, more complex global trade, ecommerce and last-mile logistics, mobility in real-time, content/data monetization and a highly fragmented industry are all contributing to the DSGX growth story. DSGX is a sneaky way to participate in ecommerce growth and also has a long M&A history with several tuck-in deals with the logistics software industry very fragmented. In 2020 we saw the value in logistics with all the disruptions and DSGX is solving many of these problems and has industry-leading customers across all transportation industries. DSGX generates robust FCF and is expanding margins via cost controls and operating efficiencies. Its deal for Shiptrack which provides ecommerce final mile solutions was a very smart one and DSGX has a tremendous opportunity in multiple large markets while remaining a relative unknown to average investors.

SAIA (SAIA) is a smaller cap trucker that screens well across all key metrics and although **Old Dominion (ODFL)** is far and away the best-in-class operator, SAIA is right there behind it. SAIA is a US-based LTL name benefitting from a strong pricing environment. It operates in a $40B annual revenue industry with Fed-Ex, YRC Worldwide, XPO, Old Dominion, and UPS the largest players. SAIA has seen a steady improvement in its operating ratio since 2016 and its investments in its network positions it for further volume growth and share gains. The trucking cycle has further to run and SAIA is likely to see further pricing momentum lead to margin expansion. Into 2021 it sets up well with an improving industrial economy, strong housing market, and inventory restocking for the LTL group.

Goosehead (GSHD) stands above the crowd in the low-growth insurance industry with a 5-year CAGR of 45% in new business and renewal premium growth. GSHD's disruptive model has positioned it for sizable growth in a large and fragmented industry. It has a robust technology platform and continues to innovate while delivering recurring revenues and margin expansion. Independent agents are capturing more market share for homeowner and auto insurance and GSHD has a vision to become the largest US personal line distributor and currently is just a tiny fraction of its larger competitors. It operates via a corporate channel where it employs much younger people and a Franchise channel for those with the entrepreneurial spirit and seeking autonomy. Its technology advantages have been a key factor leveraging big data and developing applications. GSHD is an attractive growth story that will continue to disrupt a large industry and win market share for many years to come.

Houlihan Lokey (HLI) is a global investment bank specializing in mergers and acquisitions that has generated impressive growth for many years and stands to benefit from a resurgence in M&A activity. Financial Restructuring is also a large part of its business with bankruptcy and insolvency. HLI ranks at the top of US M&A Advisors and Restructuring Advisors. HLI also continues to expand its reach through small M&A deals and has diversification across industries. HLI is looking to expand into Europe and Asia as another growth driver and is just a real solid operator at attractive valuation.

ASGN (ASGN) screened best among the staffing names for 2021 and I like its position as a leader in the IT staffing category where there are secular growth tailwinds. ASGN will benefit from the digital transformation via higher end, higher margin IT consulting services and solutions offered. It sees 28% of revenues from Federal/Civilian markets which are insulated from economic uncertainty and the Commercial business has solutions for large and growing addressable markets like cloud solutions, application development, cybersecurity, and workforce management. ASGN has a very stable business and is a nice way to gain exposure to the rising need for IT jobs with every industry undergoing a digital shift.

Bloom Energy (BE) has participated in the late 2020 surge in alternative energy focused stocks but seems to have the most staying power among the fuel cell names. BE focuses on solid oxide fuel cells which are unique in that the electrolyte used is a solid material and they're fuel-flexible. SOFCs also have advantages as they're modular, scalable, and efficient. Their Energy Server platform is a power generation system much like a generator. It's an uninterruptible, personal, flexible system for storing and using energy with lower costs, better reliability, and more predictable uptime. BE sees a big advantage as well in the density of their product versus peers like solar which can require much more space to operate. For example, a simple stack of fuel cells can put out 1MW of energy with a footprint that is 125X smaller than solar would require. BE sees big opportunity in moving critical organizations off of the traditional baseload power grid and into their own personalized energy servers, especially at a time. The market opportunity is massive as well in commercial and industrial markets. BE announced plans to enter the hydrogen market in July with their first commercial products being introduced in South Korea next year through an expanded partnership with SK Engineering and Construction. BE products have significant competitive advantages that should allow for it to sustain revenue growth and margin expansion for many years to come.

Bandwidth (BAND) has been a great find and continues to be a great way to play the strongly growing CPaaS market which is estimated to grow to $17B in 2023 from $5B currently. BAND is taking market share from incumbents with a shift to the cloud from on-premise with voice & messaging one of the key areas. BAND also did a key deal for Voxbone in October which accelerates its international expansion by several years creating a global communication software leader with opportunities for cross-selling to customers. BAND has been improving across all key metrics and is well positioned to win in the Enterprise market. BAND is making all the right moves and will see strong revenue growth and margin expansion for years to come as it is a clear leader in a large and growing CPaaS market.

Valvoline (VVV) is a boring name that sneaks into this list but screens cheap on valuation with a solid 2.15% dividend yield. It operates a high return and resilient business model and is shifting to a more services-oriented focus. VVV has nearly 1500 company owned and franchised stores, a top premium motor oil brand, and adjusted EBITDA margins above 20%. It screens cheap to other automotive aftermarket peers and has posted an impressive streak of same store sales growth (14 years) at Quick Lubes. VVV's strong cash generation allows for its growth initiatives to be self-funded. VVV is becoming a more global player and continues its transformation towards services with the growth of the Quick Lubes business. I expect as VVV's growth profile improves it will re-rate higher and close the valuation gap with peers.

Proto Labs (PRLB) is a favored name in the additive manufacturing space that is seeing a lot of attention into the end of 2020. PRLB is custom manufacturer of on-demand parts using injection molding, 3-D printing, direct metal laser sintering and other processes for engineering across a number of end-markets. PRLB has been a winner in the shorter product cycle theme while in 2020 saw a surge in demand across COVID related industries. PRLB is rapidly expanding and becoming a leader in a nascent digital manufacturing industry utilizing automation software. Its two largest markets are Medical & Computer Electronics. The benefits of its service offering is a pay-as-you-go model with virtual inventory, large capacity, and the ability to easily manage demand volatility. It estimates its current addressable market at $10-$15B. PRLB is expanding its customer base and launching new technology and recently released its new e-commerce digital manufacturing quoting experience to customers which revolutionizes the buying experience. PRLB has a strong balance sheet with solid cash flow generation and a name I expect to be a winner for many years to come in the digital manufacturing market.

Endava (DAVA) was a discovery from May 2019 that I wrote in detail unable to understand why it was so cheap to other digital transformation IT plays and has proven to be a great find. DAVA is a pure play next generation technology company targeting a massive $390B digital transformation spending market expected to grow at a 20% CAGR through 2021. It generates the majority of its revenues in Europe while also seeing Latin America exposure, but very little North America revenues. Payments and Financial Services is 53% of its verticals for revenues while Tech, Media and Telecom 27% and Other is 20% which includes Consumer Products, Healthcare, Retail and Logistics. DAVA is a combination of rapid revenue growth, improving profitability, strong client metrics, and low capex with strengthening free cash flows. DAVA is a unique play with its geographical exposure as well as its strong ties to the Fintech theme. It serves massive markets and has delivered impressive numbers, and no reason to believe that can not continue considering the secular shift in IT.

Simpson Manufacturing (SSD) has quietly been one of the great companies the last few years with industry-leading growth and margins. SSD designs, engineers and manufactures structural connectors, anchors, fasteners, software solutions and other products for new construction, repair and remodel, and do-it-yourself markets. Its focus is on wood construction products with applications in single-family, multi-family, decking, and outdoor accents. It also has a wide range of concrete construction products and would benefit from a US infrastructure plan. SSD estimates its products have an addressable market of around $3.5B with its share only at 22% and 14% for fasteners and concrete products while a dominant 52% share in wood. SSD also offers software solutions with over 40% of its core wood connector sales to customers with software needs. SSD is a high quality cyclical leader that sets up well for the 2021 theme of rebuilding America.

Chart Industries (GTLS) was a find in October as it stood out in a struggling Energy industry growing its sales impressively and is making strategic moves in the hydrogen opportunity after buying Worthington's (WOR) cryogenic & hydrogen trailer businesses and investing in McPhy, a European company specializing in zero-carbon hydrogen production & distribution equipment. The moves have doubled its TAM in hydrogen to $1.1B. GTLS is quietly positioning itself as a play on the clean energy transition with a focus on specialty products and services. In 2021 under the new administration stricter regulations should drive further opportunities for GTLS. Specialty markets like water treatment, over the road trucking and hydrogen are just a few areas driving growth and it has a very unique and broad portfolio, truly one of the most interesting stories in the Energy sector.

Artisan Partners (APAM) was a surprise find this year in an asset management industry that lacks a lot of compelling opportunities competing against the mega-cap leaders, although there has been talk of smaller names being acquired in an industry-push towards consolidation. APAM is not discussed too often but is delivering steady AUM growth, a key for the industry, with its third-generation strategies and sector-leading alpha across multiple products while also driving margin expansion and offering a large 5.6% dividend yield. APAM is coming off arguably its best quarter in history and is a unique gem in this industry group. They are launching innovative strategies and adding new investment talent while driving impressive inflows.

Terreno Realty (TRNO) is the REIT making the list this year falling into my preferred sub-segment, Industrial, and positioned six key coastal markets for logistics. It operates with superior rent growth and low vacancy with Warehouse/Distribution 82% of its business with the majority of its portfolio focused on shrinking and no new supply submarkets. TRNO has the highest population density per square mile compared to all other industrial REITS. TRNO is a favorite play on ecommerce among the REITS with large tenants like Fed-Ex and Amazon while Tesla has also been a key tenant and generates above-average FFO growth.

Cerence (CRNC) was a write-up for members in February that turned into a massive winner in 2020 yet still has plenty of opportunities ahead. CRNC is a provider of A.I. powered assistants and innovations for connected and autonomous vehicles, a spin-off from Nuance Tech, and its platform utilizes industry-leading speech recognition, natural language understanding, speech signal enhancement and acoustic modeling technology. Automotive virtual assistants built with its platform can enable a wide variety of modes of human-vehicle interaction, including speech, touch, handwriting, gaze tracking and gesture recognition, and can support the integration of third party virtual assistants into the in-vehicle experience. It sees key emerging trends like Vehicle Intelligence, Virtual Assistants, Distracted Driving, Share Mobility, Autonomous Driving and Electric Vehicles as propelling its market potential. Voice Assistance in vehicles is seeing growing adoption and 62% of new car buyers consider it a factor during purchase. CRNC is working to double its revenue per vehicle and expects to increase usage of a SaaS revenue model packaging new service offerings while also plans to pursue new after sale and adjacent market opportunities. CRNC is positioned well to be a winner in the automotive tech space with 85% of vehicles seen using in-car AI products by 2023, up from 59% in 2018 and cloud connected services seen reaching 50% of vehicles in 2023 from 12% in 2018. CRNC also is a high margin business with 52% of revenues from licenses. CRNC should continue to see increased penetration as well as larger content per vehicle driving a multi-year growth story.

Kornit Digital (KRNT) has been an awesome growth story and continues to execute well, a leader in digital printing solutions that is transforming a massive global textile industry. There is growing adoption of on-demand sustainable textile manufacturing and ecommerce is causing an accelerated shift to proximity manufacturing. Digital Printing is still just a tiny fraction of the large Decorated Apparel and Roll-to-Roll markets. KRNT's cutting edge technologies positioned it for accelerating mega trends such as ecommerce and changing consumer habits. The US apparel ecommerce market is seen reaching $130B by 2024 and DTC sales seen growing at a 33% CAGR through 2021 with forecasts that 66% of apparel will be purchased online by 2024. KRNT is similar to PRLB in that it benefits from companies wanting to lessen inventory and product on demand with short, faster supply chains. KRNT also has a strategic relationship with Amazon and plans to increase its presence in new product categories. KRNT is a fantastic growth story with so much of its future potential untapped at this stage.

Shake Shack (SHAK) is a preferred growth name in dining with it transforming to a more digital story and capturing the emerging trends of take-out and online ordering while also set to launch drive-through in 2021. SHAK has one of the best unit expansion stories in the industry with 3X the locations likely in coming years and can take advantage of the current real estate market. SHAK has an industry leading AUV, so best-in-class unit economics, and has plenty of upside to margins. Although the restaurant industry was disrupted sharply in 2020, SHAK is a preferred longer-term name to own in this industry.

Safehold (SAFE) has been a great discovery as an innovative REIT. It is focused on acquiring ground net leases and sees itself revolutionizing real estate ownership with a better way for owners to unlock value of the land beneath their buildings. SAFE is reinventing ground leases to fit modern capital markets with the first and only nationally-scaled platform, a market disruptor. It is providing a solution allowing for value-enhancing to building owners with improved capital efficiency, improved cost efficiency and significant risk reduction. Since its IPO in 2017 the size of its portfolio has growth with a 135% CAGR and market penetration has doubled. The unrealized capital appreciation growth of its portfolio has risen at a 175% CAGR. It is disrupting a $7 Trillion US institutional real estate market and started out as a radical idea that is now creating one of the fastest growing companies in public markets. Similar to great platform stories in Technology, SAFE is solving a major inefficiency in a massive commercial real estate market. SAFE looks like an amazing opportunity long-term that many investors will not take part in due to a lack of understanding of the inner workings of the business model, but management lays things out very well and it looks like an exciting opportunity. GNL's are attractive on a risk-adjusted basis, as the long-term cash flow from the land offers superior principal safety and the potential for capital appreciation. They have exposure all across the country with the highest concentration in NYC (45% of net leases) and DC (12%) and currently $2.8B in gross book value.

Corsair Gaming (CRSR) is a name that debuted in 2020 and has been posting very impressive numbers as it benefits from the strong growth in engagement across videogames. They are a market leader for competitive gamers with a big business in computer parts and supplies like cooling solutions, ATX power supplies, flash drives, and DRAM modules, often used in pre-built or custom-built PCs. CRSR sees themselves capitalizing on two big and growing areas. First is growth in competitive gaming which has become a highly specialized and high-performance area for hardware makers. Second is streaming which has continued to become more mainstream as shown by the near 2B monthly users watching videos on YouTube, Twitch, and other services. The gaming and streaming gear market is estimated at over $36B in 2019 according to Jon Peddie Research and CRSR is expanding into new products and content to continue to win market share. CRSR is positioned well for an emerging theme of competitive gaming and stronger adoption of serious gamers while the margin upside potential also attractive as the revenue mix shifts to higher margin peripherals. eSports and Gaming is now a $150B global industry and CRSR has a massive whitespace opportunity as casual gamers transition to more competitive gamers.

Inari Medical (NARI) is a new med-tech IPO from 2020 that looks to be a long-term winner. a recent IPO setting up nicely wedging back to the 13-week moving average and finding support. NARI is a commercial-stage medical device company focused on developing products to treat and transform the lives of patients suffering from venous diseases. Its current product consists of two minimally-invasive, novel catheter-based mechanical thrombectomy devices. Its ClotTriever product is FDA-cleared for the removal of clot from peripheral blood vessels and is used to treat patients suffering from deep vein thrombosis, or DVT. Its FlowTriever product is the first thrombectomy system FDA-cleared for the treatment of pulmonary embolism, or PE. VTE is a leading cause of death and disability worldwide and represents the third most common vascular diagnosis in the United States after myocardial infarction and stroke. Researchers estimate that approximately one million people present with VTE in the United States each year, resulting in approximately 296,000 deaths and direct health care costs in excess of $10 billion per year. VTE is a disease caused by blood clot formation in the veins of the body. DVT occurs when clot forms in the deep veins of the extremities of the body, such as the legs. PE occurs when a venous clot embolizes or becomes mobile, travels through the heart and gets lodged in the pulmonary arteries of the lungs. Venous clot that causes PE originates as DVT. Of the estimated 668,000 new DVT diagnoses and 400,000 new PE diagnoses in the United States each year, NARI believes approximately 242,000 DVT patients and approximately 200,000 PE patients, could benefit from safe and effective treatment with our ClotTriever and FlowTriever products, respectively. This represents a potential annual addressable U.S. market opportunity for current products of approximately $3.6B in the US. NARI is in the early days of its growth with share gains, expanding market opportunities, expanding internationally and the overall VTE market inflecting positively into 2021.

Altra Industrial Motion (AIMC) makes the list as one of the few compelling growth stories in the Industrial sector, a company that makes mechanical power transmission components like motors, gearing and controls for a number if niche industrial markets. They have two business segments of note: Automation and Specialty and Power Transmission Tech. The former is about 51% of overall revenues and growing at a faster clip with exposure to things like robotics motors, surgical power tools, and software guides for autonomous vehicles and materials handling vehicles. The latter is about 49% of revenues and more stable businesses like clutches for helicopter rotors, brakes for industrial lawn mowers, brakes for wind turbines, and more. AIMC looks positioned to be a winner of a strong Class 8 Truck market in 2021 as a supplier of compression release brakes. AIMC sees opportunity to expand cross-selling opportunities, expand into more Industrial IoT services and market their software solutions better. AIMC's cyclical markets look set for a strong recovery in 2021 which positions it well as already a best-in-class growth name.

Jumia (JMIA) had a rough start after its IPO in 2019 but has emerged with major momentum as 2020 comes to a close, providing scarcity value as there are limited ways to invest in Africa. The company is the leading online marketplace in Africa with reach into e-commerce, payments, food delivery, and travel. They also have their own logistics network. Africa is a market with low penetration and Jumia seems similar to what MercadoLibre was to Latin America many years ago. JMIA has a large reach and with mobile penetration increasing across the continent the opportunities to expand into new markets and verticals is rapidly rising. One potential catalyst in 2021 is a much larger global ecommerce player partnering with JMIA to expand reach into the coveted African market. JMIA also has potential in payments with JumiaPay, and overall has a large integrated ecosystem. JMIA is in the early stages of seeing growing traction across all of its offerings and a likely strong topline growth story for many years to come. JMIA is essentially a long-term call option of Africa following the rest of the World into the digital economy age.

Focus Financial (FOCS) screened as an attractive small cap wealth management services company and has been delivering great numbers in 2020 in the highly fragmented RIA industry with over 60 partner firms. It is primarily focused on ultra-high net worth and high net worth individuals and families by providing highly differentiated and comprehensive wealth management services. The delivery of wealth management services is moving from traditional brokerage, commission-based platforms to a fiduciary, open-architecture and fee-based structure. This shift has resulted in a significant transfer of client assets and wealth management professionals out of traditional brokerage, commission-based platforms to independent wealth management practices. FOCS has one of the largest franchises in the World for RIA and in the US, RIAs manage $6 trillion with that seen rising to $9 trillion via structural growth. The industry in winning $200-$300B in market share each year and there is an ongoing flow od new talent and assets. FOCS has an interesting business model via consolidation and sees there are 50,000 advisers managing over $3 trillion that are 65 years are older so there needs to be a succession plan and FOCS offers scale, technology and other advantages. I see FOCS as a name that will continue to win via its strategy in a massive industry that is growing well above industry rates.

Installed Building Products (IBP) is the preferred name in the highly fragmented building products market with 67% exposure to new single-family builds. IBP is a serial acquirer as the fragmented industry consolidates and continues to gain market share. Insulation is 64% of its revenues followed by Waterproofing, Doors/Mirrors, Garage Doors, and Gutters. IBP has opportunities to expand market share in non-insulation markets as well as expanding into larger commercial opportunities and repair/remodel. IBP has recently picked back up on its acquisition strategy and looks positioned well for a strong pent-up demand housing market in 2021.

Renewable Energy Group (REGI) is focused on providing cleaner, lower carbon intensity products as a leader in biodiesel. REGI is North America's largest advanced biofuel producer serving the growing demand for cleaner diesel fuels, which offer 50-90% lower emissions. It is also seeing margin expansion with lower cost feedstock. California is a major driver of growing demand and more states are discussing low carbon fuel standards. The BTC extension in early 2020 was a huge book to the industry that will result in an influx of cash to REGI. REGI has discussed key strategy elements to grow earnings via expanding its renewable diesel capacity and integrating downstream. The renewable diesel market is growing rapidly and REGI is the only US pure-play on biofuels (Darling (DAR) another favorite with exposure to this theme). With carbon reduction and clean fuel a global priority, REGI is positioned for long-term success. The industry is at an inflection point and REGI has generated a 30% sales CAGR since 2010. North America and Europe demand for biodiesel is seen reaching 5.9 billion gallons in 2020 from 2.9 billion in 2020. REGI also operates with cost advantages through a diverse supply of feedstock. REGI is a great way to participate in growth of alternative fuel as carbon reduction leading to better air and water quality becomes a global focus.

Pactive (PTVE) is an intriguing play in a normally boring packaging segment with it participating in the thematic growth trends of sustainability and restaurant delivery/takeout. PTVE's EarthChoice is the leading sustainability brand in Foodservice, and the company is set to commercialize ~70 brand-extending new products by next year. Sustainable packaging is expected to grow at a ~10% CAGR, while restaurant delivery packaging grows ~8%. PTVE has also become a self-help story with it improving operations and thus margins. EarthChoice has proprietary, sustainable offerings in: hot cups/lids; cold cups/lids; takeout containers, dinnerware, cafeteria trays, cutlery, and straws. The breadth of the offering combined with its strong brand attachment with consumers creates a competitive advantage in the fast-growing sustainable packaging space. It is also a very high margin business compared to other segments so the growth will lead to a positive mix shift for PTVE. PTVE should continue to win market share as more companies focus on ESG compliance and like its future in the large packaging market.

Sprout Social (SPT) is a name that came into focus in a report I issued in June and has been a great performer with plenty of upside remaining. Sprout Social is a powerful, centralized platform that provides the critical business layer to unlock the massive commercial value of social media. Currently, more than 23,000 customers across 100 countries rely on its platform to reach larger audiences, create stronger relationships with their customers and make better business decisions. With more than 3.4 billion global users consuming and sharing billions of posts per day, social media has fundamentally changed not only marketing but the entire customer experience. Social media is becoming mission-critical to the way organizations reach, engage and understand their target audience and customers. SPT is a centralized platform to effectively manage their social media efforts across stakeholders and business functions. It operates a single code-base without the need for customizations or professional services, allowing it to efficiently scale the platform and quickly react to changes in the market. SPT is gaining traction in larger markets with strong bookings and larger deal sizes. The social media management market is large at $25B and it is becoming vital for all companies to have an effective social media strategy and SPT is positioned to win a lot of business.

Sonos (SONO) is a high-end maker of audio products that is rolling out numerous new products and capturing trends of more time spent at home and spending more money on things as opposed to experiences. Sonos is the leading brand in wireless speakers, soundbars and subwoofers and has a 92% market share in wireless audio for industry professionals. In the latest quarter demand exceeded supply for its newest products: Move, Arc, One SL, Sub, Amp and Port. SONO has also been active with partnerships including IKEA and a recent multi-year licensing deal with Legrand. SONO has grown household penetration at least 20% for fifteen straight years and has historically seen its loyal customer base with strong repurchase habits. SONO fits the mold of many great long-term investments as a high-end differentiated brand with major customer loyalty and I expect it to continue to grow with homeowners continuing to invest in their homes.

Arcosa (ACA) was a value stock find early in 2020 and continues to look attractive, a spin-off from Trinity. ACA segments include Construction Products, Energy Equipment and Transportation Products. ACA has a lot of exposure to Energy where markets should perform better in 2021 and Wind Towers, Utility Structures and Storage Tanks are key businesses. ACA has a strong balance sheet with very little debt and stands to be a big winner on an infrastructure rebuild in the US. ACA's Construction segment offers the highest margins and focuses on natural & recycled aggregates, specialty materials, and construction site support. It has significantly expanded its footprint in that area with multiple acquisitions. ACA is not a sexy growth story by any means but has strong cash flow, a fortress balance sheet and effective capital deployment to provide strong shareholder returns over time. It has the opportunity to continue making acquisitions and building out a much larger player across three solid business segments.

Stoke Therapeutics (STOK) is the speculative biotech to make this list, always need some exposure to exciting biotech markets. STOK is making a new generation of RNA-based genetic medicines that upregulate protein expression to restore human health. Its TANGO platform (Targeted Augmentation of Nuclear Gene Output) has transformative potential for gene upregulation and around 50% o human genes contain a TANGO signature. With applicability to a broad range of targets. Lead asset STK-001 is a novel CNS-directed antisense oligonucleotide (ASO) in Phase 1/2 development for the treatment of Dravet Syndrome (DS), a rare genetic epilepsy w/ high unmet need. Initial results are expected in 2021. Preliminary data from its Part a of the MONARCH study in the OPA-1 program due in 2021 has the potential to be a key inflection point for the stock. STOK's platform has future potential to treat a range of rare diseases and early preclinical data has been robust, making it a compelling moonshot own in Biotech.

AeroVironment (AVAV) is an attractive growth story in aerospace and defense where most of the players are large caps and late in 2020 Lockheed did a deal for Aerojet (AJRD) and AVAV makes sense as a potential M&A target (it was reported in May that FLIR made an offer in 2019). AVAV has been growing nicely as defense budgets shift to unmanned aircraft and it has been seeing strong international defense sales. AVAV has some interesting catalysts the next few years as its HAPS project moves to the certification phase from ground testing after producing its first two HAWK30 aircrafts. SoftBank owns 95% of HAPMobile Inc. and commercial production and launch remains multiple years away. AVAV is targeting large growing markets with unmanned robotics and drones. It also has a tactical missile systems unit accounting for 21% of sales. AVAV is a strong defense products name with excellent growth and a lot of future upside growth drivers which makes it stand out in the industry as an attractive own.

Top 40 Attractive Micro Caps for 2021 ($500M to $2B)

Throughout 2021 I will write an in-depth profile on each of these names with one per week for OptionsHawk members in our Weekly Radar Report, discovering future great stocks is one of the most fun parts of investing

Ticker	Company	MARKET CAP	EV TO EBITDA	EV TO REVENUES
CYRX	Cryoport, Inc.	1,961	(473.0x)	26.1x
CALX	Calix Inc	1,942	26.3x	3.5x
AXNX	Axonics Modulation Technologies Inc	1,938	(33.2x)	15.0x
SITM	SiTime Corp	1,916	230.8x	16.0x
ATSG	Air Transport Services Group Inc.	1,894	6.7x	2.1x
CPK	Chesapeake Utility	1,868	15.6x	5.1x
SCPL	SciPlay Corp	1,866	10.5x	3.4x
TBIO	Translate Bio, Inc.	1,845	(30.1x)	11.4x
EVA	Enviva Partners LP	1,810	15.0x	3.0x
TPIC	TPI Composite	1,809	20.2x	1.1x
HLIO	Helios Tech	1,710	17.3x	3.8x
PRAX	Praxis Precision Medicines, Inc.	1,703	(43.6x)	
INMD	InMode Ltd.	1,670	19.6x	7.4x
CSWI	CSW Industrial	1,637	18.8x	4.1x
TBK	Triumph Bancorp, Inc.	1,255		4.0x
COHU	Cohu	1,599	20.8x	2.8x
SPNS	Sapiens	1,531	21.0x	4.0x
ILPT	Industrial Logistics Properties Trust	1,507	16.3x	11.3x
PSNL	Personalis, Inc.	1,506	(37.5x)	16.6x
CSTL	Castle Bio	1,486	(238.0x)	21.7x

Ticker	Company	MARKET CAP	EV TO EBITDA	EV TO REVENUES
MRTN	Marten Transport	1,470	7.1x	1.6x
XPEL	Xpel	1,469	58.6x	9.3x
ROAD	Construction Partners, Inc.	1,438	12.0x	1.4x
BLFS	BioLife Solutions Inc	1,423	198.3x	28.3x
QTRX	Quanterix Corp	1,393	(37.9x)	14.6x
MHO	M/I Homes Inc	1,393		0.6x
ACMR	ACM Research, Inc.	1,375	54.5x	8.9x
UTZ	Utz Brands, Inc.	1,304	6.4x	0.9x
VCEL	Vericel Corp	1,218	61.1x	9.2x
IH	iHuman Inc.	1,166		
ATEC	Alphatec Holdings Inc	1,091	(102.5x)	8.1x
ELF	e.l.f. Beauty, Inc.	1,153	20.7x	4.1x
IIIV	i3 Verticals, Inc.	1,003	23.7x	6.5x
SHYF	Shyft Group Inc	994	14.1x	1.5x
NVEE	NV5 Global Inc	994	12.1x	1.9x
TCRR	TCR2 Therapeutic	984		
SIBN	SI-BONE	962	(24.6x)	11.8x
PETQ	PetIQ Inc	949	20.0x	1.7x
NESR	National Energy Services Reunited Corp.	850	5.7x	1.5x
MEG	Montrose Environmental Group, Inc.	791	22.4x	3.6x

Top International Stocks to Own in Each Sector for 2021

US Exchange Traded:

Ticker	Company	MARKET CAP	P/E	ROIC	FCF YIELD	DIVIDEND YIELD
PAAS	Pan American Silver Corp. (USA)	7,037	36.51x	6.28	3.91%	0.69%
BEP	Brookfield Renewable Partners L.P.	15,811	(87.17x)	(2.05)	1.95%	3.06%
BEKE	KE Holdings Inc.	73,702	86.71x	33.34		
ZTO	ZTO Express	34,877	30.37x	12.85		0.93%
BP	BP PLC	74,828	(17.00x)	2.08	1.08%	9.50%
CRSP	CRISPR Therapeutics AG	10,582	(29.60x)	(194.35)		
XP	XP Inc.	23,235	54.16x	18.83	(0.37%)	0.39%
BILI	Bilibili	36,650	(73.23x)	(23.93)		
NTCO	Natura &Co Holding S.A.	13,909	(294.45x)	0.73		
TSM	Taiwan Semi	469,853	148.84x	8.14		0.37%

Foreign Exchange Traded:

Ticker	Company	MARKET CAP	P/E	ROIC	FCF YIELD	DIVIDEND YIELD
NEOEN:FP	Neoen SA	4,802	139.16x	0.88	(7.58%)	
SAGA-A:SS	Sagax AB	57,219	25.73x	5.33		0.94%
IMP:SJ	Impala Platinum	159,850	5.41x	29.71		5.63%
SINCH:SS	Sinch AB	71,383	159.41x	10.93		
ADYEN:NA	Adyen NV	58,977	234.26x	(27.65)	0.46%	
SOI:FP	Soitec SA	5,116	60.49x	23.31	0.75%	
TMV:GR	TeamViewer AG	8,750	70.68x	18.88	0.89%	
XRO:AU	Xero Limited	22,087	377.78x	0.64	0.14%	
ASELS:TR	Aselan Electronics	40,675	9.16x	25.20	(1.29%)	0.90%
SRT:GR	Sartorius AG	25,868	78.75x	9.14	(3.13%)	0.25%
GN:DC	GN Store Nord A/S	69,199	51.15x	14.46	2.38%	0.29%
EQT:SS	EQT AB	181,305	80.88x	(1,028.16)		1.25%
ENX:FP	Euronext NV	6,290	18.75x	7.96	3.88%	2.36%
LUNE:SS	Lundin Energy AB	63,041	31.01x	12.50	6.46%	3.93%
DNP:PW	Dino Polska SA	27,647	45.06x	19.81	0.34%	
DHER:GR	Delivery Hero SE	23,717	(31.86x)	(142.80)	(2.63%)	
EVO:SS	Evolution Gaming	167,823	51.08x	70.99		0.98%
4385:JP	Mercari Inc	701,863	(2,668.46x)	64.65	(1.78%)	
CLNX:SM	Cellnex Telecom SA	24,370	(1,022.45x)		0.60%	0.14%
ADE:NO	Adevinta ASA	98,016	568.05x	3.73	0.44%	0.04%
7974:JP	Nintendo Co., Ltd	8,784,956	20.99x	21.15	4.13%	2.41%

Diversified Portfolio of 12 High Yield Stocks to Own for 2021

Ticker	Company	MARKET CAP	P/E	ROIC	FCF YIELD	DIVIDEND YIELD
VZ	Verizon Communications Inc.	250,189	12.46x	5.91	8.27%	4.11%
ABBV	AbbVie Inc.	184,404	9.96x	34.38	10.77%	4.58%
GLPI	Gaming and Leisure Properties In	9,829	20.17x	(2.50)	6.04%	5.44%
MO	Altria	81,362	10.01x	6.02	10.23%	7.79%
DUK	Duke Energy CORP	66,472	17.63x	1.01	(3.41%)	4.29%
PGR	Progressive Corp	56,774	13.36x	9.34		3.44%
COP	Conoco	43,768	(42.29x)	5.91	(0.61%)	4.13%
KHC	Kraft Heinz Co	42,511	12.40x	1.93	9.75%	4.60%
MET	MetLife	41,083	8.11x	7.23		3.98%
DOW	Dow Inc.	41,286	38.44x	0.20	9.40%	5.07%
PSX	Phillips 66	29,200	(2,089.06x)	6.15	(0.59%)	5.36%
STX	Seagate Technology PLC	16,629	13.70x	15.20	7.93%	4.09%

8 Contrarian Stock Picks for 2021

(High Short Float with Strong Business Trends)

Ticker	Company	MARKET CAP	EV/Sales	EBIT MARGIN	ROIC	FCF YIELD	SHORT FLOAT %
SNOW	Snowflake Inc.	98,041		(105.64%)	(71.79)		15.0%
RKT	Rocket Companies, Inc.	42,944	2.8x	29.49%	37.05		27.4%
Z	Zillow	31,788	9.1x	(1.77%)	(3.09)	1.35%	15.6%
MDB	MongoDB, Inc.	22,713	39.5x	(12.74%)	(16.31)	(0.24%)	13.8%
GDRX	GoodRx Holdings, Inc.	17,376	31.2x	36.94%	27.90		27.0%
ZI	ZoomInfo Technologies Inc	16,682	37.5x	32.19%	(0.89)	0.75%	19.0%
RUN	Sunrun Inc	12,385	17.1x	(25.13%)	0.96		13.2%
RARE	Ultragenyx Pharmaceutical Inc	11,078	41.3x	(408.98%)	(112.55)		11.4%

Snowflake (SNOW) was one of the many exciting IPOs in 2020 and with that it was also one that was immediately hated due to its outrageous valuation, but as history has shown time and time gain it is a fools errand to try and value a hyper-growth stock in its early innings. More importantly, what we do know is that SNOW is delivering insane growth numbers in a software industry transforming global economies. Further, Berkshire Hathaway with a $1.5B stake is notable as well as several other smart funds that bought into the name. SNOW is a leading cloud-based data-warehousing company and well-established in the space with Gartner estimating a 10% market share, third best in the world behind SAP and Apache Hive. SNOW has set itself apart from peers as their software is platform agnostic and can be run on AWS, Azure, and Google's cloud, giving them a distinct advantage in a market growing rapidly. Gartner estimates that 75% of all databases will be in the cloud by 2022 and hybrid strategies likely more accelerated while IDC sees the revenue opportunity in storage doubling by 2023 to over $180B. SNOW is growing and scaling its business at an unprecedented rate and in a healthy Tech environment I fully expect it to continue to baffle the shorts.

Rocket Co. (RKT) is a leader in the massive mortgage origination industry and is transforming that industry. RKT has provided more than $1 trillion in home loans since inception while growing its market share from 1.3% in 2009 to 9.2% in the first quarter of 2020. RKT also expanded into complementary industries, such as real estate services, personal lending, and auto sales. In each of these gigantic and fragmented markets, they seek to gain share and drive profitable growth by reinventing the client experience. The U.S. residential mortgage market remains highly fragmented and RKT should see further market share gains as online adoption grows with a stated goal of a 25% share, while also being the post profitable mortgage company in the country. RKT will have to deal with tough comps in 2021 and the overall cyclicality of the mortgage market, but RKT's disruptive process to increase the ease and speed of mortgage applications should allow it to be a more defensive play while continuing to win in current and new markets.

Zillow (Z) is another high-growth name that people like to bet against despite it being such an iconic brand and delivering consistent strong numbers disrupting a massive real estate industry. Zillow has expanded into the Home Buying market via iBuyer where it competes with new start-ups like Opendoor and there is significant potential to scale-up and expand margins. The digital transformation of the real estate market remains in the early stages and Z has a strong position to capitalize. Z is in the early stages of monetization streams in mortgage, homes, and other services. Z is a name that has seen massive bullish options positioning including sizable January 2022 and 2023 opening put sales showing confidence in the long-term sustainability. Z's core market is showing strong trends while its other businesses are a source of both margin and growth upside potentially. Z is set to thrive over the next few years from a pent-up demand to move as well as the much larger shift to digital transactions which will benefit all of its business segments.

MondoDB (MDB) shares have tripled in 2020 and has been a favorite name the whole way up on the modernization of databases theme. MDB is a leading cross-platform document-oriented database and popular tool for modern apps. They also have their Atlas program which is a global cloud database used with AWS, Azure and GCP. Nonrelational databases have several advantages over relational ones, including being better at handling "Big Data" and offering better scalability and security. MDB announced a partnership last October with Alibaba Cloud and its Atlas product now accounting for 40% of its business. The database market is one of the largest in Software, $64B spent in 2019 expected to reach $97B in 2023. Database is at the center of software application which is seeing growing spend/adoption across all industries. MDB has less than a 1% share of this market, a long runway for growth. The database market is at the very beginning of a profound platform shift towards the cloud over the next decade. As the new and existing workloads migrate to the cloud, customers will be forced to examine and modernize their data architectures and MDB stands to be a long-term winner.

GoodRx (GDRX) is a new issue in 2020 that hot slammed in Q4 on news that Amazon was entering the Pharmacy business but the move seemed misjudged and GDRX addressed the concerns well on its latest conference call, essentially dismissing it as a real threat. GDRX sees a massive $800B TAM for its solutions, a $524B opportunity in prescriptions and $250B in telehealth the most notable segments. GoodRx was founded to provide consumers with solutions to the complexity, affordability and transparency challenges American healthcare presents. Its platform provides consumers with a variety of mobile-first offerings designed to make their access to healthcare simple and more affordable. GDRX is tackling some major challenges within the US healthcare system and looks positioned to be a potential winner in this massive industry ripe for disruption. The $4 trillion Healthcare sector is one of the least digitized, and GDRX offers a serious value proposition to consumers and healthcare providers. It offers a simple yet elegant mobile app allowing for pricing information, savings programs and patience assistance programs. GDRX has first-mover advantage as well as key partnerships to provide it with a defensible moat. With the potential to become the leading digital health platform in the US, its current $19B market cap seems way too small.

ZoomInfo (ZI) is a tech IPO from 2020 that has traded sideways but liking what I see in its quarterly reports as well as options positioning. ZoomInfo is a leading go-to-market intelligence platform for sales and marketing teams. Its cloud-based platform provides highly accurate and comprehensive information on the organizations and professionals they target. This "360-degree view" enables sellers and marketers to shorten sales cycles and increase win rates by delivering the right message, to the right person, at the right time, to hit their number. Its go-to-market intelligence platform delivers comprehensive and high-quality intelligence and analytics on over 14 million companies, including advanced attributes, technologies used by companies, intent signals, and decision-maker contact information. It estimates a TAM of $24B. ZI operates a 99% subscription business with more than 14,000 customers and a > 10X LTV/CAC ratio. ZI generated 103%

revenue growth in 2019 and 60% growth in 2020. It is also profitable and has impressive FCF margins. ZI has all the makings of a great company with strong customer economics, a competitive moat with its machine learning and AI run database and targeting a large addressable market.

Sunrun (RUN) should continue to work well in a strong market for solar growth and has led the industry since 2007 with its solar-as-a-service model, which provides clean energy to households with little to no upfront cost and at a saving compared to traditional electricity. The company designs, installs, finances, insures, monitors and maintains the systems, while families receive predictable pricing for 20 years or more. The company also offers a home solar battery service, Sunrun Brightbox, that manages household solar energy, storage and utility power. The industry is seeing improving cost advantages as cost of solar modules and batteries have declined significantly and the new Biden administration will be pushing strongly for increased solar installations. In top markets like Hawaii and California penetration has grown strong to 32% and 15% respectively while the rest of the US is at 2% with forecasts for 13% penetration by 2030. RUN is not growing quite as fast as some peers but does have scale advantages and an intriguing position in grid services. RUN's value proposition to customers continues to improve and with that it will see accelerated penetration. As the market leader in residential solar yet having < 1% of the share of US residential electricity generation, the opportunity is enormous over the next ten years.

Ultragenyx (RARE) has been a strong performer in Biotech in 2020 yet still has a large short float. RARE focuses on rare and ultra-rare genetic diseases through biologics, enzyme replacement, and an emerging early-stage gene therapy program. The latter recently had positive data in Glyocogen Storage Disease and in May another gene therapy program of theirs in OTC deficiency showed positive results with a Phase 3 expected to start early next year. In early April they reached a deal with Daiichi Sankyo to out-license their gene therapy manufacturing processes for $125M upfront and a $75M equity stake. RARE also screens as a potential ideal M&A target for large Pharma. RARE has guided to $1B in sales by 2025 though at a market cap of $11.5B is valued at a premium already. RARE's gene therapy program may prove to be an additional source of upside. RARE enters 2021 looking to execute on its Crysvita launch and drive additional growth from Dojolvi and Mepsevii. It sees itself with 7 commercial products by 2025 and expanding its treatable patient population six-fold. RARE has seen four approvals in the last three years which now are expected to results in 10X revenue growth in the next five years. RARE also has more than fifteen preclinical programs. It is a combination of an early commercial launch growth story with longer-term pipeline upside, and think it continue to perform well.

Top 5 High Beta Stocks for 2021

Ticker	Company	MARKET CAP	EV/Sales	EBIT MARGIN	ROIC
SHOP	Shopify	4,802	48.6x	2.90%	1.69
TWLO	Twilio	57,219	31.3x	(0.16%)	0.91
W	Wayfair Inc.	159,850	2.0x	(7.55%)	450.23
COUP	Coupa Software Inc	71,383	50.8x	8.19%	5.67
TSLA	Tesla, Inc.	58,977	21.3x	3.37%	0.27

Shopify (SHOP) has been one of the most successful tech stories on the planet as it only trails Amazon for the amount of the ecommerce market it captures. SHOP will clearly face tougher comps in 2021 but its platform provides the essential tools for any business to turn into an ecommerce business. SHOP has posted impressive metrics consistently and still has a long way to grow particularly expanding its footprint outside of the US & Canada. SHOP will also see positive tailwinds in the US from the number of new business startups and overall shift to an entrepreneurial society. It estimates the small business TAM at $78B. SHOP also has a great partner ecosystem of 5300 apps and 37,400 agencies and web designers. Its share of the US ecommerce sales in 2019 reached 5.9% (Amazon is 37%). SHOP is also diversifying into other subscription solutions while improving its operating leverage with cost efficiencies. SHOP's core platform, payments, and shipping will continue to push near-term growth while it has plenty of longer-term ambitions to expand its opportunity. The Shopify flywheel is expansive and its key sales channels with Facebook, Walmart and TikTok position it to capture an even larger share of US retail.

Twilio (TWLO) is another top tech winner from 2020 and it is just getting started with its leading customer engagement platform the provides companies with digital engagement, software agility and cloud scale. TWLO's use cases continue to expand from customer services to marketing to IT alerts. TWLO is targeting an $87B digital cloud engagement TAM for 2023. TWLO's business is diversified across all industries and customer sizes and Messaging is the largest product contributor at 45% while Voice, Email, App Services and Other account for the remaining. TWLO has one of the best go-to-market strategies in the software industry with sales & marketing as a % of revenue at just 24%, only Shopify at 24% is even close to its efficiency. TWLO is investing heavily in R&D and making key acquisitions with SendGrid and Segment which is not only expanding its solutions, but also accelerating customer growth. TWLO hit $1.13B in revenues in 2019 and should reach $4B or more by 2023, a rapid growth story worthy of premium valuation.

Wayfair (W) was positioned well for COVID as not only a major ecommerce player but also in the home category where consumers allocated a lot of spending as experience spending shifted to goods. Although its 55% topline growth in 2020 will slow in 2021 as it laps these tough comps, it remains a very strong growth story on the cusp of operating leverage ramping. Wayfair is building a leading home goods platform in both the US and Europe and a massive market, estimated to be $600B and still in the early stages of transitioning online. They've got long-term drivers from additional partnerships with suppliers, a sprawling network of more than 12,000, while their logistics networks and existing infrastructure give them ample opportunity to gain share and grow at scale. Wayfair is set to become an earnings and margin expansion story the next few years as opposed to a pure topline growth story. W's co-founders remain its largest shareholders which is always a good sign. W is also seeing positive customer demographic trends with Millennials beginning to enter the prime years for spending on home goods. As the home category continues to see more share done online, Wayfair is the prime beneficiary taking a large majority of that share in the underpenetrated market. The trend towards increasing household formations and home ownership will provide a positive backdrop into 2021.

Coupa (COUP) has been one of the strongest growth stories in software with its spend management software, a priority for many companies. COUP is the market leader in BSM which is a $56B opportunity while it also has large opportunities with Coupa Pay and Supply Chain Management. COUP has multiple growth levers and its operating margins have expanded nearly every quarter the last few years and sees a long-term vision of 25-30% versus the current 8% rate. Coupa Pay is seeing strong traction and it intends to win the majority of the market, aiming for 70%+. Coupa also announced a key $1.5 deal for Llamasoft in November expanding it into supply chain and network planning software. Coupa also did a deal for Bellin earlier in the year which provides treasury management software. The Llamasoft deal may be the beginning of the future supply chain — one in which AI drives decisions and value creation outweighs cost-cutting. COUP is positioned for continued success across all its markets.

Tesla (TSLA) was the story stock of 2020 and a top pick from last year's report. The case for Tesla is a very simple one, yet it seems to attract so many haters. Put simply, Tesla is a luxury brand with a cult-like following that is in the very earliest of stages as a market leader in EV, a technology that is set to disrupt the massive automotive market globally and increase penetration for the next decade and probably longer. Similar to other premier brands like Apple, Amazon, Netflix, Peloton, Spotify there will always be claims of competition concerns, but in the end, consumers want the highest quality and most recognized product/service. The latest news is that Apple may enter the EV market as soon as 2024 but if anything, I see that validating Tesla which has a massive first-mover advantage. Tesla profitability is starting to ramp while topline growth remains robust. Adoption of EV vehicles is set to accelerate with the improving economics of ownership as technology is rapidly improving. Tesla simply screens so much better than any automotive peer on the planet from a growth perspective and margin potential which could see vast upside driven by software sales. Tesla's competitive moat has been expanding and I think the company will continue to innovate and drive growth for a very long time with new products and ventures and its ability to ramp production capacity the next few years.

12 Hidden Gems for 2021 (Value and Growth Trading < 100K Shares/Day)

Ticker	Company	MARKET CAP	PE	EBIT MARGIN	ROIC	FCF Margin
PRSC	The Providence Service Corporation	1,980	19.1x	2.00%	(1.62)	3.32%
OFLX	Omega Flex, Inc.	1,732		21.71%	(98.88)	13.30%
MLAB	Mesa Laboratories, Inc.	1,442	178.3x	15.42%	4.61	21.29%
LNN	Lindsay	1,356	39.0x	11.42%	9.13	5.18%
SNEX	StoneX Group Inc.	1,088	7.6x	0.40%	31.08	3.57%
MORF	Morphic Holding, Inc.	1,060	(23.7x)	(276.77%)	146.17	(258.05%)
FOR	Forestar Group Inc.	998	12.2x	7.77%	6.07	(18.14%)
IESC	IES Holdings Inc	991		5.07%	21.42	6.05%
ESTA	Establishment Labs Holdings Inc	797	(21.1x)	(34.55%)	(84.91)	(41.29%)
USLM	US Lime & Mineral	642		20.03%	(5.11)	12.58%
DCO	Ducommun Incorporated	616	21.6x	7.80%	6.25	4.54%
FBRX	Forte Biosciences Inc	500	(4.5x)	(170,863.89%)	(259.10)	(165,738.89%)

Providence Services (PRSC) is a $1.9B company that is the largest manager of non-emergency medical transportation programs in the US primarily through its brands LogistiCare and Circulation. Providence also owns a minority investment in CCHN Group Holdings, Inc. and its subsidiaries ("Matrix"). Matrix is a nationwide provider of a broad array of assessment and care management services that improve health outcomes for individuals and financial performance for health plans. NET Services provides non-emergency transportation solutions to clients, including health systems, in 50 states and the District of Columbia. As of December 31, 2019, approximately 24.2 million eligible members received its transportation services, and during 2019, NET Services managed approximately 63.2 million gross trips. PRSC's acquisition of Simplura positions it to become a leader in non-medical home care services. PRSC overhauled its leadership team in late 2019 and is embarking on a transformational growth plan entering adjacent opportunities. PRSC is targeting very large markets and positioned well for both demographic trends of an ageing population and a shift to value-based care. At 21X earnings with revenues seen rising 50% in 2021 after navigating well through 2020 challenges and having multiple growth levers, it is a name that can quietly be a winner over time.

Omega Flex (OFLX) is a leading manufacturer of flexible metal hose, which is used in a variety of ways to carry gases and liquids within their particular applications including: carrying fuel gases into residential and commercial building; automotive refueling; medical gases in healthcare facilities; and industrial applications to carry corrosive compounds and mixtures or for very high or low temperature carrying. The flexible metal hose industry is highly fragmented and diverse, with more than 10 companies producing flexible metal hose in the United States, and at least that many in Europe and Asia. OFLX's top customer at 22-24% of sales is Ferguson Enterprises, a leading distributor of plumbing supplies and HVAC equipment. OFLX does not have much of an IR site or earnings calls to review but it is a strong business with 20-25% EBITDA margins, strong FCF and a ROCE above 30%. Its end-markets look positioned well for 2021 so I expect it can continue to perform well in the upcoming year.

Mesa Labs (MLAB) is a quality business growing revenues to $130M expected in FY21 from $96M in 2018 while EBITDA up to $37M from $25.5M in that same period. MLAB is a maker of quality control products and services, many of which are sold into niche markets that are driven by regulatory requirements. It has sterilization and disinfecting segment, Instruments segment, Biopharma development, and Monitoring business. MLAB has a strong group of businesses and the biopharmaceutical development opportunity is one of the most attractive areas providing turnkey solutions for bioanalysis and bio process testing with growth being driven by cell & gene therapy as well as vaccines. MLAB is also utilizing M&A as it is transforming into a higher growth business and expanding margins. At 12X sales shares are being valued at a premium but a steady grower with high quality businesses that can continue to be a compounder.

Lindsay (LNN) is a familiar name that I had not looked at in a while but screened very well versus industrial equipment peers. LNN is a global leader in providing a variety of proprietary water management and road infrastructure products and services. It operates under two major segments, Irrigation and Infrastructure. The irrigation segment includes the manufacture and marketing of center pivot, lateral move, and hose reel irrigation systems which are used principally in the agricultural industry to increase or stabilize crop production while conserving water, energy and labor. The infrastructure segment includes the manufacture and marketing of moveable barriers, specialty barriers, crash cushions and end terminals, road marking and road safety equipment, large diameter steel tubing, and railroad signals and structures. LNN operating margins have expanded to 11.4% in 2020 from 7.8% in 2017 and is positioned to be a double digit EBITDA growth name the next few years. LNN growth is being driven by megatrends such as global food security, sustainability, farm economics and Ag technology. It has pivoted strongly towards tech with the industry's leading fully-integrated suite of intelligent irrigation tools to maximize efficiency. Its Road Zipper product in Infrastructure is interesting as a way to minimize road congestion. LNN named a new CEO in November and is a solid transformation story with improving growth and margins while its businesses would also fit nicely for a larger acquirer.

StoneX (SNEX) is a $1B company that operates a global financial services network that connects companies, organizations, traders and investors to the global market ecosystem through a unique blend of digital platforms, end-to-end clearing and execution services, high touch service and deep expertise. It serves more than 32,000 commercial and institutional clients, and over 330,000 retail accounts located in more than 130 countries. SNEX provides services such as Execution, Clearing, Global Payments, Advisory, Market Intelligence and Market-Making. It has a diverse group of businesses and has been expanding its global scale while generating a 16% revenue CAGR and 17% income CAGR since 2015. It is a name that benefits from volatile environments which drive volumes and widens trading spreads and would also benefit from rising rates. In a consolidating industry it is one of the last small players around but is putting up strong numbers and seems underappreciated.

Morphic (MORF) is a $1B Biotech that came public in 2020 that is applying its proprietary insights into integrins to discover and develop a pipeline of potentially first-in-class oral small-molecule integrin therapeutics. Integrins are a target class with multiple approved injectable blockbuster drugs for the treatment of serious chronic diseases, including autoimmune, cardiovascular and metabolic diseases, fibrosis and cancer. To date, no oral small-molecule integrin therapies have been approved by the FDA. Integrins are the only receptors in the human body that use both intracellular and extracellular ligands to transmit signals both from inside of the cell to the outside of the cell and from the outside of the cell to the inside of the cell. This bi-directional signaling ability allows integrins to affect virtually every aspect of cell and organ homeostasis. MORF has a broad preclinical pipeline across multiple disease areas and partnership with major Pharma companies like AbbVie and Janssen. MORF-057 for IBD is one of its more compelling assets with annual sales potential for $1.4B. MORF is well funded with enough cash through the end of 2022 and we should see a proof of concept for MORF-057 in the middle of 2021.

Forestar (FOR) is a publicly traded residential lot development company and announced a merger with DR Horton (DHI) in 2020 who now owns 65% of its outstanding stock. FOR develops lots for single-family homes on sites it typically purchases in the open market and sells residential lots primarily to local, regional and national homebuilders. FOR revenues have grown to $932M in 2020 from $109M in 2018 and EBITDA to $77.4M from $2M. FOR operates in 49 markets across 21 states with a focus on the Southwest and Southeast. The lot development market lacks many national participants and FOR is positioned nicely for a booming housing market. FOR uses a high turnover, lower risk lot manufacturing strategy to generate efficient returns and the deal with DHI provides a national platform and significant demand for lots. FOR has already seen its share of lots sold to DHI as a percentage of DHI closings rise to 16% from 7%. Forestar expects to grow its lot deliveries 25% to 30% in fiscal 2021 and to generate approximately $1.1 billion of revenue. FOR is also focused on the attractive entry-level market which aligns with the DHI strategy. With DHI being my top homebuilder, FOR also is an attractive company.

IES Holding (IESC) owns and manages operating subsidiaries that design and install integrated electrical and technology systems and provide infrastructure products and services to a variety of end markets. Its main markets include Communications, Residential, Infrastructure, and Commercial/Industrial which includes building of data centers, electrical installation services, and electro-mechanical solutions. IESC has made this same list in the 2020 report and shares +90% YTD, a name with little recognition but screens well consistently on the numbers. IESC has posted revenue growth of 22.8% and 10.6% the last two years and EBITDA growth of 49% and 37%. IESC focused on attractive end-markets and operates with no debt and strong cash flows. It is a gem in the E&C industry.

Establishment Labs (ESTA) was a small cap discovery from August 2019 that continues to perform well despite COVID disrupting its business in 2020 it sees a return to 30%+ revenue growth in 2021 after growing revenues 76.5% in 2018 and 46.3% in 2019. ESTA is a medical technology company focused on improving patient safety and aesthetic outcomes, initially in the breast aesthetics and reconstruction market. Motiva Implants show low rates of adverse events (including rupture, capsular contracture, and safety related reoperations) that compare favorably with those of competitors. Breast augmentation surgery remains the leading aesthetic surgical procedure by number of procedures globally. ESTA is winning market share with its innovative implants in an area that has lacked much innovation and driving strong results while margins have risen sharply the last few years. It sees a $1.5B addressable market and approvals in the US and China would triple its market, China approval seen in 1H22 and in the US studies remain underway. ESTA has the potential to be a real game-changer in its niche.

US Lime & Mineral (USLM) is a manufacturer of lime and limestone products, supplying primarily the construction (including highway, road and building contractors), industrial (including paper and glass manufacturers), environmental (including municipal sanitation and water treatment facilities and flue gas treatment processes), metals (including steel producers), oil and gas services, roof shingle manufacturers and agriculture (including poultry and cattle feed producers) industries. The Company extracts high-quality limestone from its open-pit quarries and an underground mine and then processes it for sale as pulverized limestone, quicklime, hydrated lime and lime slurry. PLS is used in the production of construction materials such as roof shingles and asphalt paving, as an additive to agriculture feeds, in the production of glass, as a soil enhancement, in flue gas treatment for utilities and other industries requiring scrubbing of emissions for environmental purposes and for mine safety dust in coal mining operations. Quicklime is used primarily in metal processing, in flue gas treatment, in soil stabilization for highway, road and building construction, as well as for oilfield roads and drill sites, in the manufacturing of paper products and in municipal sanitation and water treatment facilities. Hydrated lime is used primarily in municipal sanitation and water treatment facilities, in soil stabilization for highway, road and building construction, in flue gas treatment, in asphalt as an anti-stripping agent, as a conditioning agent for oil and gas drilling mud, and in the production of chemicals. Lime slurry is used primarily in soil stabilization for highway, road and building construction. USLM does not have a ton of information on it but in 2019 grew revenues 9.6% and EBITDA by 26%. It is an interesting way to play a recovery in construction.

Duocommun (DCO) is a leading global provider of engineering and manufacturing services for high-performance products and high-cost-of failure applications used primarily in the aerospace and defense ("A&D"), industrial, medical and other industries. Electronic Systems and Structural Systems are its operating segments. Commercial Aerospace accounts for 48% of revenues and should provide a recovery in 2021. Key platforms for DCO include F-17 and F-35 aircraft, Patriot and TOW missiles, Apache and Blackhawk helicopters, Airbus A320 and A220, Gulfstream, and Boeing 737 MAX. DCO makes highly engineered products and has blue chip customers. Shares are back near new highs despite all the challenges in its markets in 2020 and has been a consistent grower that is likely to be a strong recovery story the next few years.

Forte Bio (FBRX) is a clinical-stage dermatology company in the United States. It is developing a live biotherapeutic FB-401 that has completed Phase 1/2a clinical trial to treat inflammatory skin diseases for pediatric atopic dermatitis patients. FBRX is likely a boom or bust story with Phase 2 data due in mid-2021 for FB-401 and is considered one of the bigger binary readouts in 2021 as an important validation step for microbiome medicines. Atopic Dermatitis is a large market and this is a differentiated approach that could be a major event. Eric Simpson, Professor of Dermatology at the Oregon Health & Science University, attributed a 70%-80% probability of success for Forte's FB-401.

Some additional names I want to look at through 2021 that fit this group and look to have intriguing growth opportunities include **Apollo Medical (AMEH), Allied Motion (AMOT), DZS Inc. (DZSI, Red Violet (RDVT), Chicken Soup for the Soule (CSSE), LiqTech (LIQT), Pro-Dex (PDEX), Envela (ELA), DLH Holding (DLHC), Bioanalytical Systems (BASI), Core Molding Tech (CMT), Issuer Direct (ISDR), RumbleON (RMBL),** and **Good Times Restaurant (GTIM)**. I have added these to the MicroCap list to write in 2021 for the Weekly Radar Reports.

Tickers	Company Name	Mkt. Cap	EV to EBITDA	EV to Sales	Revenue CAGR (3 Year)	EBITDA Margins	ROCE	FCF Margin	Debt to EBITDA
AMEH	Apollo Medical Holdings, Inc.	955	10.9x	1.6x	10%	9.04%	4.17%	2.25%	2.5x
AMOT	Allied Motion Tech	489	14.1x	1.6x	8%	12.81%	8.41%	5.29%	2.4x
BASI	Bioanalytical Systems, Inc.	111	91.5x	2.1x	20%	2.56%	(9.57%)	(8.12%)	15.7x
CMT	Core Molding Tech	106	7.2x		5%	2.21%	(4.61%)	3.25%	8.6x
CSSE	Chicken Soup for the Soul	252	79.2x	3.7x	51%	10.75%	(21.64%)	(33.77%)	2.3x
DLHC	DLH Holdings Corp.	116	8.5x	0.8x	15%	10.23%	8.68%	9.23%	2.8x
DZSI	Dasan Zhone	349	52.1x	1.2x	4%	2.74%	8.78%	(8.15%)	4.9x
ELA	Envela Corp	135	20.2x		52%			(0.86%)	
GTIM	Good Times Restaurants Inc.	29	4.1x		11%	7.41%	5.77%	5.25%	1.8x
ISDR	Issuer Direct	75	14.0x	3.0x	12%	21.44%	3.32%	14.88%	0.1x
LIQT	LiqTech	176	(55.6x)	4.5x	64%	2.91%	0.33%	(21.81%)	0.1x
PDEX	Pro-Dex	156	19.8x	3.9x	14%	21.93%	23.18%	12.71%	0.6x
RDVT	Red Violet, Inc.	323	35.9x		86%	13.96%	3.31%	(14.38%)	0.0x
RMBL	RumbleON, Inc.	67	(6.8x)	0.2x	49%	(3.14%)	(95.31%)	(5.11%)	(2.8x)

Sector & Industry Breakdowns

***This section is designed to become a great resource that I will build upon each year, so some of the information may be repetitive from prior years. I want to continue to break down each sector into industries and even further into cohorts while keeping the components updated. From there I want to build upon my research looking at each group from a higher level describing what the industry does, the key factors influencing the industries, and key metrics. From there we eventually get to relative comparisons and determining the best-in-class names in each industry. My goal here is to provide a clear and concise view of key valuation metrics, management efficiency ratios, and YTD performance to show what worked in 2020. I then briefly touch on some of the top plays in each group. This is a brief analysis that can serve as a guide throughout the year as we see sector trends develop by closely monitoring earnings reports. It is important to remember that these are current snapshots and projections, and one must due his/her due diligence throughout the year follow the earnings reports and management commentary, as the trends in these metrics are more important than the metrics themselves. I strongly encourage you to read the most recent earnings transcript and transcripts from investment conferences to better understand these companies.*

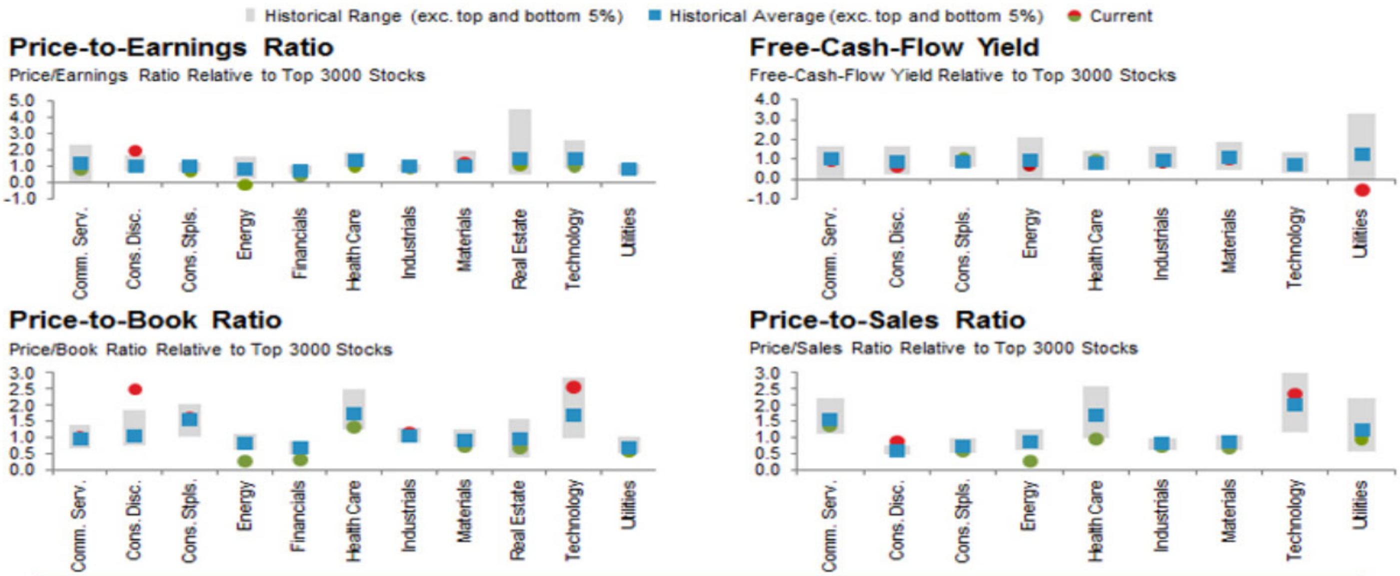
*Active sector rotation has become more vital than ever in managing portfolios throughout the year, so this section can serve as a guide as to the best of breed type names to target. This year I am adding key recent management commentary from leaders across industries as these executives have the most knowledge on their respective industries and can give us great insight into market trends. I will continue to pursue better ways to organize this section and plan on creating a web-based version for each group in the future. My broader goal here is to make you an informed investor across every sector and industry maximizing investment opportunities and to highlight the top 10-20% of strong businesses. This year I have attempted to break down each section further to allow it to flow better and make it an easier read. It is important to note that market research and sell-side firms release 100+ page reports on each of these industry groups but we really just want to focus on the background, the important metrics, the trends and overall what we need to know to find the quality investment opportunities, so I try to keep it as concise as possible. ***

	Valuation Measure	Momentum Measure	Growth Measure	Quality Measure
Communication Services				
Media & Entertainment	Price to Sales, EV/EBITDA	12-Mth Return and 1-Mth Reversal, Trading Volume	PEG Ratio	ROE (1-Yr)
Telecommunication Services	Dividend Yield	12-Mth Return and 1-Mth Reversal	Dividend Growth	ROC
Consumer Discretionary				
Retailing	P/E (Trailing), EV/EBITDA	Relative Strength - 10W/40W	Estimate Revision	ROC
Other Discretionary (Autos, Durables, Services)	Price to Book	12-Mth Return and 1-Mth Reversal, 11-Mth Return	Estimate Revision	ROC, ROA
Consumer Staples	EV/EBITDA, Fwd P/E	Trading Volume, 12-Mth Return and 1-Mth Reversal	PEG Ratio	ROC
Energy	Price to Book, Fwd P/E	Trading Volume	Estimate Revision, Earnings Torpedo	ROC
Financials				
Banks	Historical Relative P/E, Fwd P/E, Trailing P/E	12-Mth Return and 1-Mth Reversal	EPS Momentum, PEG Ratio	ROC
Insurance	Historical Relative P/E	Trading Volume,12-Mth Return and 1-Mth Reversal	PEG Ratio	ROC
Diversified Financials	Historical Relative P/E, Fwd P/E, Trailing P/E	Relative Strength - 30W/75W, 12-Mth Return and 1-Mth Reversal	EPS Momentum, PEG Ratio	ROE (1-Yr), ROC
Health Care				
Health Care Equipment & Services	FCF/EV, Price to Free Cash Flow	12-Mth Return and 1-Mth Reversal	PEG Ratio, Estimate Revision	ROC
Pharmaceuticals, Biotech & Life Sciences	Price to Sales	Trading Volume	Estimate Revision	ROE (5-Yr, Debt Adj)
Industrials				
Capital Goods	EV/EBITDA, FCF/EV	12-Mth Return and 1-Mth Reversal	Earnings Torpedo, Estimate Revision	ROE (5-Yr), ROE (5-Yr, Debt Adj)
Other Industrials (Services, Transports)	EV/EBITDA, Trailing P/E	12-Mth Return and 1-Mth Reversal, Trading Volume	PEG Ratio	ROC, ROE (1-Yr, Debt Adj)
Information Technology	EV/EBITDA, FCF/EV	Trading Volume	Estimate Revision	ROA, ROE (1-Yr)
Materials	EV/EBITDA, Price to Cash Flow	12-Mth Return and 1-Mth Reversal	PEG Ratio	ROE (1-Yr, Debt Adj), ROE (5-Yr, Debt Adj)
Real Estate	Price to Cash Flow, EV/EBITDA	12-Mth Return and 1-Mth Reversal	Estimate Revision	ROC
Utilities	Price to Sales, Historical Relative P/E, Fwd P/E	Relative Strength - 10W/40W, Relative Strength - 30W/75W	PEG Ratio, Estimate Revision	ROE (1-Yr)

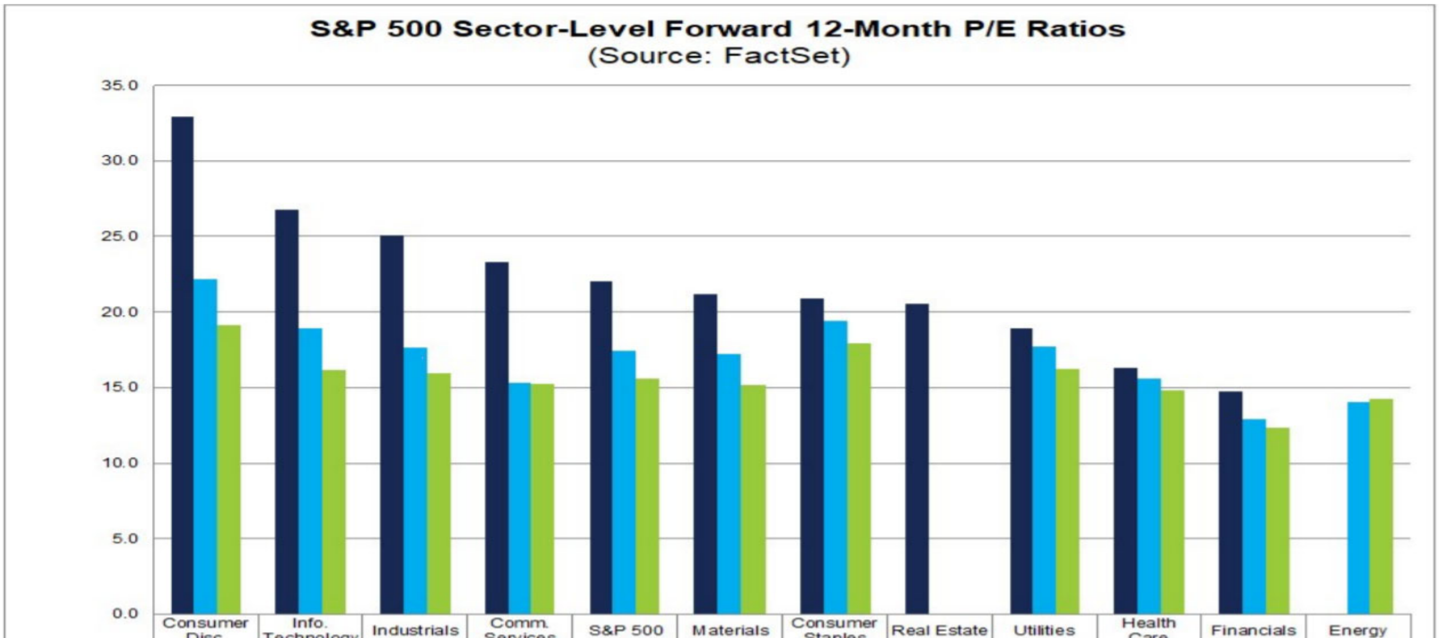
	EARLY CYCLE Rebounds	MID CYCLE Peaks	LATE CYCLE Moderates	RECESSION CYCLE Contracts
FINANCIALS	+			
REAL ESTATE	++			−−
CONSUMER DISCRETIONARY	++	−	−−	
INFORMATION TECHNOLOGY	+	+	−−	−−
INDUSTRIALS	++			−−
MATERIALS	+	−−	++	
CONSUMER STAPLES			++	++
HEALTH CARE	−−		++	++
ENERGY	−−		++	
COMMUNICATION SERVICES		+		−
UTILITIES	−−	−	+	++

EARLY CYCLE	MID CYCLE	LATE CYCLE	RECESSION CYCLE
Economically sensitive sectors may tend to outperform, while more defensive sectors have tended to underperform.	Making marginal portfolio allocation changes to manage drawdown risk with sectors may enhance risk-adjusted returns during this cycle.	Defensive and inflation-resistant sectors tend to perform better, while more cyclical sectors underperform.	Since performance is generally negative in recessions, investors should focus on the most defensive, historically stable sectors.

	Energy	Consumer Disc.	Comm. Services	Industrials	Info. Technology	S&P 500	Materials	Health Care	Real Estate	Utilities	Financials	Consumer Staples
Today	13.2%	12.7%	11.7%	9.7%	8.2%	7.7%	7.5%	6.6%	5.1%	3.6%	2.9%	2.6%
30-Sep	16.6%	12.8%	11.4%	10.6%	7.6%	8.0%	7.1%	6.5%	6.2%	3.7%	4.3%	2.5%

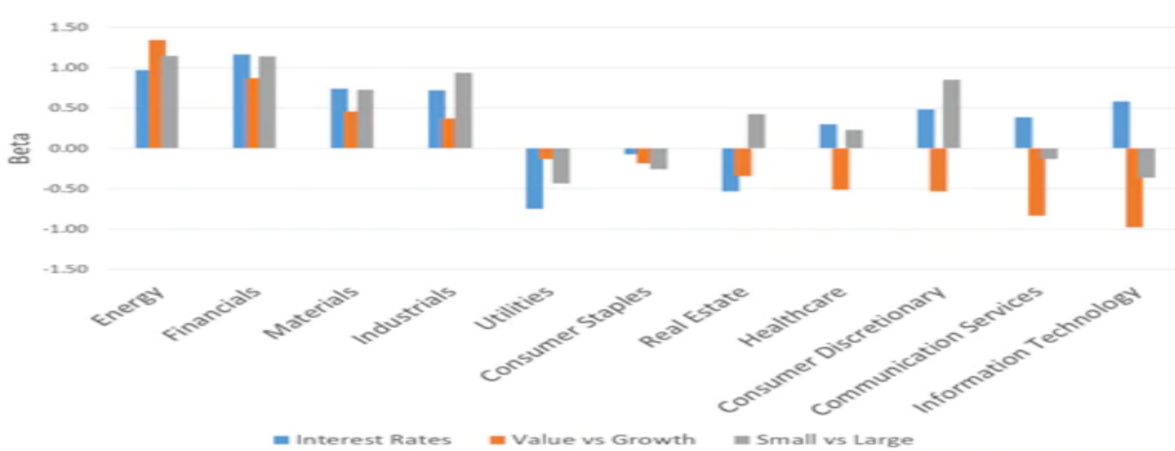


Relative Valuations: On their own, valuations are not necessarily the best indicator of future sector performance, but when combined with other factors, valuations can be a useful tool in determining the risk-and-reward profile.



	Consumer Disc.	Info. Technology	Industrials	Comm. Services	S&P 500	Materials	Consumer Staples	Real Estate	Utilities	Health Care	Financials	Energy
Fwd P/E	33.0	26.8	25.1	23.3	22.0	21.2	20.9	20.5	18.9	16.3	14.7	
5-Yr Avg.	22.2	18.9	17.6	15.3	17.4	17.2	19.4		17.7	15.6	12.9	14.1
10-Yr Avg.	19.1	16.1	15.9	15.3	15.6	15.2	17.9		16.2	14.9	12.4	14.3

Sector exposure to value, size and interest rates varies



Basic Materials: *The materials group has always been one of my least favorite areas to invest/trade due to the cyclical nature and number of external factors that are less easy to predict. The stocks tend to move in correlation with commodity prices, whether it be a mining company with metal prices, an energy company with oil/gas prices, or a materials company impacted by costs of commodities impacting its margins and bottom-line. It is a group that is very sensitive to inflation, currency movements, and global macroeconomic data. As we move into 2021 we have seen commodities start to rise and a reflationary environment with a weak USD sets up for a much stronger outlook across this group. A low interest rate environment is ideal for companies to finance exploration projects and other capital intensive investments. On the demand side in the US, investments in infrastructure often drive sentiment and is likely a major topic heading into 2021, while politics can also play a major role this year with the Democrats looking to reduce dependence on fossil fuels. Demand is strongly correlated with the strength of the global manufacturing economy, and with a sharp economic recovery expected in 2021 it could provide a meaningful tailwind.*

Commodity Price Index Chart

Chemicals

Industry Synopsis

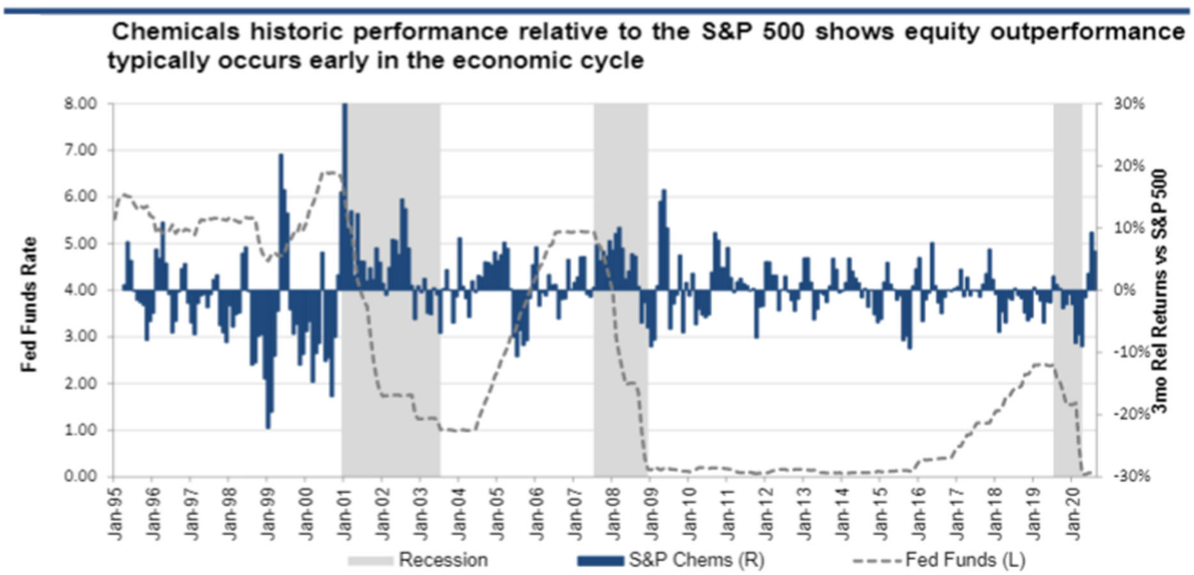
The chemicals industry converts raw materials derived principally from oil and natural gas, minerals, and air as well as plant based raw materials into more valuable products for use in industrial and consumer markets. The sector consists of a vast array of products, including fertilizers, paints and coatings, plastics, industrial gases, petrochemicals and vitamins.

The chemicals industry is typically broken into five sub-sectors of commodity chemicals, agrochemicals, industrial gases, specialty chemicals and life sciences chemicals though I have broken them into eight groupings. The products made by these companies fall into three main categories. Basic Chemicals have commodity-like characteristics and are sold in large volumes. These include petrochemicals, such as polymers used to make plastics and other man-made fibers. The category also includes such derivatives as carbon black and synthetic rubbers. Specialty Chemicals are more performance critical, value-added products, usually made to customer specifications. These include industrial gases, coatings, and chemicals used in electronics manufacturing. Finally, the Life Sciences segment encompasses animal health, crop protection, biotechnology, and pharmaceutical-related products.

Investment Considerations

The chemicals sector is one of the most assorted sectors in which to invest. Companies differ greatly in their product offering, primary feedstock, customer structure and underlying technology. The vast range of end markets mean companies' fortunes are driven by many different factors, with one of the key influences being GDP. The chemical sector is very cyclical in nature with profitability impacted by the imbalances between capacity and demand, which can be volatile. Production costs are mostly driven by the price of energy and feedstocks, so there is a tight relationship with energy prices, and cost advantages in this industry often separate the leaders from the laggards. Feedstock accounted for almost 60% of total input costs and fuel and power for the remaining 40%. Cost structures however differ significantly within the chemicals industry, as certain sub sectors like petrochemicals or industrial gas manufactures are much more sensitive to energy costs but have lower payroll and marketing costs. Oil and natural gas prices are less of an issue for those supplying industrial gases, where the primary concern relates to the utilization of production capacity. Pricing power differs significantly across the sector due to wide variations in end-market characteristics, product lines and market positions. The Petrochemical group is mainly driven by margins and utilization rates with **DOW, CE, LYB, EMN** most exposed to commodity chemical margins.

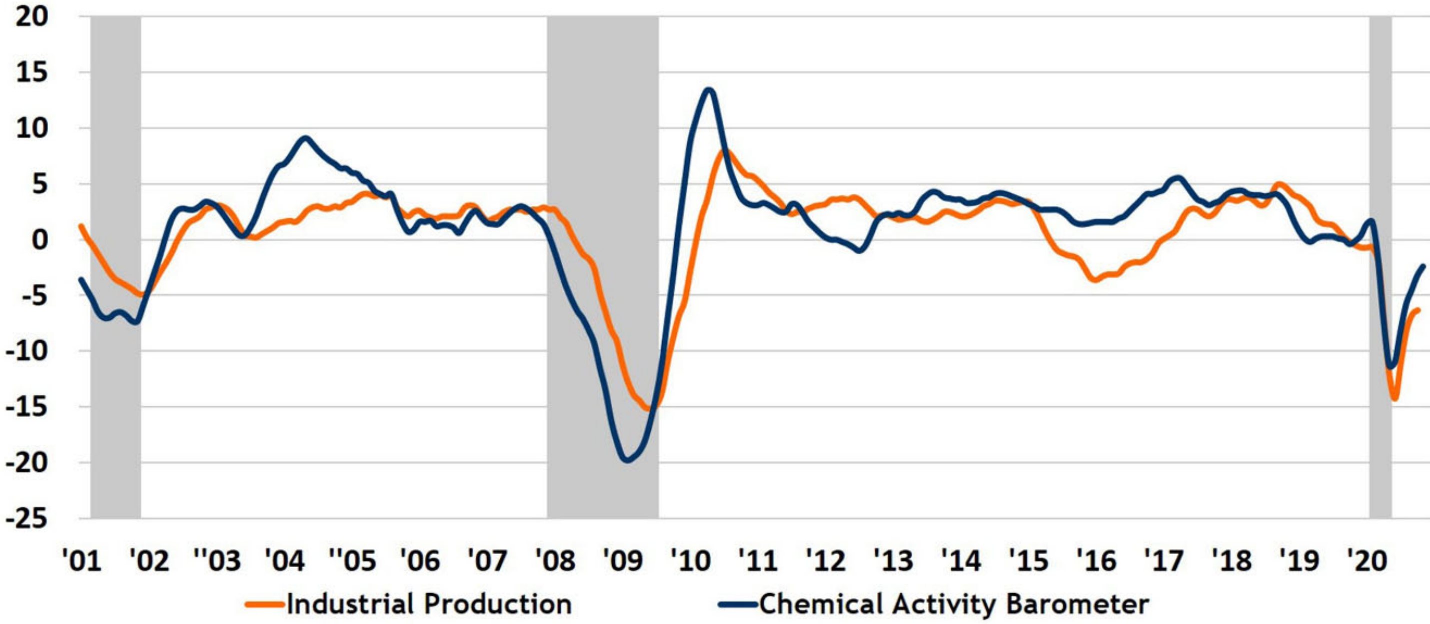
On the demand side the chemical industry tends to outperform early in expansion cycles and correlated to an acceleration in durable goods as well as demand indications from housing and auto markets.



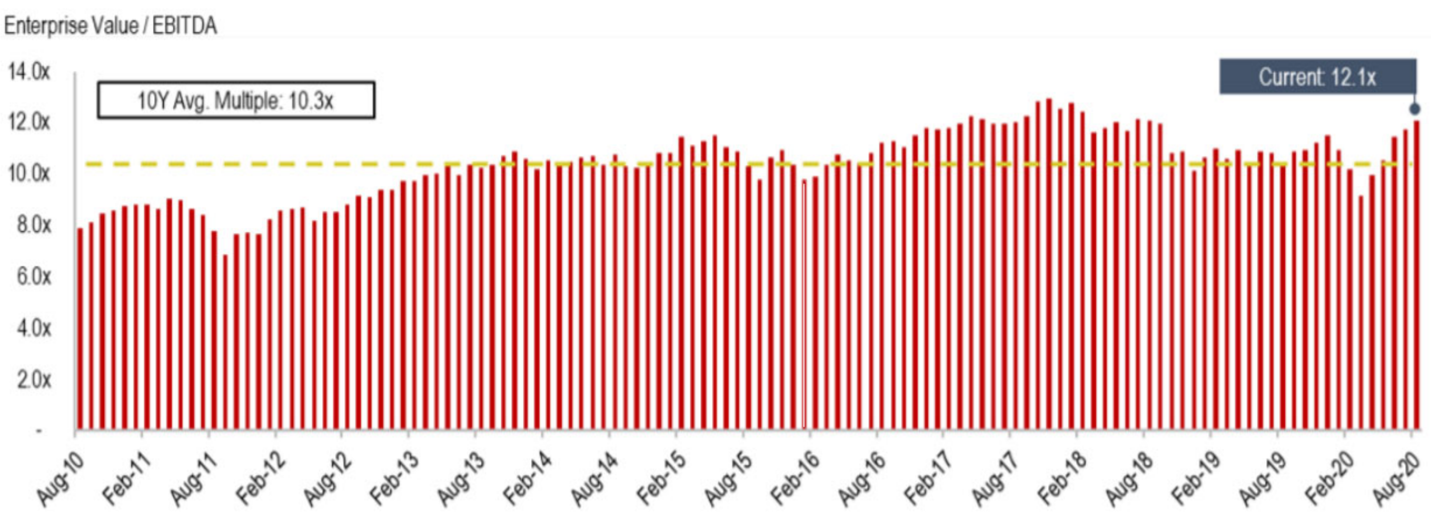
The Chemical Activity Barometer is closely correlated to the Industrial Production Index. The chemical industry has consistently led the US economy business cycle given its early position in the supply-chain. Though this industry is mature, member companies, some more than others, are subject to swings in the macroeconomic cycle. For many, sales and earnings performance will track activity in the housing, heavy construction, and industrial sectors. It is important to monitor industrial output, railcar loadings, housing starts, and other economic indicators to gauge the demand for specialty chemicals. It is also vital to monitor supply/demand dynamics, excess inventory may be an indicator of a slowdown and coming price pressure and earnings weakness.

The American Chemistry Council is a solid source of insight into the industry with its Chemical Activity Barometer. The CAB has four main components, each consisting of a variety of indicators: 1) production; 2) equity prices; 3) product prices; and 4) inventories and other indicators. The CAB is a leading economic indicator derived from a composite index of chemical industry activity. Due to its early position in the supply chain, chemical industry activity has been found to consistently lead the U.S. economy's business cycle, and the barometer can be used to determine turning points and likely trends in the broader economy. In November the index rose for a seventh straight month and production-related indicators were positive. Trends in construction-related resins, pigments and related performance chemistry were mixed. Resins and chemistry used in light vehicles and other durable goods were strong. Gains in plastic resins used in packaging and for consumer and institutional applications were positive. Performance chemistry for industry rebounded and U.S. exports were mixed. Equity prices rebounded and product and input prices were positive. Inventory and other supply chain indicators were positive.

Chemical Activity Barometer Chart



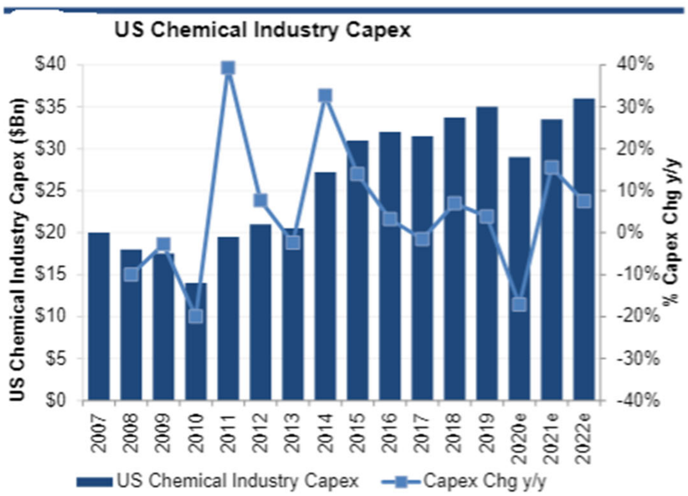
Grace Matthews is another quality source publishes a Chemicals Insights newsletter as a M&A advisor in the sector. The GM Chemical Index tracks EV/EBITDA multiples for 100 public traded chemical companies and current values suggest investors are giving companies a free pass for earnings software in 2020 with an expectation that strong growth returns in 2021.

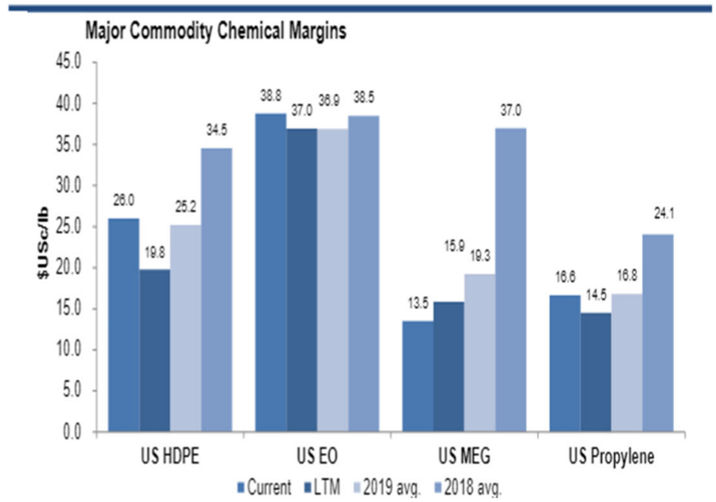


Diversified/Commodity Chemical Components: DD, DOW, EMN, HUN, HWKN, ASH, CE, WLK, HUN, LYB, NEU, BAK, IOSP, PQG, GPRE, FF

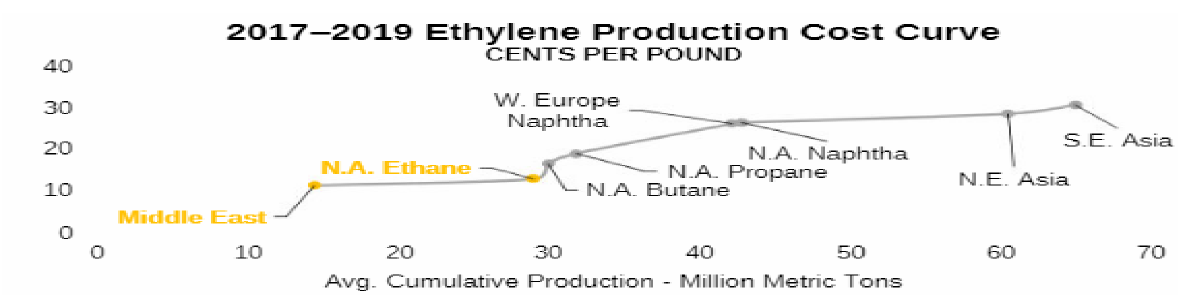
Industrial Gases Components: APD, LIN, MEOH

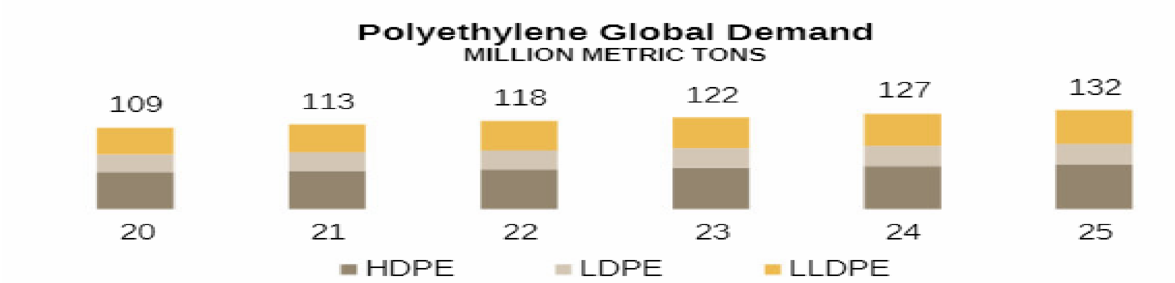
The global chemicals industry is nearing the tail end of a capex cycle that added capacity in the form of world scale facilities at an unprecedented pace. China remains the center of world petrochemical demand growth (growing at 2x the global rate of ~4% CAGR over the past 5 years) and capacity additions in proximity to these end markets have enjoyed labor & capital cost benefits (the tradeoff for feedstock disadvantages), not to mention lower regulatory burden. For petrochemical producers the question of when the market absorbs this capacity and returns utilization rates to 90%+ (indicative of improving margins) is the key debate. The pace of recovery will be highly dependent upon global economic growth (and in turn oil prices). The silver lining (in the context of 2+ years of underperformance for commodity chemical names once the last cycle peaked) is the unassailable position of US producers with world scale capacity at the low end of the global ethylene cost curve. Commodity price volatility and feedstock availability have been key concerns for this industry. Global ethylene capacity is expected to grow ~6% in 2020 with the vast majority of this growth in 2H despite demand declining ~1.7% creating downward pressure on utilization rates which could decline from 86% in 2019 to ~82% in 2020. While supply-demand dynamics are expected to tighten in '21 and '22 as global demand grows ~6.5% in 2021 and ~4.8% in 2022, utilization rates are only expected to improve from ~82% in '20 to 84-85% by 2022 due to significant capacity additions.



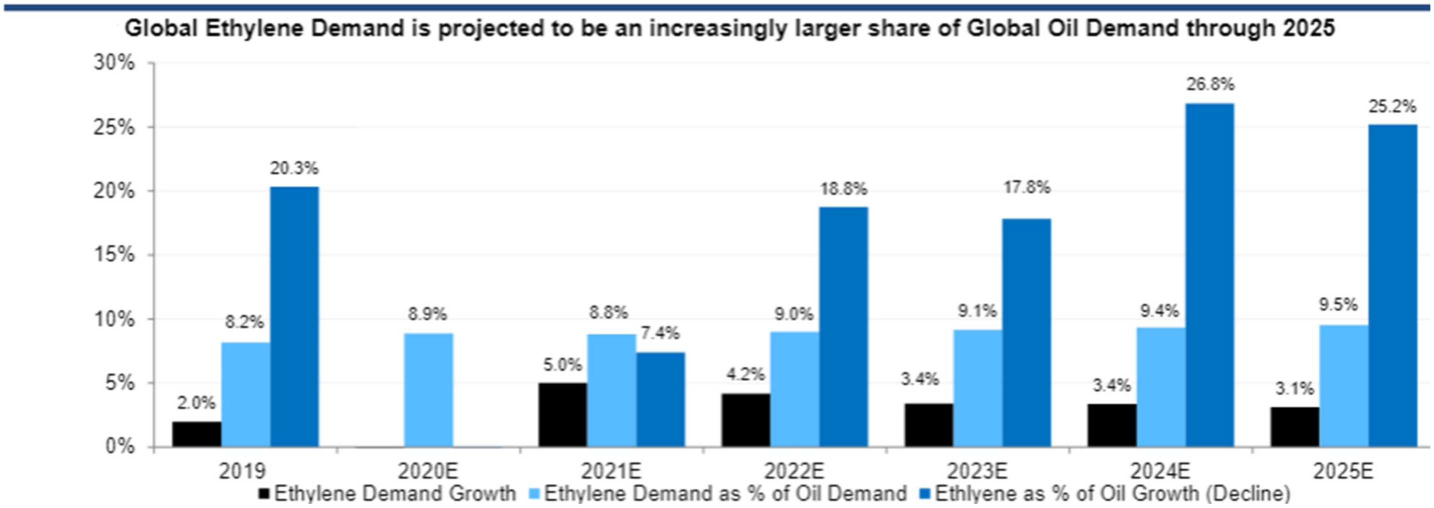


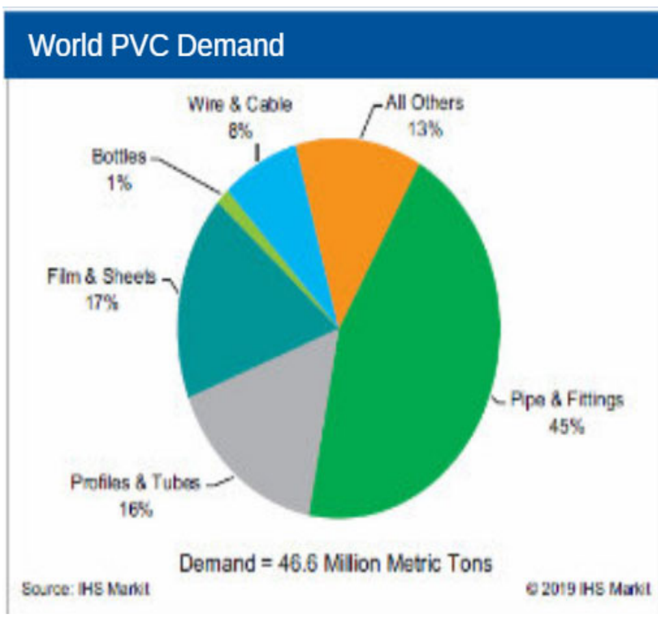
Chemical producers (particularly at the more commodity end of the spectrum) are conversion businesses that capture spreads. Chemicals are more opaque than other 'spread' businesses such as petroleum refining due to a mix of contract + spot markets for multiple end markets without real time pricing. Global ethylene (the key petrochemical building block) demand has tracked 1.3X GDP over the past decade. While all cycles have their own dynamics, there are a few recurring characteristics of note. Accelerating global growth (demand led) lift's demand in key end markets and draws volume from the supply chain. Alternatively, feedstock price increases (normally in co-incident with demand) and pushes product prices higher (again, dependent upon spread). Both of these scenarios drive a stocking dynamic as producers look to capture more of the apparent and expected spread). Margins fall as either the economic cycle turns (demand led) or new capacity comes to market (supply led) further pressured by inventory draw downs in expectations for continued challenged market environment.

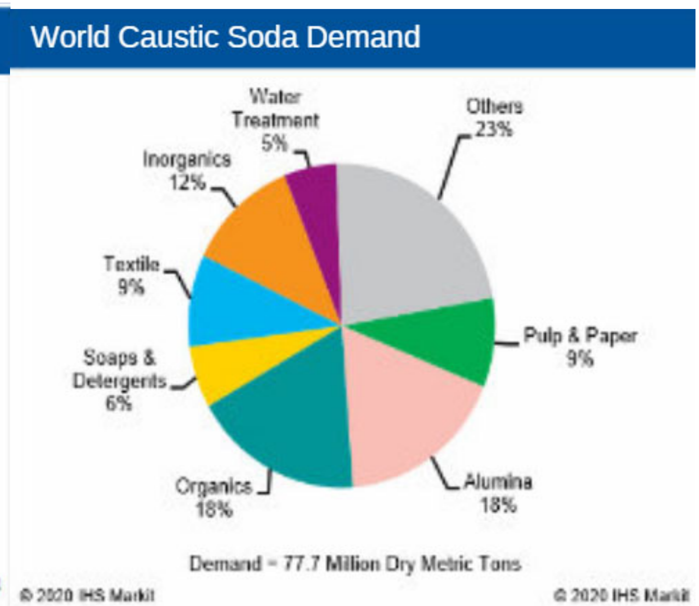


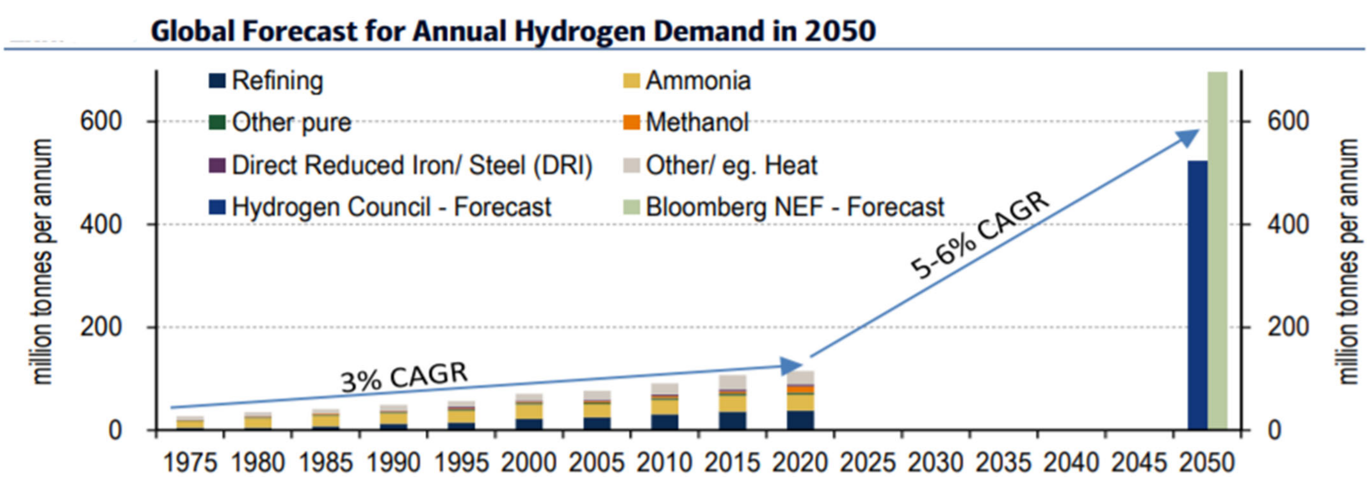


Ethylene is one of the largest-volume petrochemicals worldwide. Additionally, because of its size and broad usage, ethylene is often used as a benchmark for the performance of the petrochemical industry. Ethylene demand is driven primarily by growth of polyethylene-based consumables; bottles, and packaging demand; and increasing requirements for PVC used in construction and pipe applications. The demand for global ethylene is forecasted to be an increasingly larger share of global oil demand. **DOW** is the largest producer at 8% of global capacity and **LYB** the sixth largest at 4% of global capacity. Propylene is the second-largest volume chemical produced globally. Propylene consumption has been increasingly linked to emerging countries (China, more particularly), where the improvement in living standards and a growing urbanization are driving an increasing usage of a broad spectrum of polymers and chemicals. Global propylene trade is dominated by Northeast Asia.





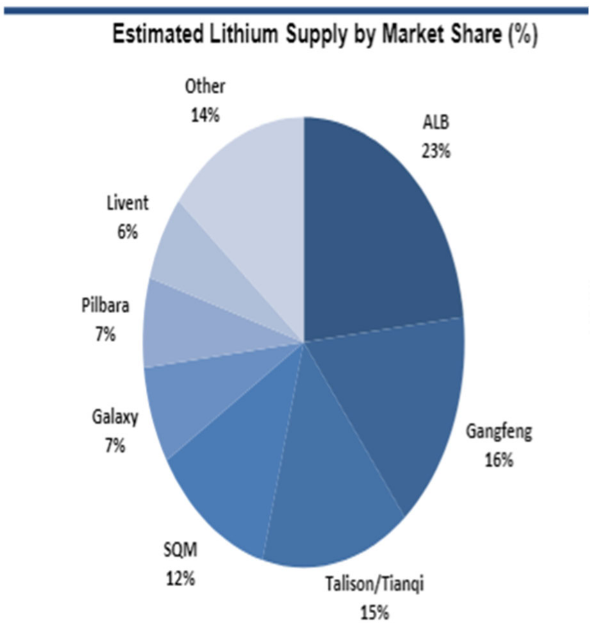


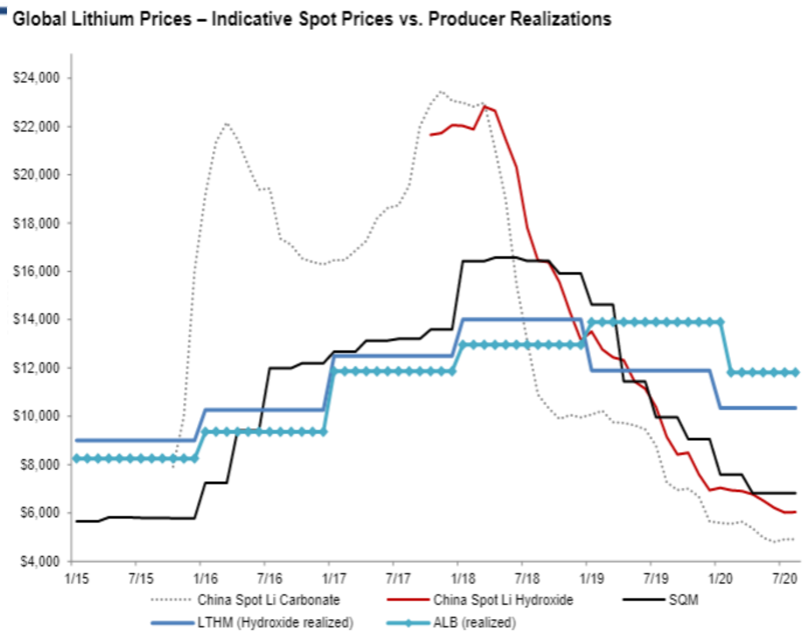


Source: International Energy Agency (IEA), Bloomberg, Hydrogen Council

Lithium / EV: ALB, LTHM, SQM

Lithium is a key element in the electric vehicle supply chain and the distributed power networks that will be central to a lower carbon future. Suppliers of this elemental material both extract the resource (either from brine based or hard rock reservoirs) and undertake processing to meet the increasingly stringent specifications of battery suppliers. After a period of acute tightness in 2017/18 when battery manufacturers and auto OEMs scrambled to secure lithium supply (and regulatory / tariff concerns in Latin America suggested structural constraints) the lithium market faced a period of oversupply well before the COVID economic slowdown. The reduction of Chinese EV subsidies in 2019 and a bloated supply chain (particularly amongst the midstream processors in China) pressured prices to the downside, a dynamic that has continued into 2020 when the market was expected to see some tightening. The battery pack for both hybrid and electric vehicles are reliant on three significant elements (Cobalt, Nickel, & Lithium). While battery technologies have evolved over time, lithium due to its electromechanical properties has been a recurring and central element of the battery supply chain. China is the location of the majority of the world's lithium refining facilities, and as such sits at the center of the battery supply chain.





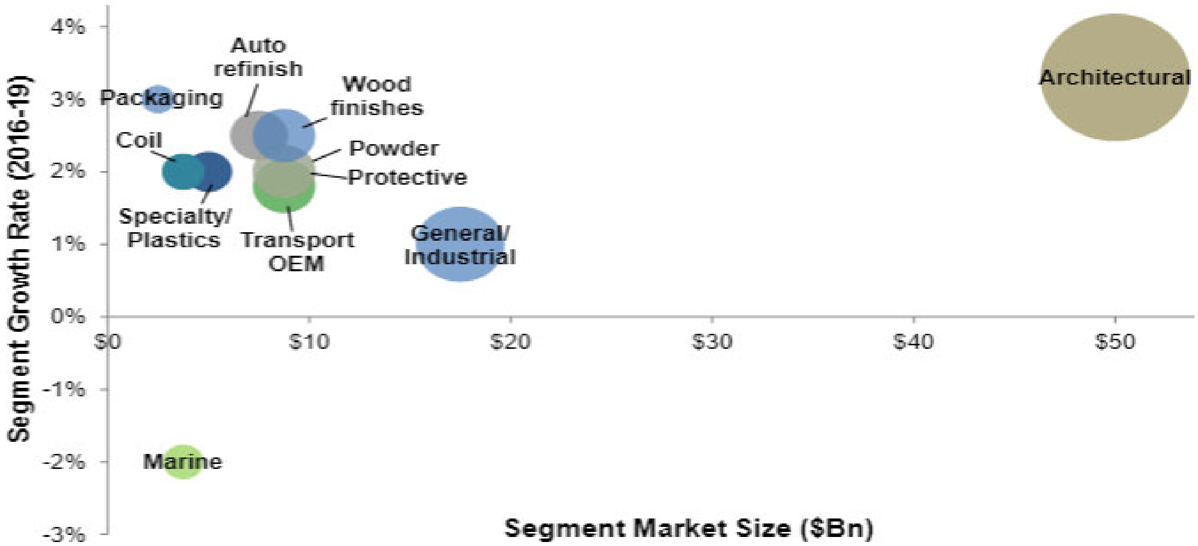
Lithium demand is closely tied to EV demand. EV penetration is expected to grow at a ~7.3% CAGR from 2020-2025. Overall, EV's are expected to grow from 2% of new vehicles in 2020 to 8% in 2025 and ~16% by 2030. EV penetration is set to drive significantly higher, particularly in China and Europe as environmental incentives continue to take hold.

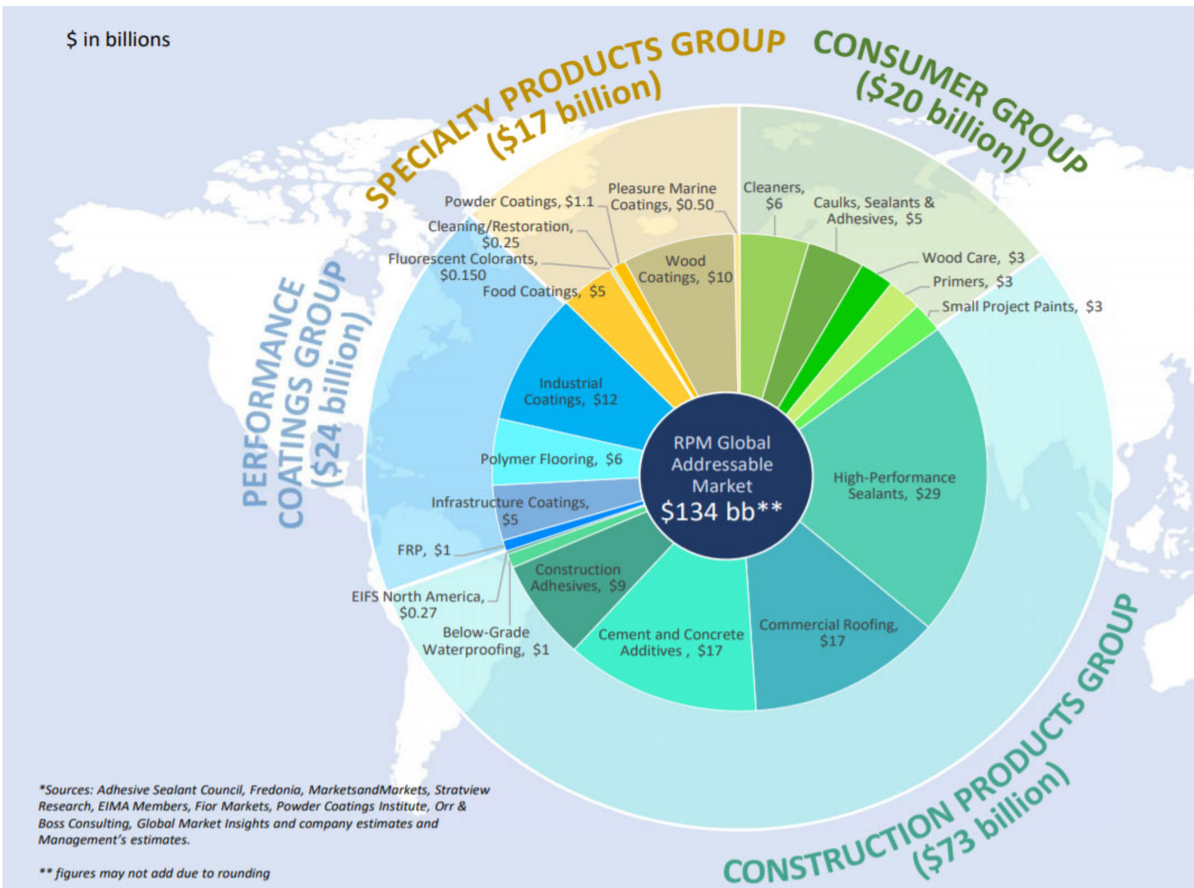
Specialty Chemical Components: ASH, BCPC, ESI, AIN, SXT, WDFC, KWR, FUL, SCL, CSWI, CCF, FOE, KOP, KRA, GRA, NGVT, CBT, OLN, GCP, OEC, MTX

Coatings: PPG, AXTA, SHW, RPM, ASIX

TiO2 Components: CC, TROX, KRO, VHI

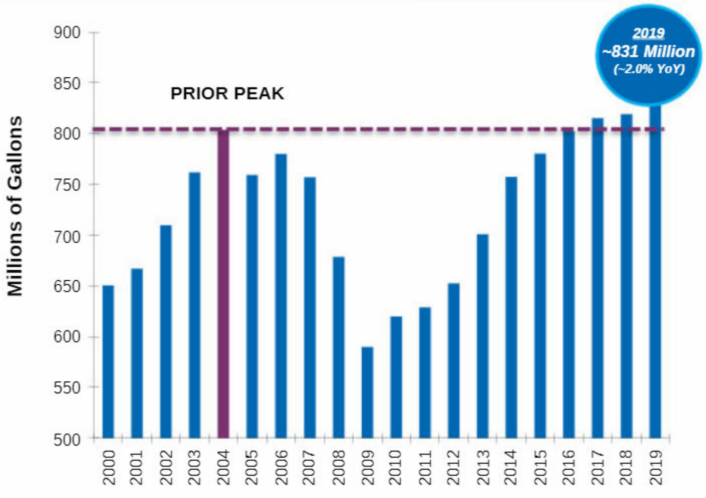
The coatings group can be divided into businesses of architectural (higher growth, particularly in Asia) and industrial (driven by PMIs in the OECD and Auto OEM builds). Margin stability and cash generation are the attractive underlying attributes of the coatings industry. There is underlying commodity exposure here as coatings suppliers are major purchasers of TiO2, resins, acrylics, and pigments though pass-through pricing mutes much of the margin impact. Free cash conversion has averaged well above 1.0x over the past decade and asset turns have improved as technology and supply chains have been rationalized. Capex averages 3-5% of revenues. Cash conversion in addition to stability of sales / margins is likely the central most attractive element of the outlook and limits volatility relative to other chemical subsectors.





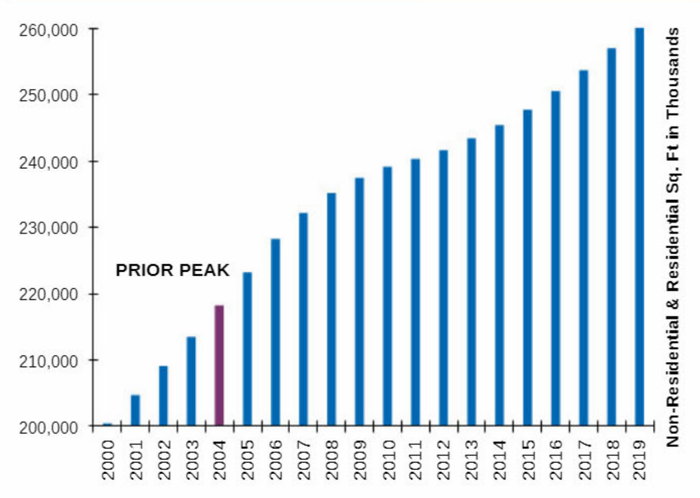
M&A remains a major theme in coatings with the top 10 producers accounting for 60% of the market and driven by positive mix implications for margins and organic growth as well as lowering costs via common raw material purchases and scaling distribution. Many of the companies are also undergoing cost-cutting initiatives. Recent earnings reports suggest a global restock cycle and prospects of share gains and pricing power while lagging end-markets expected to recover and provide an even larger boost to earnings. For the global chemical industry, key themes in China's 14th Five Year Plan (14FYP) will likely include economic rebalancing (better for downstream chemicals), GHG emissions (positive for industrial gases, and companies that clearly contribute to carbon neutralization solutions), self-sufficiency (which could translate into more COTC) and competitiveness (likely glossed as a medium-term threat for, and catalyst for consolidation of, specialty chemicals).

Architectural Paint Gallons



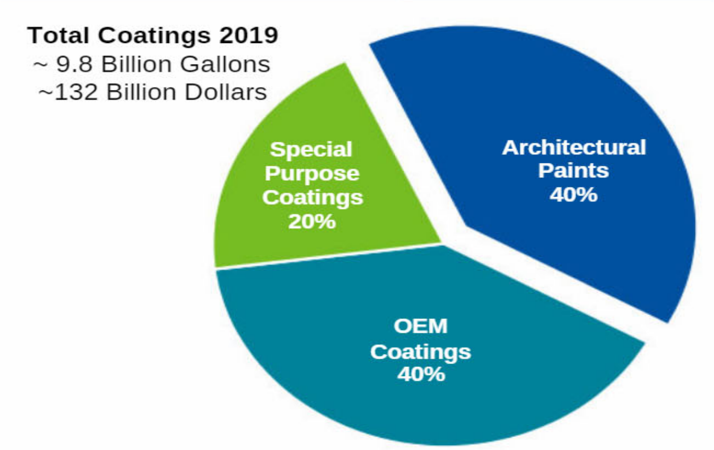
Sources: ACA, Department of Commerce, Dodge Data & Analytics & Company Estimates

Non-Residential & Residential Square Footage

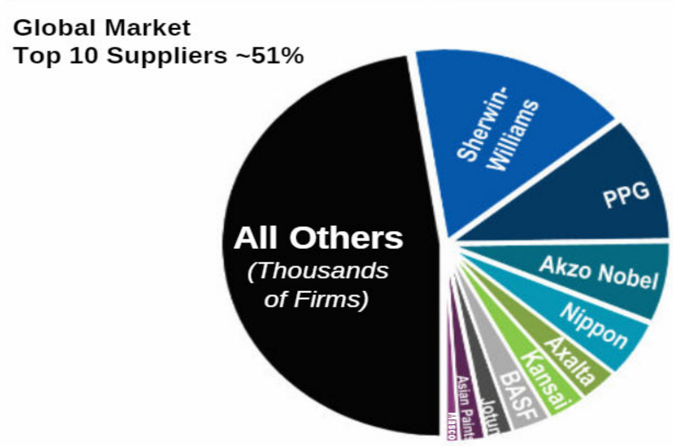


Source: Dodge Data & Analytics U.S. Building Stock Data

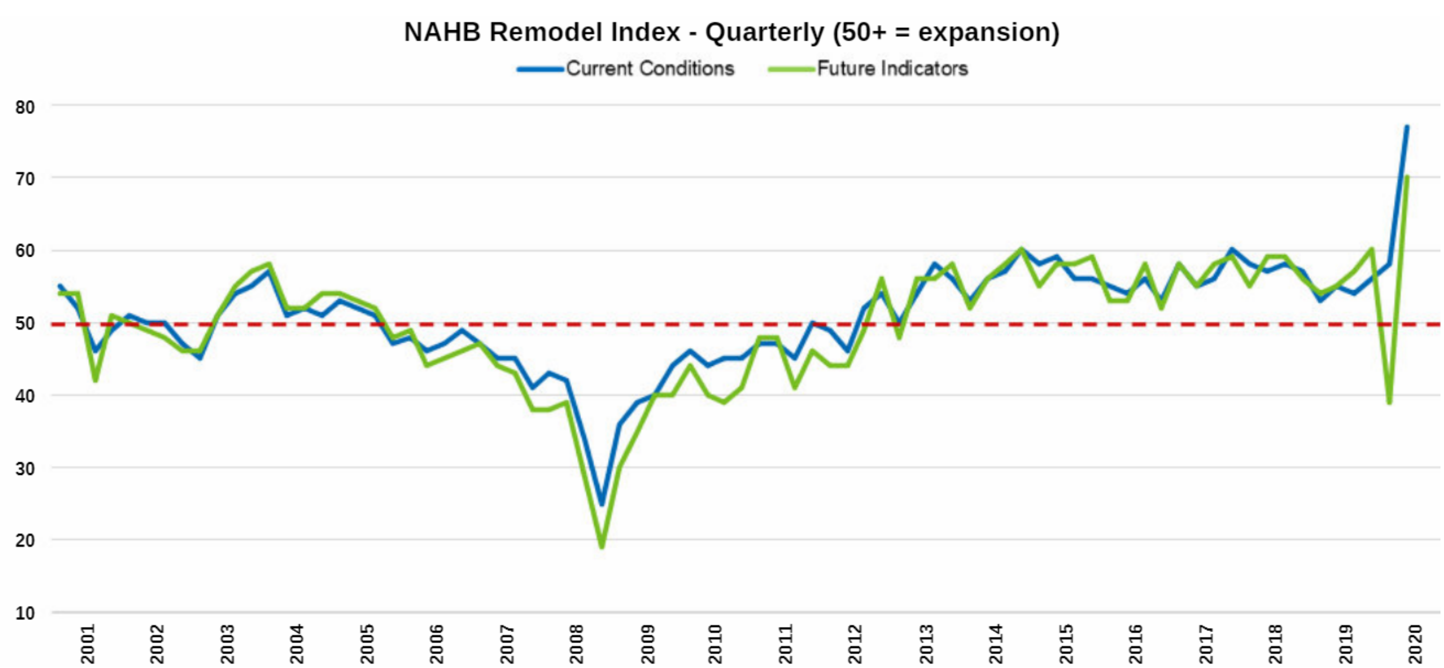
Paint & Coatings Industry Global Mix by Category (Based on $)



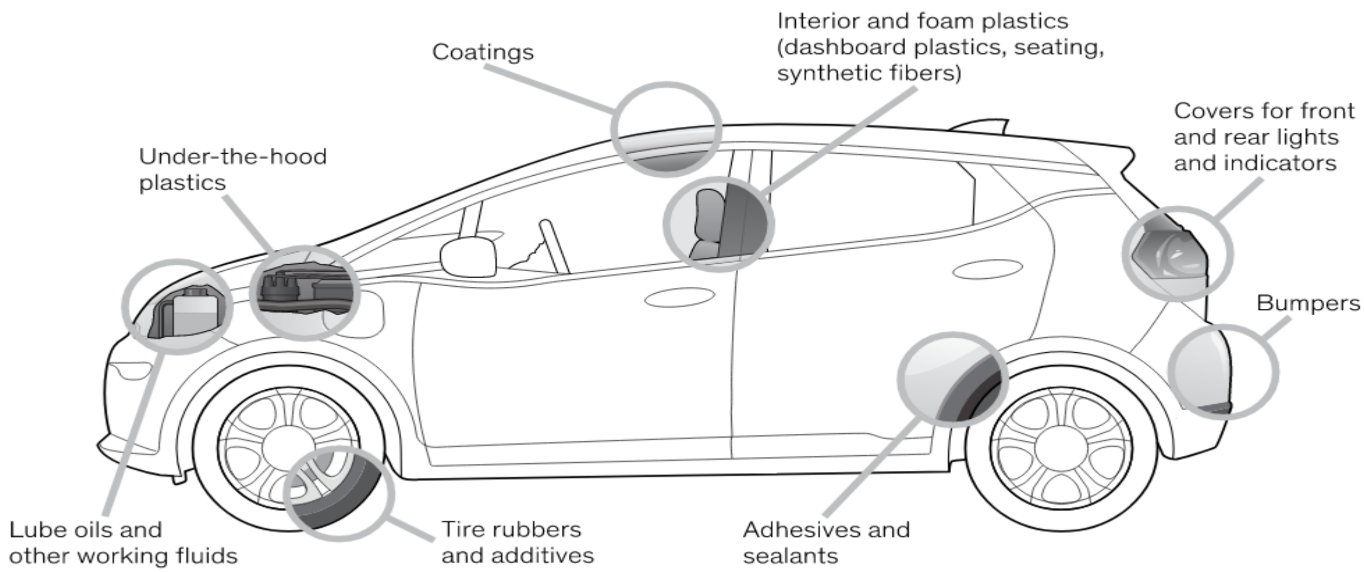
Top Global Manufacturers Coatings Industry 2019



Significant Organic and Acquisitive Growth Opportunities in Industrial Coatings

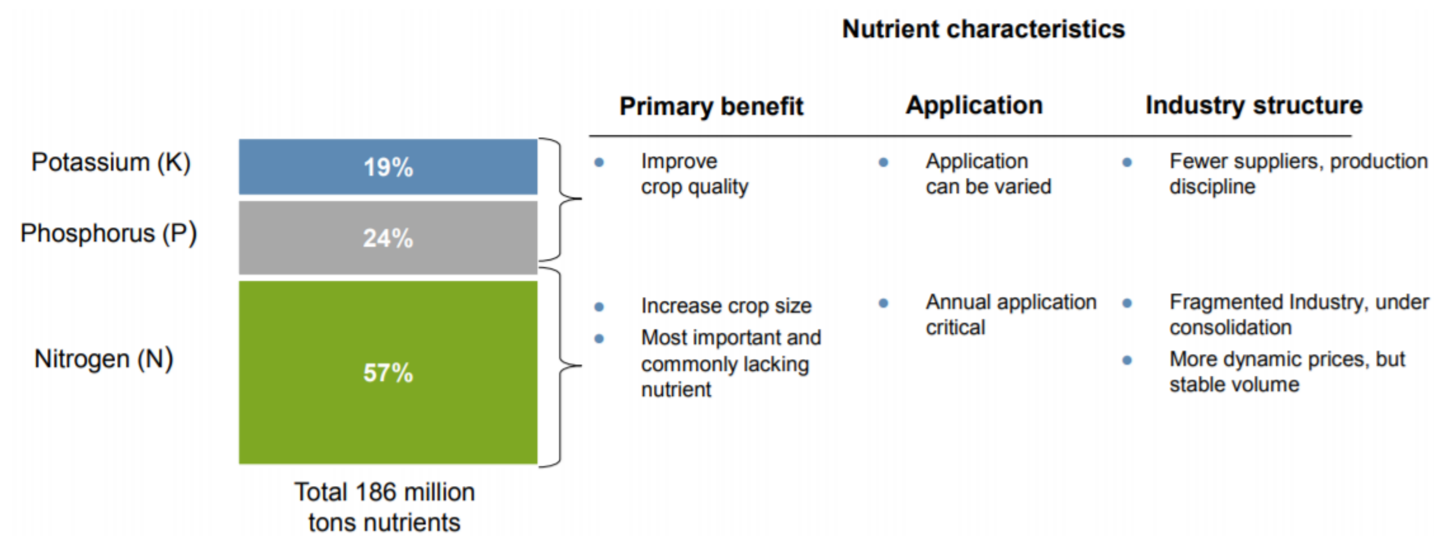


The automotive industry relies on chemical companies to produce important applications.



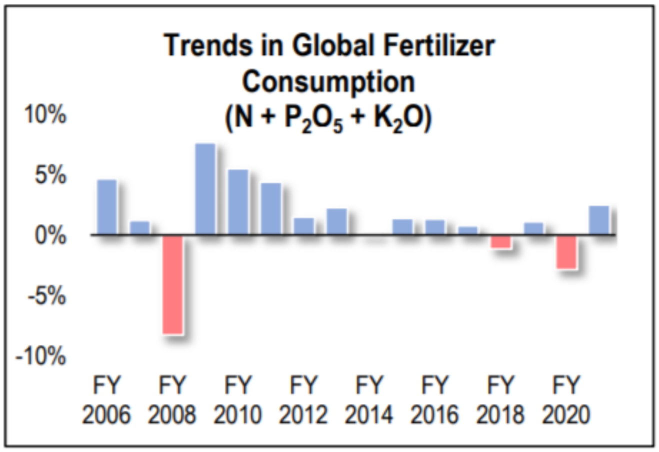
Ag, Fertilizer and Crop Chemical Components: NTR, CTVA, CF, FMC, MOS, ICL, UNVR, AVD, AMRS, ODC, SMG, CMP

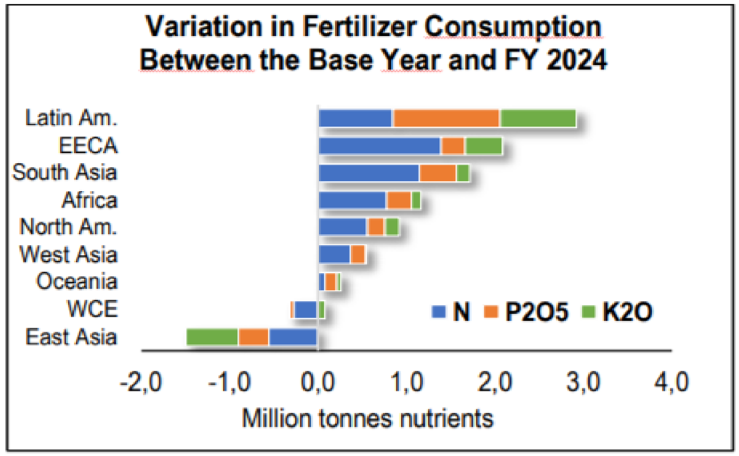
Chemical fertilizers are manufactured by synthesizing several chemicals from plant nutrients, the most important being nitrogen (N), phosphorus (P) and potassium (K). Nitrogen is the widest used fertilizer among farmers. Nitrogen is key for plants production of chlorophyll. Phosphate fertilizers help strengthen plant roots, which plays a role in sub prime soil and in times of drought. Potash (potassium) boosts crop resistant to disease, natural extreme elements, and to a lesser extent drought. In general, each segment will grow in proportion to rising crop yields and yearly acreage, or amount of each crop planted, will demand specific types of fertilizer. Prices per bushel and profit margins will determine excess levels of fertilizer farmers' purchase. Fertilizer levels will be one of the first expenses cut in periods of low prices and low profits. Weather patterns, environmental hazards, and changes in soil complexion will mean different fertilizers will be needed.



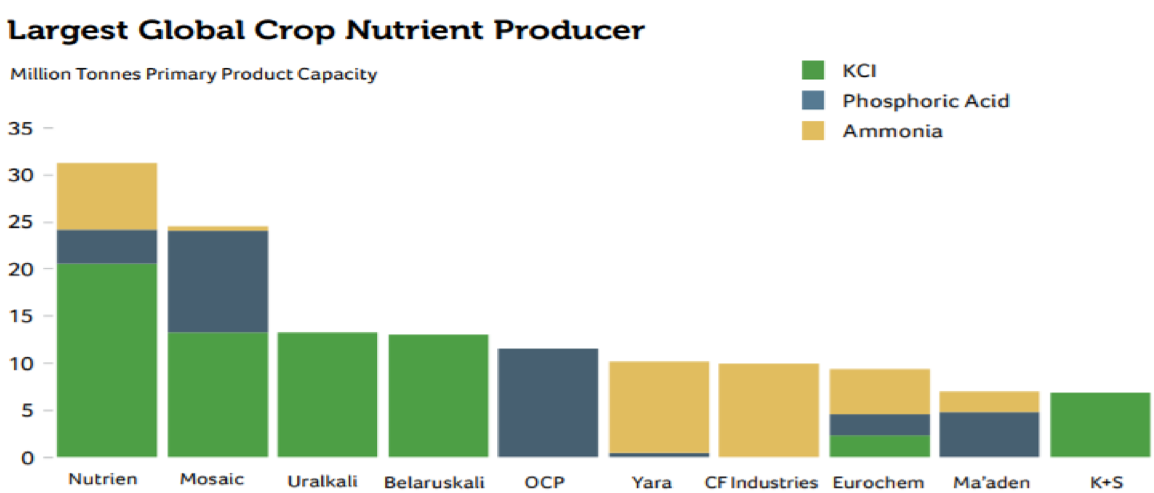
Demand for and supply of fertilizer is rising worldwide. This is partly supported by trends that are encouraging greater consumption of food crops, and the growing use of biofuel as an alternative source of energy. As the world population rises, a continual demand will be placed on fertilizer to boost crop yields without the expansion of harvestable acreage. The cost structure for the industry is about 80% raw material purchases such as urea, diammonium phosphate and potassium chloride. Natural gas is a major input for fertilizers, especially nitrogen based. Increasing exports is the biggest opportunity for US based fertilizer producers. The US has access to the cheapest natural gas in the world, giving them a global competitive advantage.

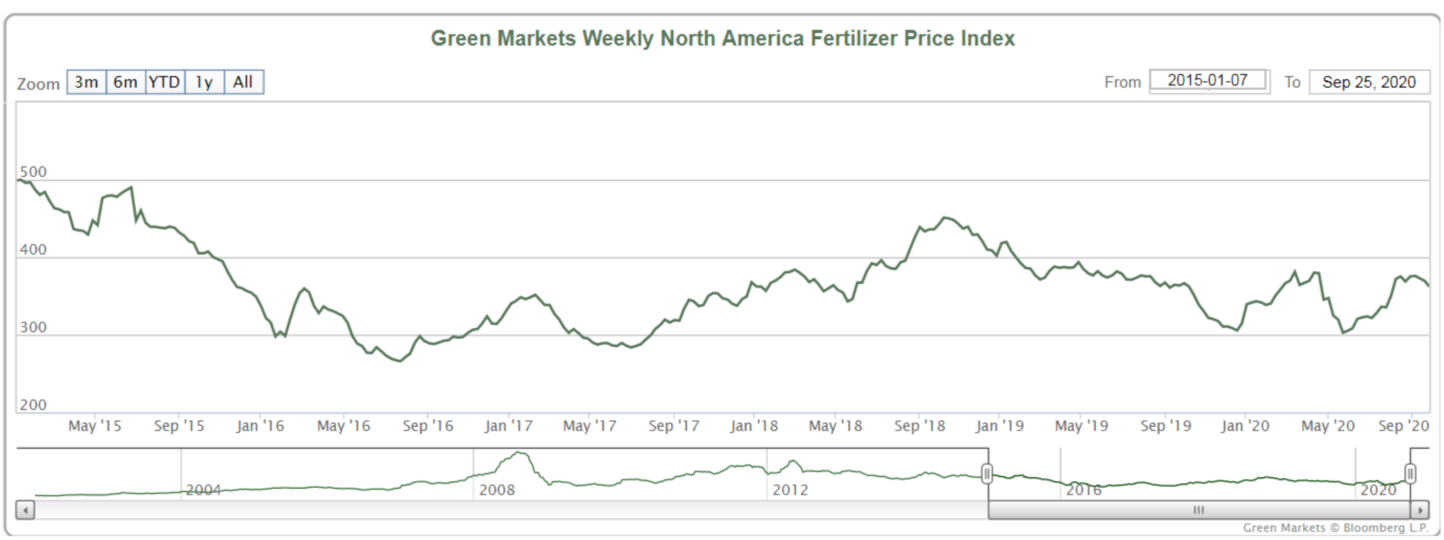
Global fertilizer demand is expected to decline by 2.9% (-5.5 Mt) between FY 2019 (189.9 Mt) and FY 2020 (184.4 Mt), before recovering partially in FY 2021, by 2.5% to 189.0 Mt. In relative terms, the expected decline in FY 2020 would be more significant for K2O (-4.5%) and P2O5 (-3.5%) than for N (-2.1%). Due to ongoing capacity additions which are expected to be commissioned during the next five years, global supply will be more than sufficient to meet global demand. Based on a modest 0.9% average annual growth in global demand for all uses, compared with an average of 1.9% annual growth in supply, markets will remain generally supply-driven.



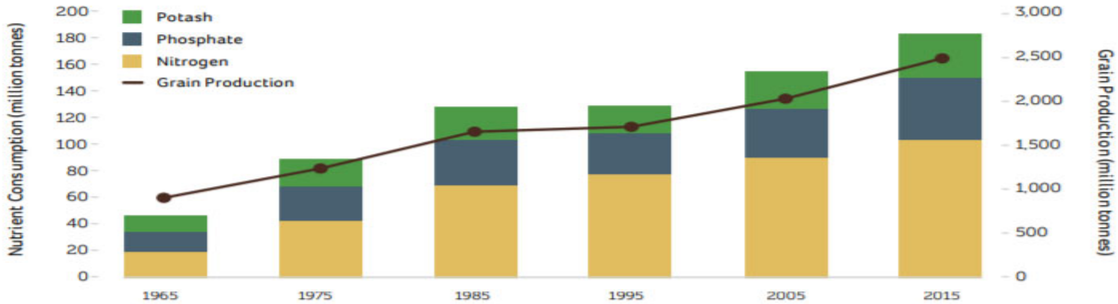


The fertilizer market is mature with a CAGR of 1.8% seen for 2020-2025. Field crops dominate the market in the US with the four major crops being corn, cotton, soybeans and wheat accounting for 60% of acreage. It is a consolidated industry with the five major players accounting for more than 60% of the market. Latin America is expected to drive global fertilizer demand, accounting for 37% of the total increase.





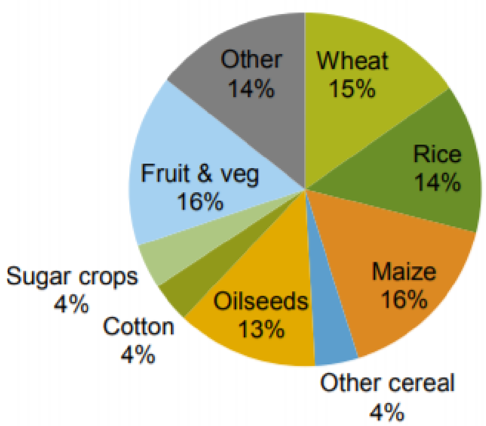
World Nutrient Consumption vs. Grain Production



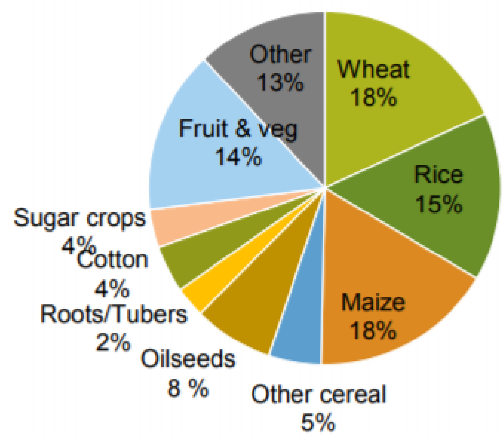
Source: IFA, USDA

By tonnes nutrient

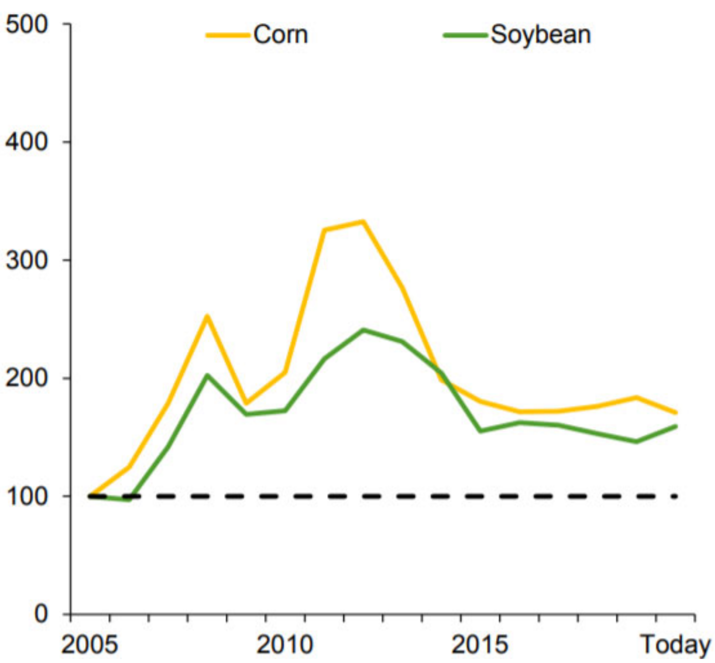
N + P + K



Nitrogen



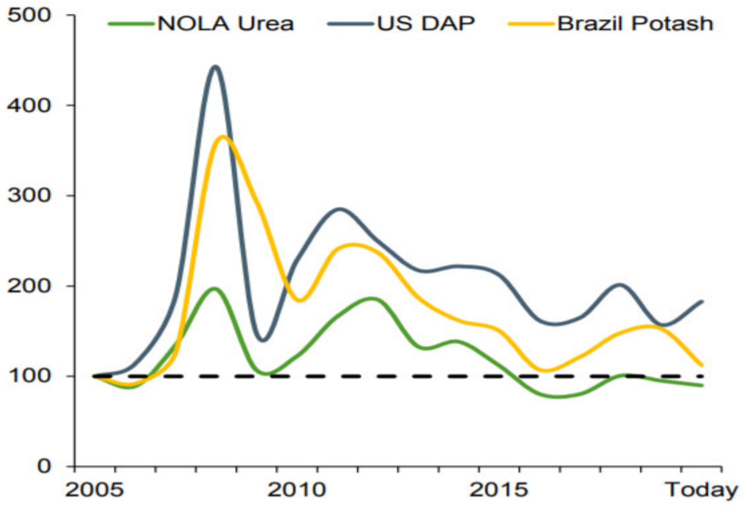
Crop Prices
Index: 2005 = 100



We see a number of positive Ag developments emerging:

- Corn prices have seen recent strength, due to lower US yield & stocks-to-use expectations from the market, and high demand out of China.
- Continued improvement in ethanol blending margins, end-use demand, and utilization rates since Q2 lows.
- Brazil experiencing strong export volume and historically high sales prices for major crops.
- US farm support programs expected to add $0.36/bu for corn and $0.45/bu for soybeans.

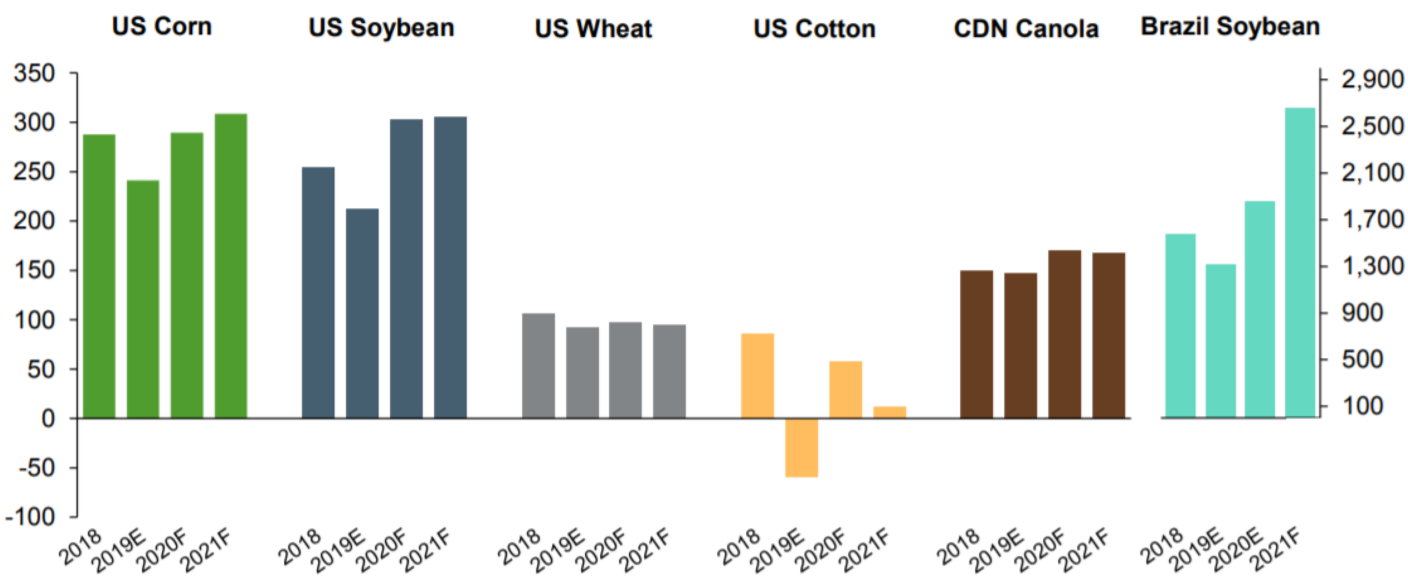
Fertilizer Prices
Index: 2005 = 100



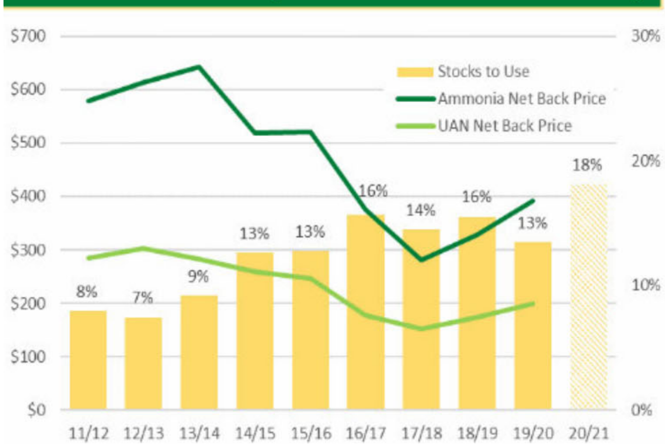
Several positive fertilizer developments are emerging:

- Favorable US growing conditions this summer have led to an expected early harvest season, which should be supportive for fall fertilizer application rates.
- Strong demand for out of India has provided a catalyst for the urea price recovery seen in 2H20 so far.
- US phosphate prices have increased $100 since May lows, due to strong demand out of Brazil and the impact from Mosaic's countervailing duties petition.
- The majority of new potash capacity is now online and being absorbed in the market. No significant new nameplate capacity expected in the near term.

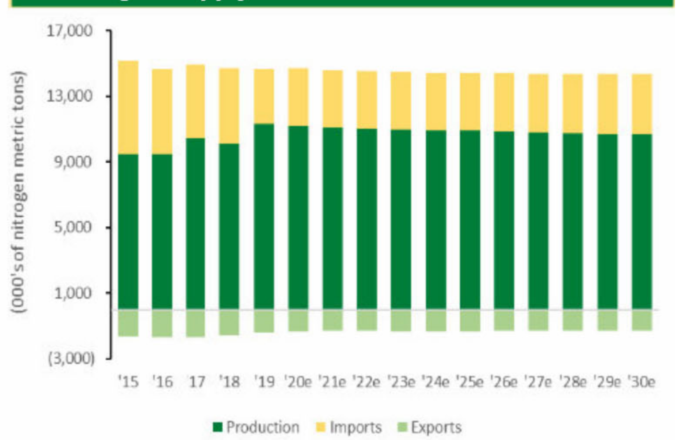
Key Crop Grower Cash Margins
Local Currency Margin/Acre



Corn Stocks to Use Compared to Netback Fertilizer Pricing



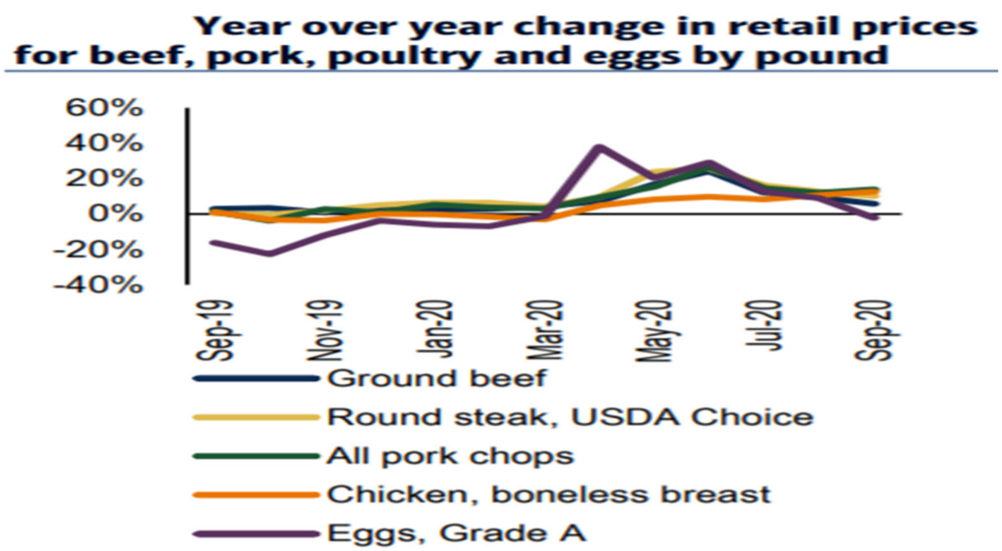
US Nitrogen Supply



Ag Products Components: CVGW, MGPI, ADM, BG, CALM, DAR, FDP, INGR, JBSS, VFF, BRFS, PPC, SAFM, TSN, AVO, VITL, LNDC

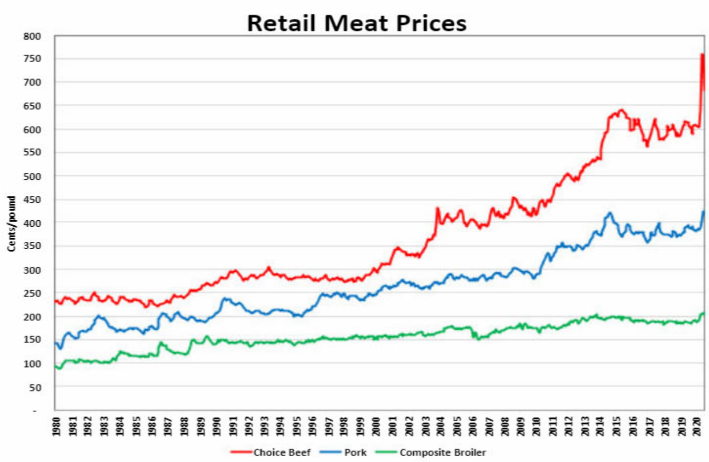
This sub-group has a strong correlation to soft commodities and similarities to commodity stocks so it makes sense to include within the materials sector. The international demand for grains and oilseeds is increasing due to population growth, increasing income, changing diets and urbanization. In many ways, each of these have become interlinked – population growth is largely in developing countries, which are the same areas seeing the highest increase in relative incomes, and also with the greatest shift of consumers from rural to urban areas. Around 41% of grains produced globally are for direct human consumption. While not as well-known as food, feed and fuel, the use of grains and oilseeds in industrial products will play an increasing role in the demand of these commodities going forward. Several factors are behind the push to use more grains and oilseeds in industrial products. As with biofuels, societies are increasingly seeking to replace petrochemical feed stocks with renewable resources. Finally, the increased need to address environmental and community concerns forms a growing part of product marketing. An increasing number of pharmaceuticals are made from crops. Biopolymers which are used in products such as packaging materials, resins, adhesives, bio lubricants, can be sourced from starches from cereals, as well as oils from oilseeds. A growing number of cosmetics and sunscreen are also using soy oil rather than petroleum-based products. In addition to soybeans, wheat is also being sourced for a number of industrial uses. Wheat can be elastic and form films that can be stabilized with heat. As such, wheat gluten can be useful for preparation of adhesives, coatings, polymers and resins, straw particle board, strengthened paper, and adhesives, such as those used on postage stamps.

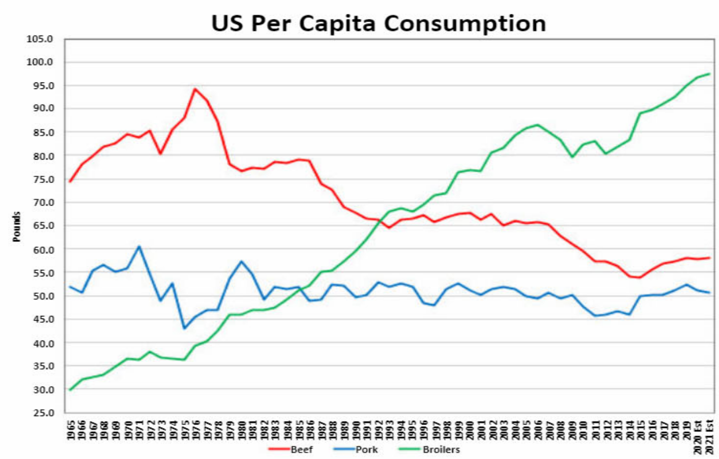
Correlation between grains prices and fertilizer is relatively high. Fertilizer prices are strongly influenced by the demand side of the equation. So, when grains prices are high and farmer margins are good they consume more fertilizer and are willing to pay more. This relationship works in the same way when grains prices fall. Gasoline prices influence both the supply side and the demand side of the grains market. As gasoline prices rise there is more cost pressure on farmers reducing their margins. This is only a small element in their costs though, so the impact is minimal. The reason gasoline prices are positively correlated with grains prices is because of the ethanol story. As gasoline prices rise, ethanol prices usually follow, making ethanol production more profitable and therefore increasing demand for corn. Weather also often plays a major role in grain prices.

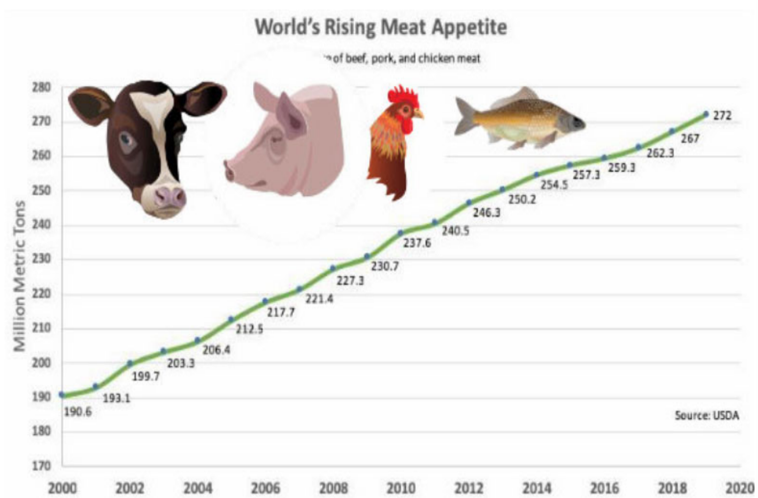


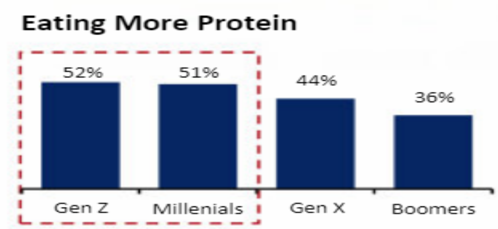
The global protein ingredients market size was $38B in 2019 and is anticipated to experience a CAGR of 9.1% from 2020 to 2027. Rising demand from food products such as milk sausages, spicy sauces, yogurt, spreads, bakery products, cold cuts, and margarine is anticipated to drive the growth. Ag Biotech is rapidly growing, a $20.2B market in 2017 expected to reach $52B in 2026, a CAGR of 11.1%. Agricultural biotechnology is a sector in which a few major players dominate the market. Companies like Monsanto, Bayer CropScience, and Dow AgroScience control numerous patents on plant genetics. Precision farming is an area that has also seen significant growth in recent years. The global precision farming/agriculture market size was valued at $4.1B in 2018 and is expected to register a CAGR of 14.2% until 2025.

2020 has been a tough year across the group, particularly the protein names. SAFM investor presentations always provide great insight into market data.

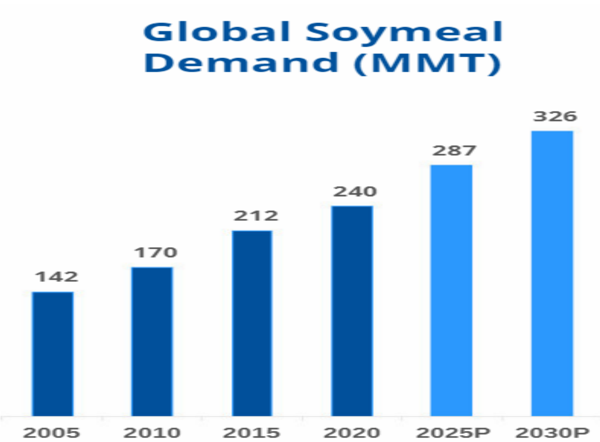

Retail Meat Prices
Cents/pound
Choice Beef
Pork
Composite Broiler

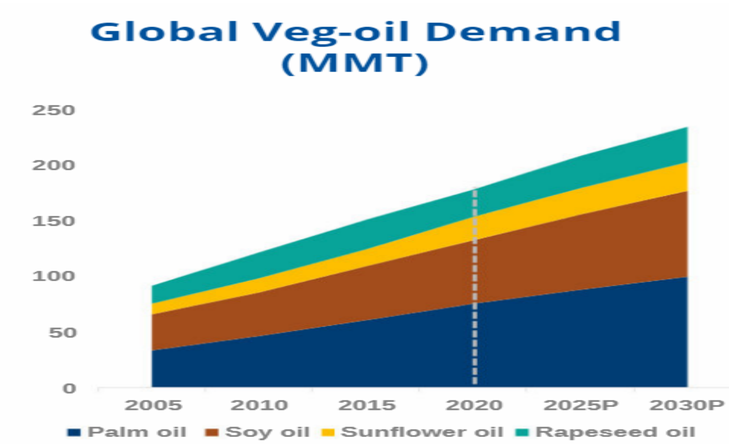

US Per Capita Consumption
Pounds
Beef
Pork
Broilers

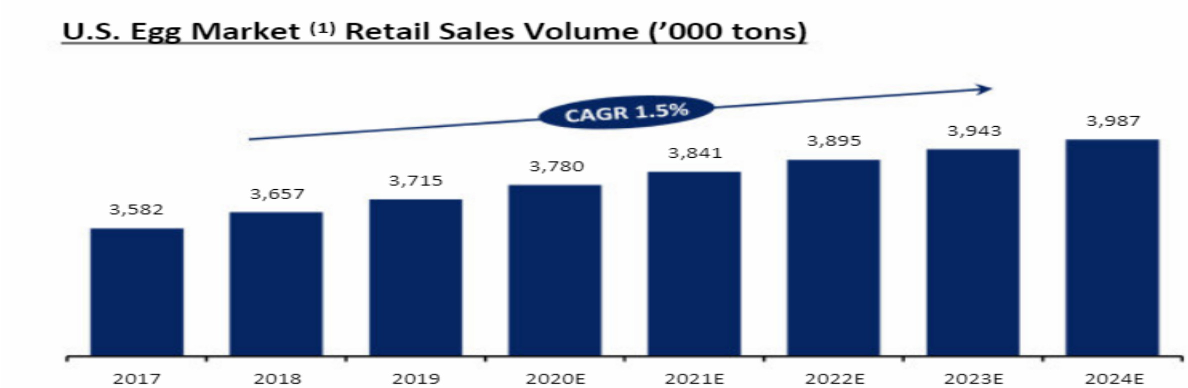

World's Rising Meat Appetite
Million Metric Tons
190.6
193.1
199.7
203.3
206.4
212.5
217.7
221.4
227.3
230.7
237.6
240.5
246.3
250.2
254.5
257.3
259.3
262.3
267
272
Source: USDA

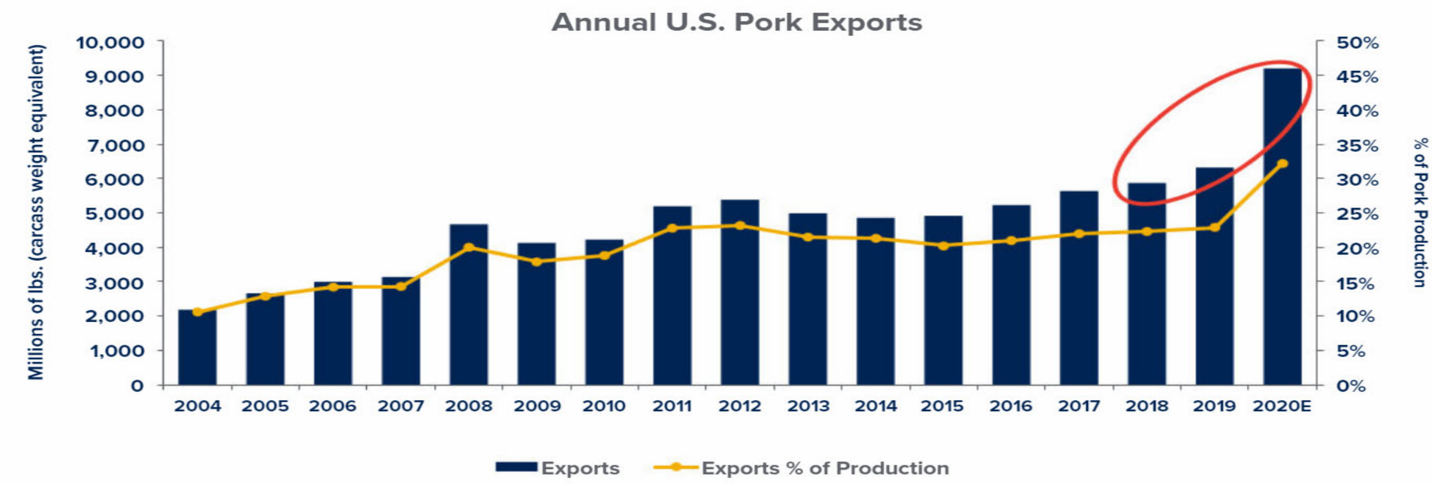

Eating More Protein
52%
51%
44%
36%
Gen Z
Millenials
Gen X
Boomers

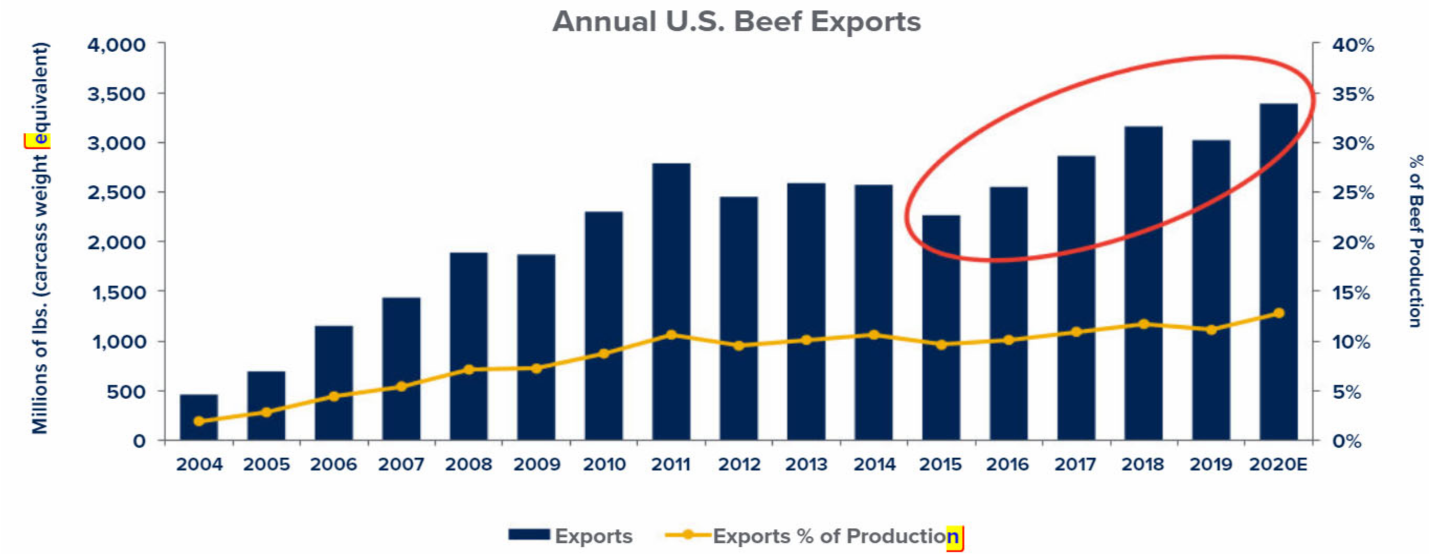

Average Retail Price Per Serving
$0.13
$0.20
$0.63
$0.88
$0.99
$1.32
Eggs
Milk
Chicken
Pork Chop
Ground Beef
Beef Roast


Global Soymeal Demand (MMT)
142
170
212
240
287
326
2005
2010
2015
2020
2025P
2030P

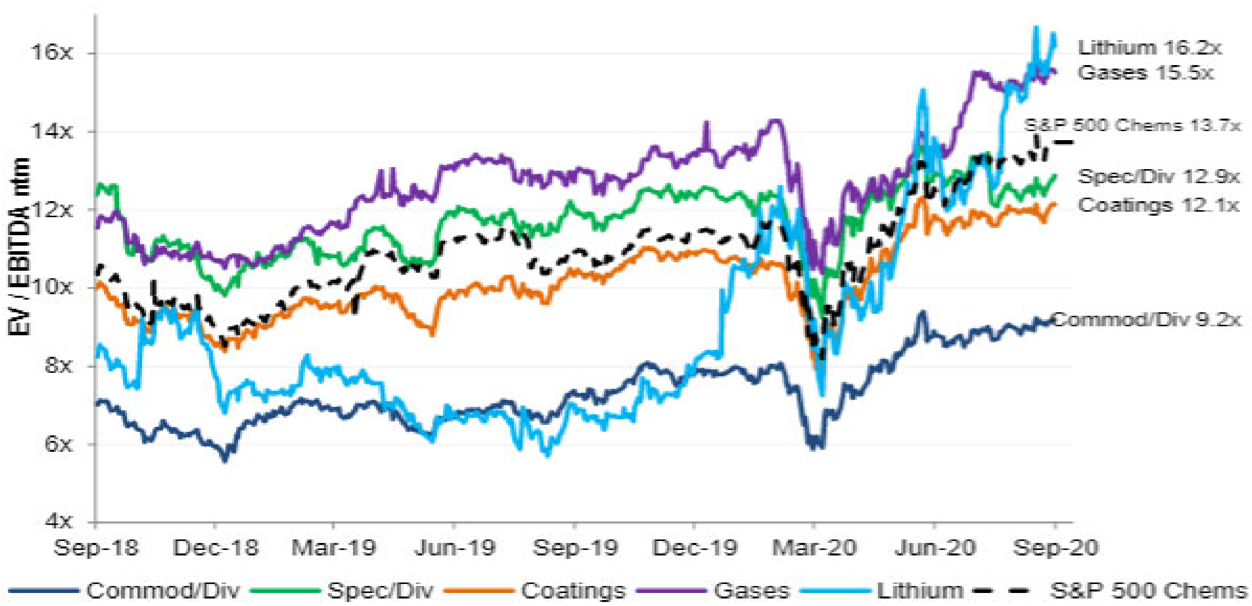

Global Veg-oil Demand (MMT)
2005
2010
2015
2020
2025P
2030P
Palm oil
Soy oil
Sunflower oil
Rapeseed oil


U.S. Egg Market (1) Retail Sales Volume ('000 tons)
CAGR 1.5%
3,582
3,657
3,715
3,780
3,841
3,895
3,943
3,987
2017
2018
2019
2020E
2021E
2022E
2023E
2024E





__Industry Valuations__



In terms of valuation, the specialty chemical names have historically traded at a premium to the basic chemical stocks. P/E, EV/Revenues and EV/EBITDA can all be used as valuation metrics, while EBITDA margins & ROIC tends to determine whether a name should trade at a premium or discount to peers. Historically, transactions in the space have taken place at 1.35X Sales, and 10X EBITDA the last four years.

	Global Chemicals					Coatings		Industrial Gases		Lithium			
Ticker	DOW	LYB	EMN	CE	ASH	PPG	RPM	APD	LIN	ALB	LTHM	ECL	Avg
Rating	In Line	Outperform	In Line	Outperform	In Line	In Line	In Line	Outperform	Outperform	Underperform	In Line	Outperform	
End Market Exposure													
Autos & Transport	15%	30%	21%	25%	-	30%	-	-	-	45%	50%	-	18%
Consumer Goods & HPC	15%	15%	15%	20%	31%	-	34%	-	-	-	-	-	11%
Electronics	15%	-	2%	10%	-	-	-	15%	9%	40%	40%	-	11%
Food & Feed/Bev	-	-	7%	5%	-	-	-	4%	8%	-	-	41%	5%
Healthcare	-	-	-	-	27%	-	-	5%	18%	-	-	14%	5%
Housing & Construction	20%	10%	14%	25%	20%	36%	34%	-	-	-	-	9%	14%
Manufacturing	-	-	10%	-	14%	19%	20%	13%	22%	-	-	12%	9%
Metals & Mining	-	-	-	-	-	-	-	15%	13%	-	-	2%	3%
Oil & Gas	-	25%	5%	-	2%	-	-	46%	19%	15%	-	8%	10%
Paper & Packaging	5%	15%	-	-	-	-	-	-	-	-	-	6%	2%
Plastics	20%	-	15%	-	-	-	-	-	-	-	-	-	3%
Other	10%	5%	11%	15%	6%	15%	12%	2%	11%	-	10%	8%	9%
Geographic Exposure													
Asia/Pacific	23%	13%	25%	27%	19%	17%	3%	33%	25%	41%	65%	12%	25%
Americas	46%	56%	48%	33%	49%	53%	77%	44%	47%	31%	20%	64%	47%
Europe	23%	27%	17%	39%	32%	21%	19%	19%	27%	22%	10%	19%	23%
Africa/Middle East	9%	4%	11%	1%	0%	10%	1%	5%	2%	7%	5%	5%	5%
Margins													
Sales 2021e ($Bn)	$38.5	$27.5	$8.6	$5.7	$2.4	$14.7	$5.7	$9.5	$28.7	$3.3	$0.4	$13.1	$13.2
Sales Growth 2021e	6.9%	7.9%	4.2%	7.7%	3.1%	8.5%	3.4%	8.2%	6.3%	8.3%	30.4%	6.5%	8.5%
EBIT Margin 2021e	7.9%	10.8%	15.4%	17.9%	10.2%	14.0%	12.8%	27.1%	21.2%	19.5%	12.9%	17.0%	15.6%
Valuation													
$/shr	$50.37	$79.00	$83.83	$113.82	$71.07	$125.77	$81.95	$295.81	$246.10	$97.96	$9.05	$204.02	
Mkt Cap ($Bn)	$40.6	$31.5	$10.8	$14.7	$4.6	$31.5	$9.7	$48.9	$113.8	$7.7	$1.2	$55.7	$30.9
Enterprise Value ($Bn)	$58.3	$39.1	$19.4	$16.5	$5.7	$32.3	$12.9	$69.3	$140.1	$14.0	$1.5	$63.9	$39.4
EBITDA 2021e ($Bn)	$5.9	$4.7	$1.9	$1.6	$0.6	$2.7	$0.9	$4.4	$9.1	$0.9	$0.1	$3.1	$3.0
EV/EBITDA 2021e	9.9x	8.2x	10.3x	10.3x	10.2x	11.8x	14.7x	15.8x	15.3x	16.2x	19.8x	20.5x	13.6x
EPS 2021e	$2.12	$6.90	$6.98	$8.84	$3.30	$6.31	$3.53	$10.25	$9.00	$4.45	$0.27	$5.72	$5.64
P/E 2021e	23.8x	11.4x	12.0x	12.9x	21.6x	19.9x	23.2x	28.9x	27.3x	22.0x	33.6x	35.7x	22.7x
FCF Yield 2021e	8.3%	5.9%	7.6%	7.2%	5.5%	5.5%	4.7%	3.4%	3.2%	0.3%	-2.7%	3.2%	4.3%
Div Yield	5.5%	5.3%	3.2%	1.1%	1.5%	1.7%	1.7%	1.8%	1.6%	1.6%	0.0%	0.9%	2.2%
Leverage													
Net Debt 2021e ($Bn)	$12.6	$11.2	$4.9	$1.9	$1.3	$2.2	$1.9	$2.8	$12.6	$3.1	$0.2	$5.0	$5.0
Rating (Moody's)	-	Baa1 (Neg)	Baa3	WR	-	A3 (Neg)	Baa3	A2	A2	Baa2 (U/R)	-	Baa1 (Pos)	
Net Debt / EBITDA	2.1x	2.4x	2.6x	1.2x	2.3x	0.8x	2.1x	0.6x	1.4x	3.6x	2.2x	1.6x	1.9x

Management Commentary

Air Products (APD): When you look at the fundamental drivers for sustainability at Air Products, we are the largest producer of hydrogen in the world. Hydrogen is used for the cleaning of the fuel that we all use for driving the cars and the trucks around the world. Hydrogen is a very key element of that sustainable operation. In addition, we are one of -- we are the largest supplier of heat exchangers for the production of liquified natural gas, which is providing clean energy for the world. And in addition, we have significant developments in our products, oxy-fuel burners and the like, in order to make the operation of our customers cleaner. So overall, when you look at Air Products, we are about energy, environment and emerging markets.

Sherwin Williams (SHW): In DIY, we've seen unprecedented demand driven by consumers' nesting and doing projects. Eventually, we expect this to return back to more normal low single-digit growth rates. Let's dig into some of the drivers in more depth. First, it's important to understand that U.S. demographics are a tailwind, driving demand for years to come. Baby Boomers are aging in place and remodeling. While Gen X and Millennials are moving up or buying their first homes and engaging in professional or DIY projects. And hot on their heels is the largest generation in U.S. history, Gen Z. The median age of the nation's 137 million homes is 40 years. 54% were built prior to 1980. Home price appreciation also gives homeowners confidence to remodel. Since the 2012 time frame, home values have continued to increase giving homeowners confidence to invest in repairs, renovations and remodeling.

Dow Chemical (DOW): And market tightness in polyethylene and isocyanates are both supporting price increases, which, together, are driving improved earnings and incremental margin upside. The increased durables demand we expected really led by the improving automotive and construction industries around the world is also benefiting our polyurethanes business. Also coupled with some supply disruptions caused by some unplanned European outages from our peers, the MDI markets have also seen pricing strength perform a little better than expected.

Corteva (CTVA): We are seeing commodity demand and foreign currency rates stabilize in several key markets, and we're seeing some constructive actions from China regarding the pace and the size of their corn and soybean purchases from the U.S. On the supply side of commodities, that derecho event, and clearly, the drought that we're seeing in kind of that core Midwest of the U.S. have spurred some increases in commodity levels.

CF Industries (CF): So the 3 components, I'd say 3, there's obviously a supply and demand, then there's the energy structure, which we'll get into also that are important going forward. Looking at supply and demand, I'll start with demand in the first, and it has been very positive. Not only has North American demand been steady and stable, but you're seeing exactly that issue of record demand in India, fantastic monsoons going into the second season now, tender after tender, and India's the only country in the world that tenders. And Brazil is up probably 15% over last year. With also consistent demand, they're going into their peak application season or they're already in it now for corn, which starts in August and then cotton in November; and then second crop corn in December, January and February, those movements. So we see the consistent demand coming from Brazil over the next several months, which also helps balance the world market. And then we go into our position in our import peak period of Q1 and Q2. On the supply side, I think the surprise has been the Chinese production and how they stayed out of the market and some of these runups in India. And then it became more active once the price level got to something that was acceptable to them. And this has been one of our stories is you have to bid in the Chinese ton, and that comes at a price.

Archer Daniels (ADM) on the feedstock opportunity for bio-mass diesel: "So renewable green diesel and really veg oils role in a more sustainable renewable fuel is certainly top of mind. And it's exciting. But I think when you look at the significant volume uptick that's coming in that space you still have a real benefit versus petroleum equivalents to look at soybean oil and canola oil as a feedstock and as a reliable domestic supplied feedstock. And so I really think it's also an opportunity for us to help differentiate the way that we supply feedstock to an industry that's going to value a lower carbon footprint. And so there's a lot to unpack when you think about renewable green diesel, well beyond just the 3 billion or 2 billion or however many billions of gallons you want to put out there in terms of your estimate. It's a real opportunity for us to set ourselves apart from other commodity suppliers of those feedstocks."

Tyson (TSN) on its focus in International markets: "Our International portfolio continues to give us great opportunities for growth and synergy. Our view remains that the vast majority of global protein consumption growth will happen outside of the U.S., so we are positioning our company to meet that need. During the last quarter, we found new profitable international outlets for U.S.-based byproducts that would otherwise realize relatively low values domestically. By leveraging our U.S.-based scale with our newly acquired and legacy International businesses, we've identified repeatable opportunities to margin up bulk export products into a convenient, value-added and retail-ready format for international markets."

Industry Summary

- Demand is correlated with economic growth and thus GDP, Petrochemical demand is closely tied to global oil demand (prices).
- Lithium demand is driven by EV penetration/demand, but prices have slumped with over-supply
- Fertilizer demand is consistent with rising global populations while crop prices, weather patterns, and planting data all play a role
- Gasification, Carbon Capture and Hydrogen for Mobility three key trends for specialty gas industry
- Grains & Oils are seeing a strong opportunity in biofuels

OptionsHawk Executive Summary and Top Picks

The chemical industry sets up well into 2021 with the economic recovery though my preference is to focus on the higher margin industrial gas names, the thematic growth driven coatings names, and selectively the crop & fertilizer companies with improving market dynamics.

Linde (LIN) and **Air Products (APD)** are both high quality companies and I continue to prefer APD with its higher margins and stronger opportunity in hydrogen with valuations in-line. **Eastman (EMN)** screen attractive among the large caps on valuation with strong FCF and margins while **Celanese (CE)** continues to be a preferred name at a premium valuation with a high ROIC, superior margins, and strong FCF. Lastly, **NewMarket (NEU)** screens well among the smaller cap names on valuation and operational efficiency.

The specialty chemicals group consists of several small cap companies and a few that stand out positively including **Ingevity (NGVT), Chase (CCF), CSW Industrial (CSWI), Albany (AIN) and Balchem (BCPC)**.

In the Coatings group **Sherwin Williams (SHW)** is a long-time best-in-class operator that stands head and shoulders above peers. **PPG Industries (PPG)** is also a high quality name and carries less debt with strong ROIC. **Tronox (TROX)** screens best in the TiO2 names slightly edging **Chemours (CC)**.

In the Ag & Crop group **Scott's Miracle Gro (SMG)** remains a leader with impressive growth and FCF and tailwinds from the Cannabis industry. **Nutrien (NTR)** stands out among the Fertilizer names with its diversified businesses and much higher margins with strong FCF. Lastly, **FMC Corp (FMC)** is a high quality crop protection name with double digit ROIC and sustainable growth.

Tyson (TSN) is the clear top operator in the Ag Products space and trades at attractive valuation with a balanced business and a return of the foodservice market in 2021 should strengthen results. **Darling (DAR)** is a favorite I did research on in 2020 as a top play on biodiesel. **John B Sanfilippo (JBSS)** continues to stand out as an attractive small cap.

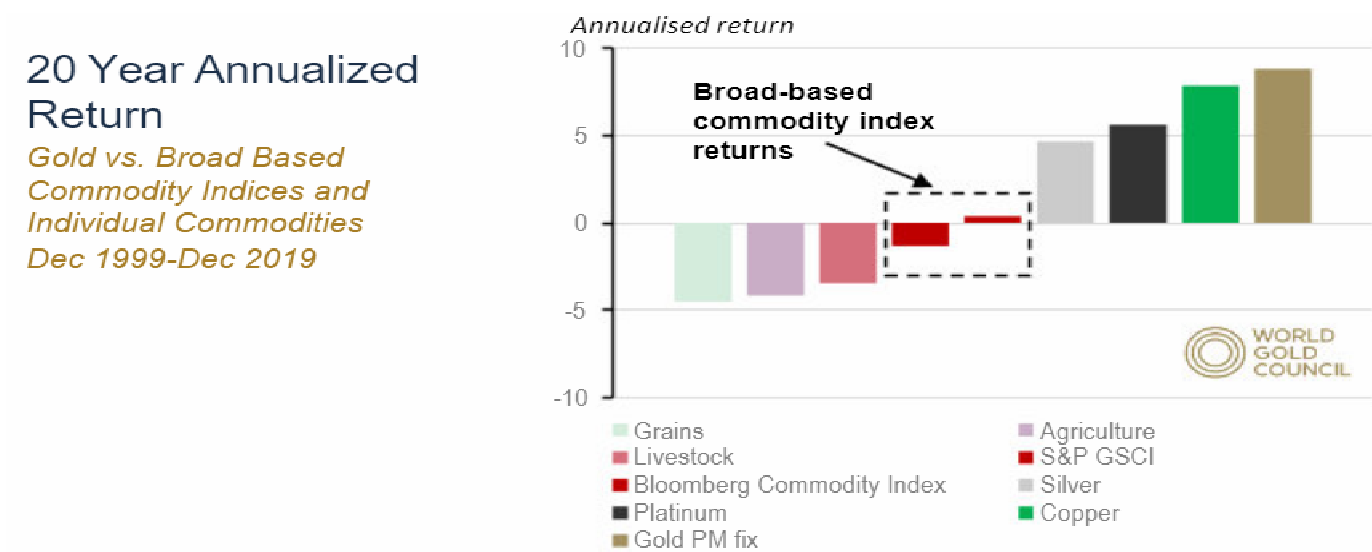
<u>Metals</u>

Industry Synopsis

The metals group can be broken up into two basic groups, Industrial metals like Coal, Steel, Aluminum, Copper & Iron Ore, and the Precious Metals like Platinum, Silver, and Gold. In 2020 we saw strong moves in precious metal miners with the strong price moves in Gold & Silver. The industrial metals were hurt by the sharp slowdown in economic activity with weakness in construction, energy and automotive markets. Copper was an outperformer among industrial metals.

Stock selection within this group can be tricky, though there generally is little dispersion among the names as metal stocks tend to trade day to day with the movement in the underlying commodity as supply/demand dynamics shift. It is a very industrial driven group with close ties to end-markets such as Auto, Aerospace, Construction, and Energy. Aluminum is primarily used in Transports/Packaging, Copper in Construction/Electrical, Iron/Steel in Auto, Construction and Oil/Gas, Nickel in Consumer/Industrial, and Zinc in Construction. Many of the larger mining companies are global players and tend to look for management commentary at the large players like Glencore, BHP Group, Rio Tinto, Anglo-American, South32 and Antofagasta. Further, China tends to be the largest source of industrial demand and metals pricing often correlates to economic activity in China. BHP issues an economic and commodity outlook each August.

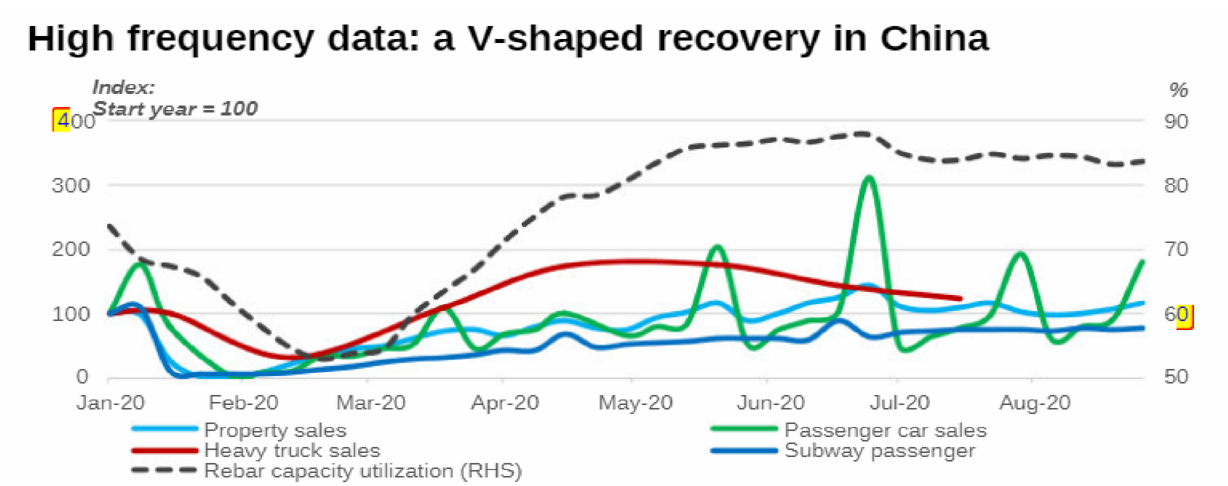
Some key characteristics of materials for future megatrends include lightweight, corrosion resistance, conductivity, purity, thermal management, lubricity, reliability, durability, miniaturization, and strength. A few of these megatrends include electronic miniaturization, additional aero/auto instruments, high performance optical devices, innovation in medical sensors and diagnostics, oil & gas extraction from previously inaccessible locations, alternative energy, and LED.

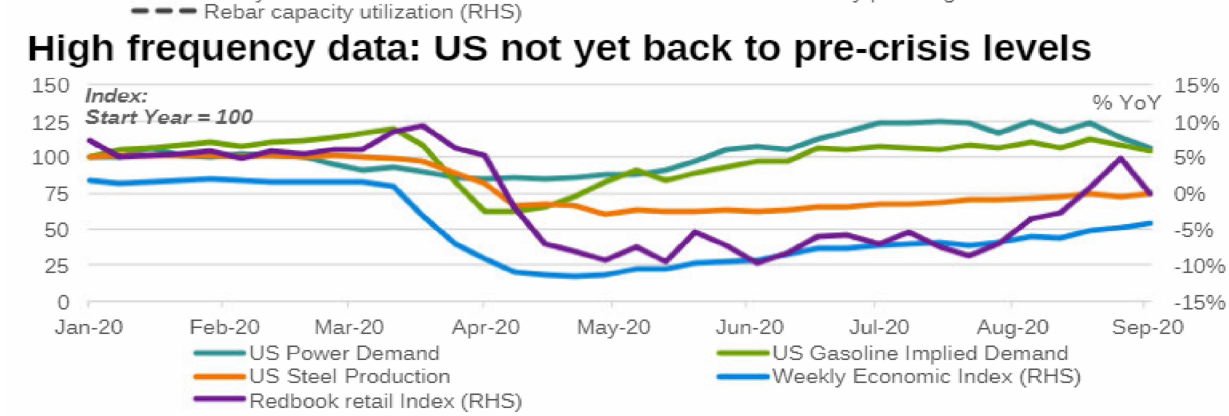


Investment Considerations

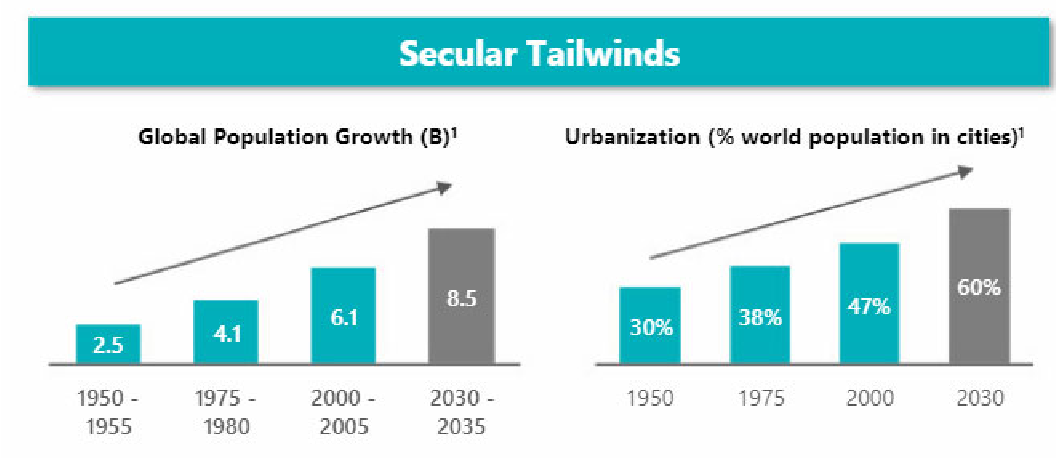
This is a very cyclical group and important to determine where on the commodity price and/or economic cycle markets are currently. The volatility in pricing results in volatile revenues, earnings and cash flows, which can make valuation techniques difficult. The high fixed costs required also leads to debt-heavy balance sheets. With these mining companies, metrics are often counter-intuitive, such as the PE Ratio, it is often best to buy when PE's are historically high (indicating low earnings), and sell when PE's are low (indicating peak/high earnings), due to the cyclical swings. A good approach to valuing many of these companies is to look at 10 years of earnings/revenues, and value the company based on where it is in the current cycle to calculate where earnings/revenues will get at mid-cycle and late-cycle stages. Seasonality stats show February and October as strong months, while January, March, May, September, November and December are weaker.

EV/EBITDA is primarily used for large, stable and diversified miners such as BHP Billiton, Rio Tinto, Glencore and Vale. For these companies, mining project life is well defined and cash flows are relatively predictable. If one mine goes under, this will not have an outsized effect on EBITDA because there are several mines across several commodities being extracted concurrently. P/NAV is more popular for miners that focus on one or two commodities – it ascribes value given to each ounce of gold or whatever the relevant unit metric is for the metal. Where the P/NAV multiple trades at is dependent on how de-risked the mining asset is (when the next stage is reached, the profits become less uncertain). With each stage of development, the P/NAV multiple will trade higher – from feasibility (preliminary economic assessment, pre-feasibility & feasibility) to construction to production to project expansion. Most explorers, developers and junior producers will be evaluated on P/NAV. The P/NAV for explorers can be 0.3-0.5x, so that there is a healthy risk premium embedded. The highest P/NAVs are the royalty companies, perceived by the market to have low operational risk. Price/Cash Flow is the second most popular metric for most non-global, diversified miners. Usually Price/Cash Flow is looked at from a one year out and two year out basis. P/CF will also heavily consider the country risk for the miner, as assets in developed nations are more likely to see work stoppages due to labor shortages, strikes and other unforeseen production delays. Other valuation metrics include EV/P1 Reserve, EV/P2 Reserve, and EV/Resource. Other key metrics we will look at are the Quick Ratio for assessing financial health, Operating Margins for profitability/cost management, FCF Yield, Asset Replacement Ratio and ROE for assessing management.





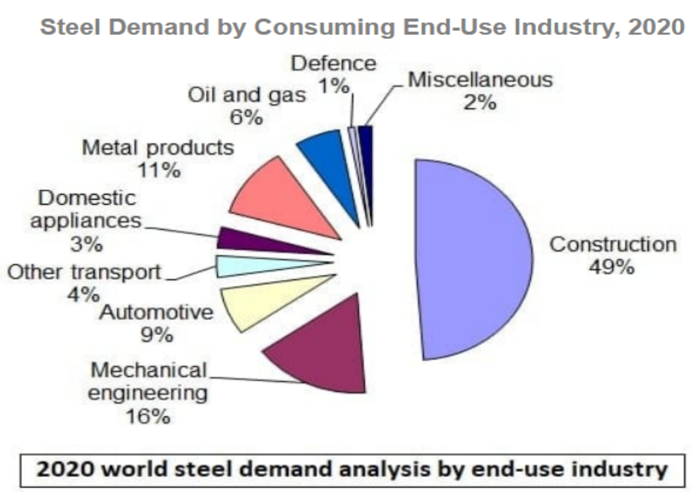
Source: Rio Tinto, Bloomberg, CEIC, Mysteel



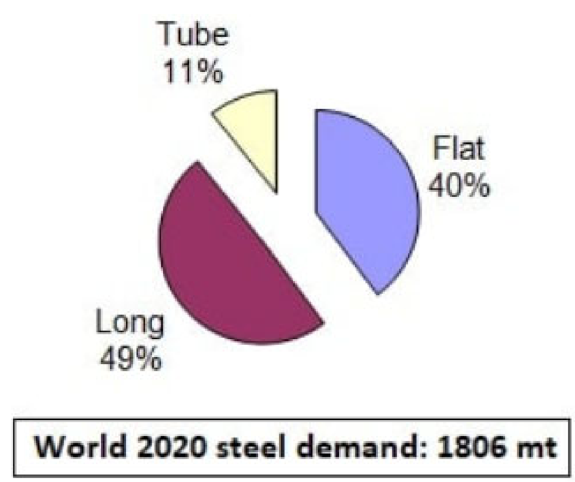
Diversified: RIO, BHP, VEDL

Steel: NUE, MT, PKX, TS, RS, STLD, EAF, GGB, TX, SID, CMC, X, WOR, SIM, AKS, MTL, SCHN, RYI, ZEUS

Steelmaking is the process of turning iron ore and other components into carbon steel or alloys. This involves heating metallurgical coal (also known as met coal, steelmaking coal – which is a certain grade of bituminous coal) into coke and using the concentrated carbon substance to transform iron ore into steel. Steelmaking also involves the recycling of steel scrap into new steel for commercial use. Machines heat and pressure steel slabs using rolls in a rolling mill to get to the standard for hot rolled coil (HRC). To get to cold rolled coil (CRC) (more expensive as it is more refined than HRC), the HRC is pickled through an acid bath and rolled even thinner. CRC is stronger than HRC. The construction and transportation sector, including both automobiles and railways, consumes most steel worldwide. Cumulatively, these two sectors consume two-thirds of the steel produced globally. Other sectors that are major consumers of steel include energy, home appliances, machinery, and defense. Market tracks closely the Architecture Billings Index, which is the forward-looking indicator for nonresidential construction activity, with a lead time of about 9-12 months. The steel industry uses significant amounts of raw materials (mainly iron ores, coal and scrap) and energy, and is also a major source of negative environmental impact.

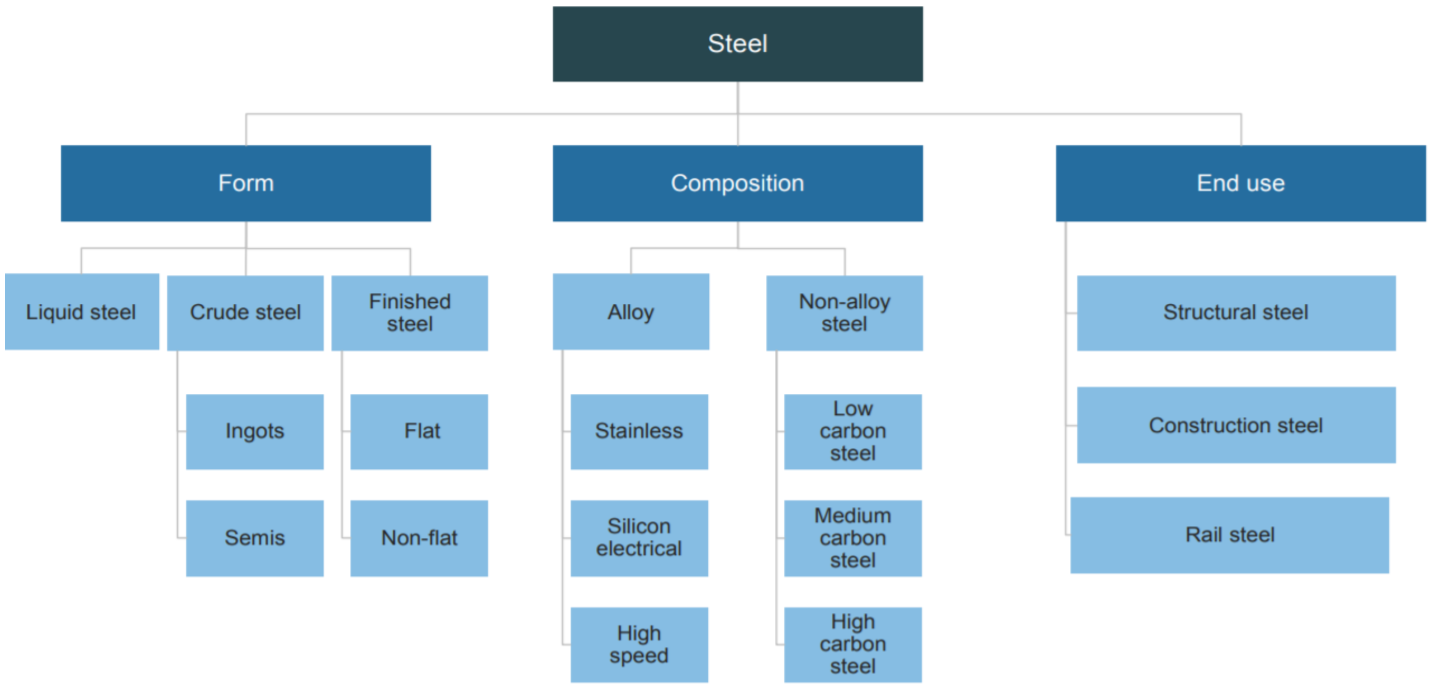


World steel demand by end-use market



World steel consumption by product shape

Steel markets have continued to weaken as a group closely tied to economic activity, and in particular Industrial activity. Weakness has persisted in Automotive & Oil and Gas while Construction activity is a major end-market and seeing positives in Residential but a key driver moving forward will be any progress on Infrastructure investments which have trended down for years.



The world steel forecast is that 1.65 billion tons of crude steel will be produced this year and that production will increase 3.8% to 1.71 billion tons in 2021.

The OECD commented on Steel earlier this year "Steel market fundamentals have weakened considerably in 2019. Steel production growth has turned negative in all regions, with the exception of Asia and the Middle East. Weakening global economic activity, uncertain prospects for steel demand growth, and the upturn in new capacity investments in some regions continue to cloud the outlook for the global steel market and excess capacity."

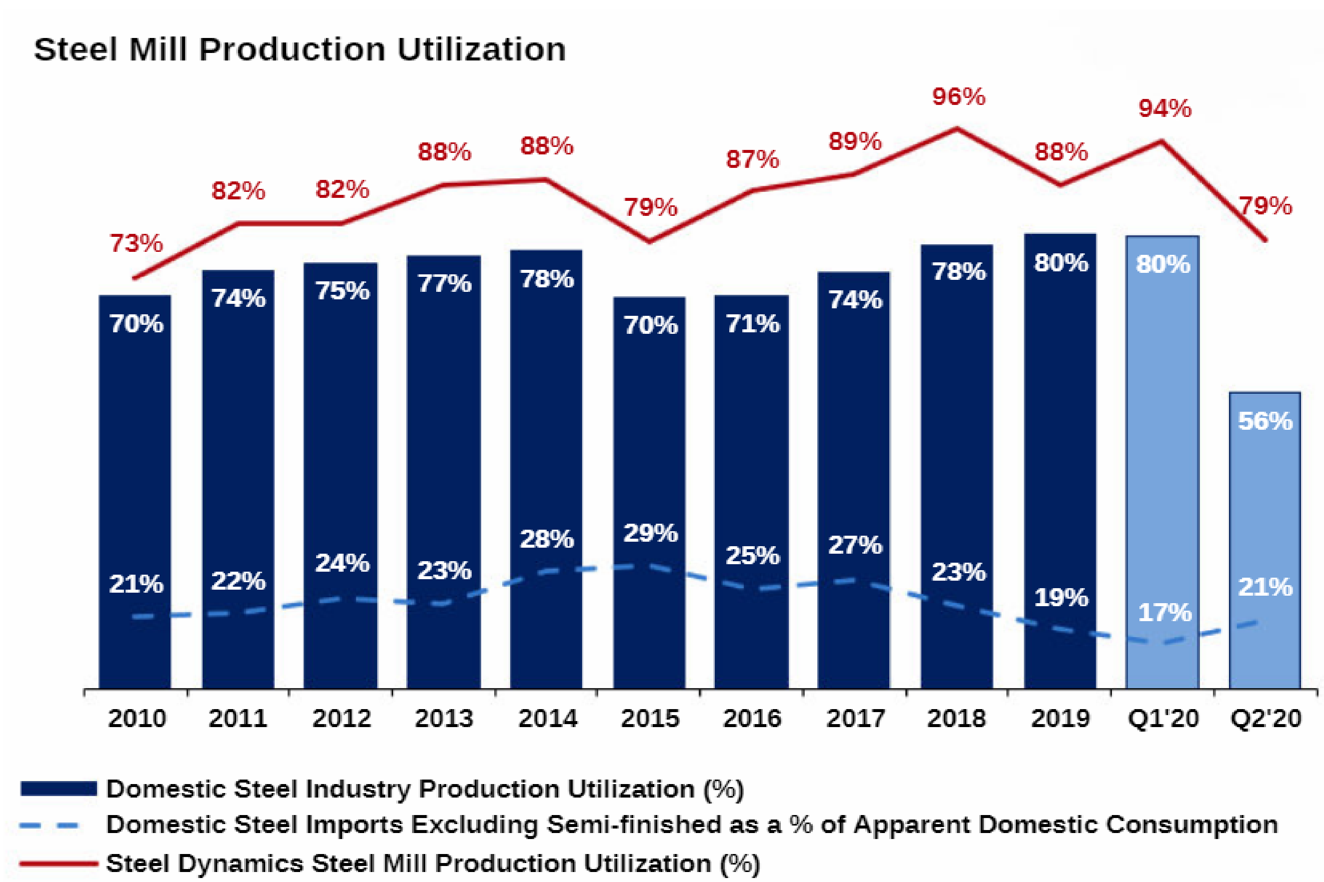
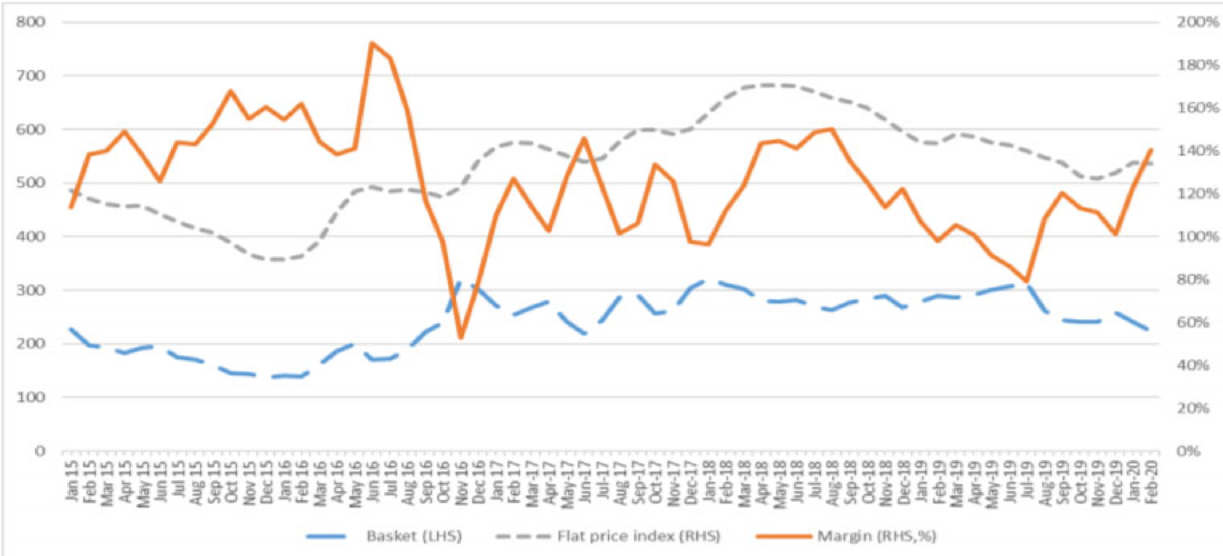
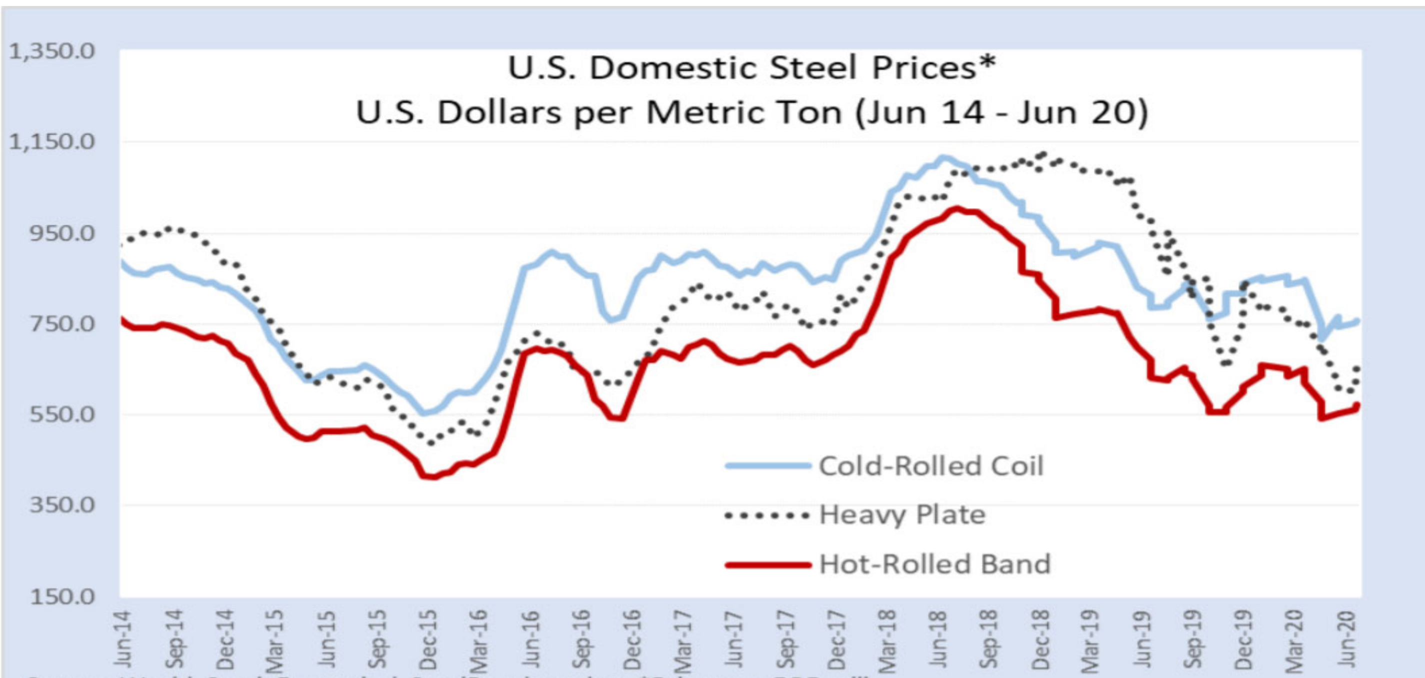
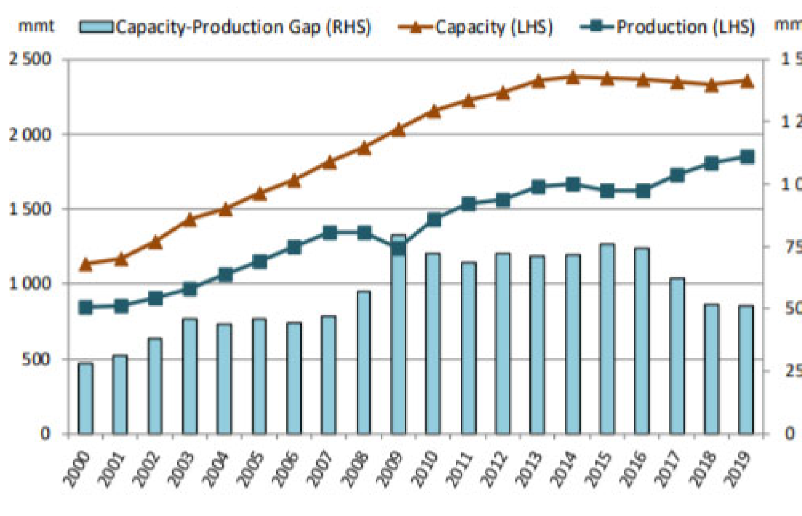


Figure 8. Margin between steel and raw material prices



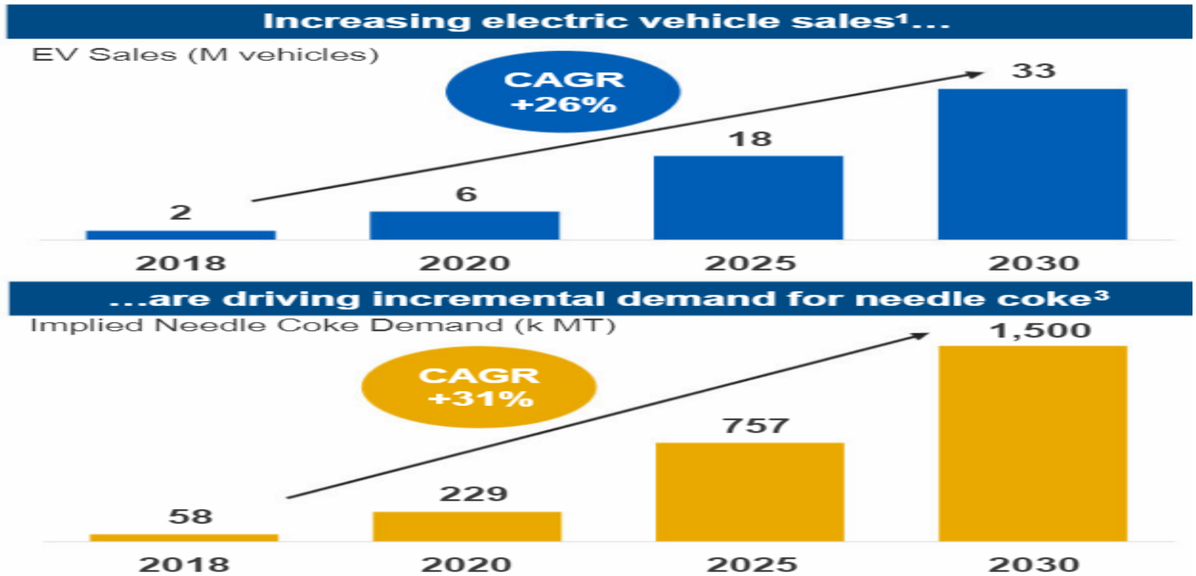


Source: World Steel Dynamics' SteelBenchmarker. *Prices are FOB mill.



The raw materials basket for steel production includes 70% of the usual quantities of iron ore (1.6 ton) and coking coal (0.77 ton) needed to produce steel in the integrated process and 30% of the quantity of ferrous scrap (1.07 ton) needed to produce steel in the electric arc furnace process.

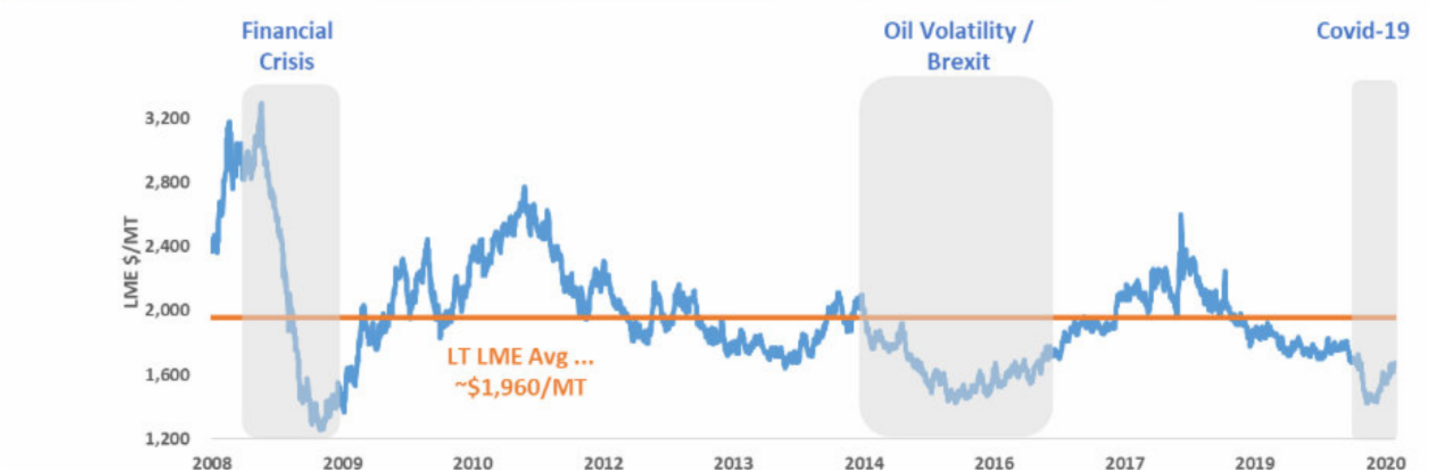
EAF steelmakers continue to take market share from integrated steelmakers due to better cost structure and lower environmental footprint. EAF accounts from 47% of the global steel production outside of China, up from 37% in 1984. In 2018, Chinese steel production was approximately 12% EAF; China's stated objective is to move to 20% EAF steel production by 2025. Graphite is a key material in anodes for lithium-ion batteries.



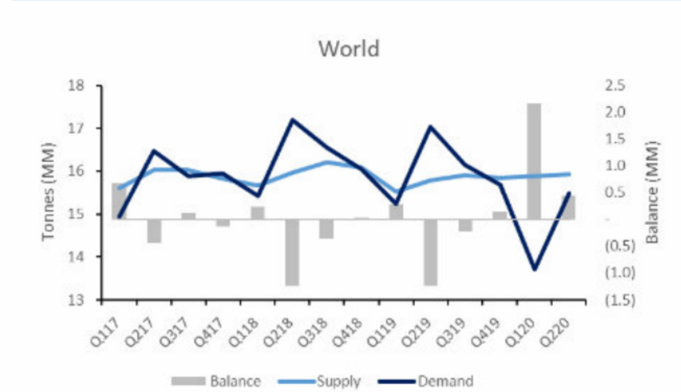
Aluminum & Coal: AA, TECK, ARNC, ACH, CSTM, KALU, ARLP, ARCH, HCC, BTU, CENX, NRP, CNX

Aluminum is widely used in the automotive, construction, and aerospace industries. It's also used in making household appliances and utensils. The automobile industry is the biggest consumer of aluminum while packaging remains the second biggest consumer of aluminum. Since it's a good conductor of electricity, aluminum is also used in electric wires and cables. Although copper is a better conductor of electricity, lightweight aluminum is the preferred choice. Aluminum is also a key raw material in the aerospace industry, it can form almost 75% of an airline's weight. Corrosion resistance, reflectivity, and recyclability are other characteristics of Aluminum, which makes it a favorable choice for various industrial applications. Transportation continues to be the largest market, accounting for 30% of the total aluminum output. As the transportation industry faces growing demand for high fuel efficiency and low gas emissions, aluminum will become an increasingly important factor, offering attractive properties and light weight for aerospace and automotive applications. The Aluminum Market was valued at $147B in 2018, and is expected to reach $190B by 2026, registering a CAGR of 3.2% from 2019 to 2026. In 1H 2020, the global primary aluminum demand was down by 6.6% year-on-year to 30.3 million tons. Ex-China demand contracted by 15.4% to 12.3 million tons, while Chinese demand remained almost unchanged at 18 million tons. Electric vehicle development is also driving aluminum demand higher with more content per vehicle. In packaging there is a move towards aluminum from plastic benefitting demand as well.

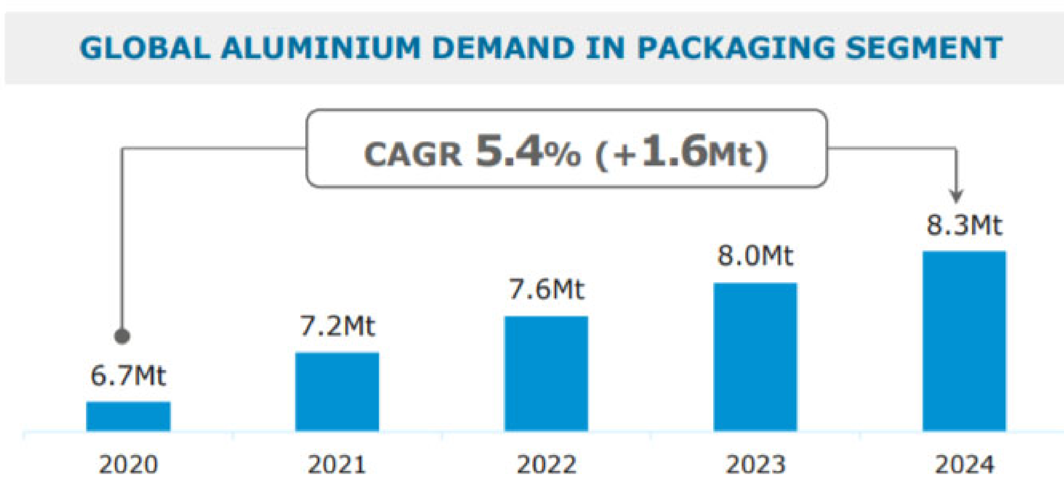
LME Aluminum Pricing



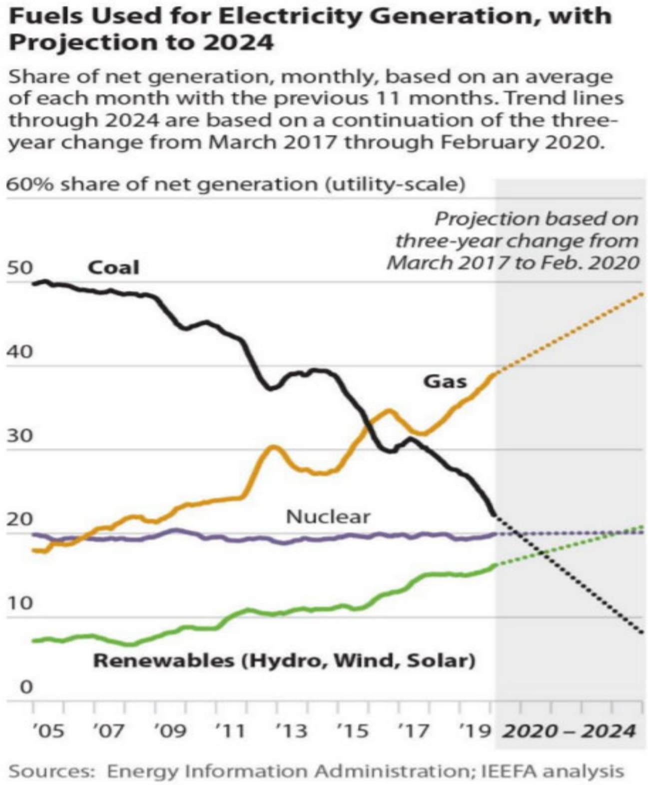
Aluminum Supply and Demand Balance

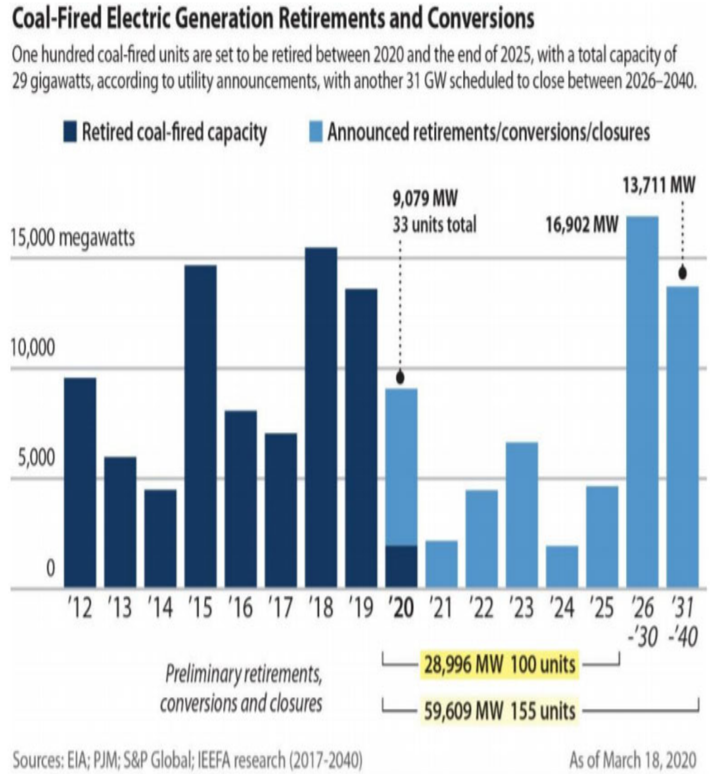


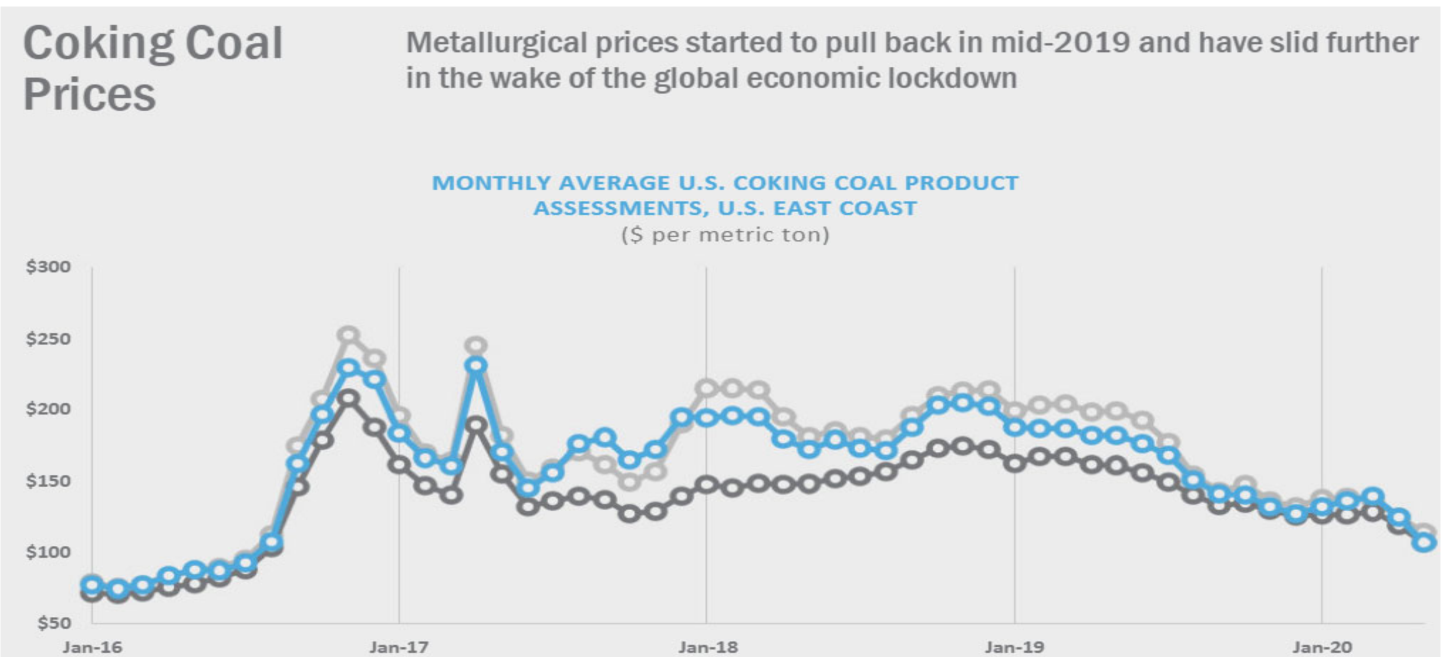
Key Raw Materials



There are not a lot of names left to invest in the coal industry and for good reason, it is a dying industry with electricity generation shifting to alternative energy and natural gas which has caused problems for coal due to its abundance and cheap prices. IEEFA sees coal's share of the generation market potentially dropping to 10% or less by 2025 from current 20%+ levels. Excess capacity persists across the industry, but the situation in the Powder River Basin (PRB) is especially bad. U.S. met coal exports face significant potential downside as companies ramp up efforts to develop techniques to produce steel without met coal. Two noteworthy projects already are under way to enable production of coal-free steel. The first of these projects, the HYBRIT initiative (Hydrogen Breakthrough Ironmaking Technology) is being pushed by three Swedish firms: the mining company LKAB, the steelmaker SSAB and the power producer Vattenfall.



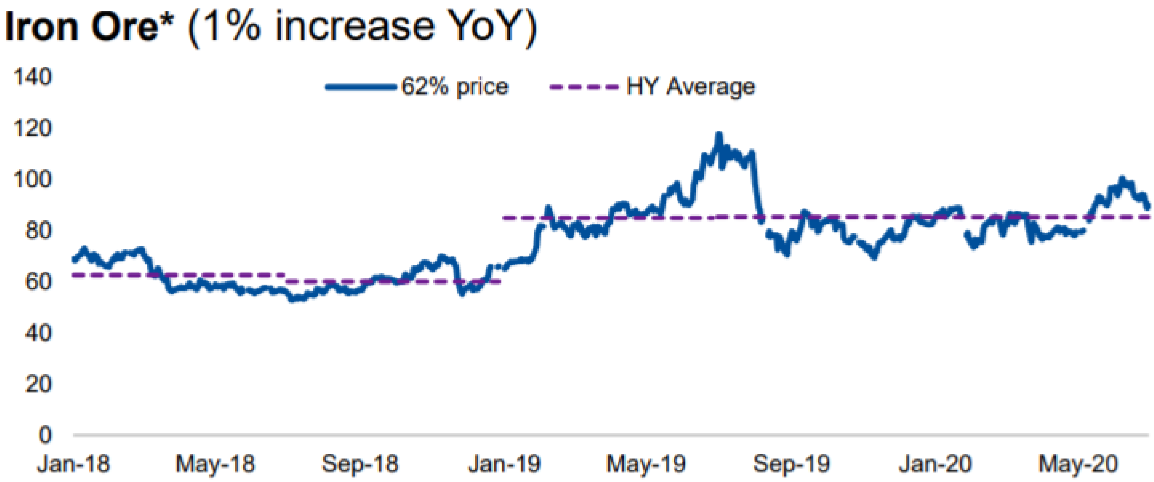


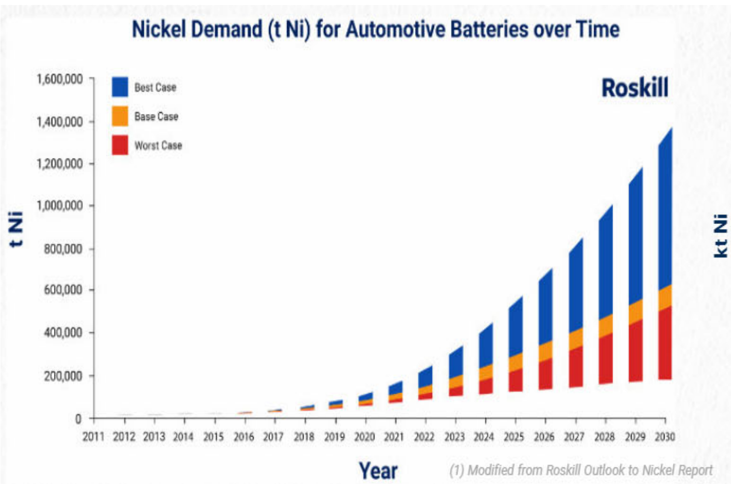


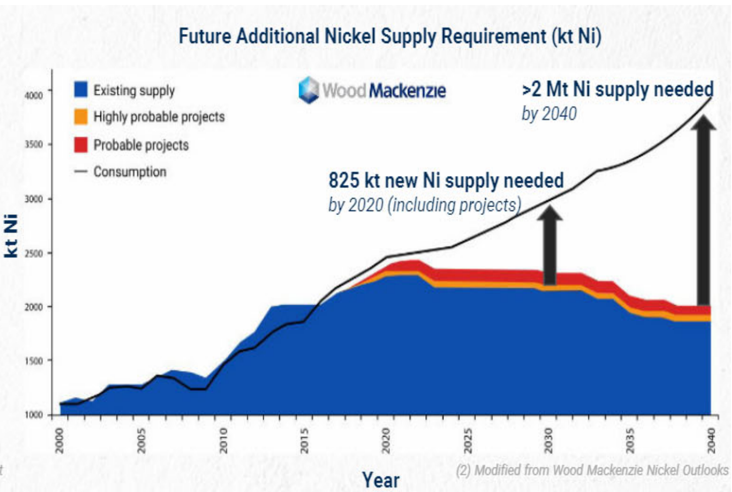
Iron Ore, Nickel, Copper, Rare Earth & Uranium: VALE, CCJ, CLF, NXE, CINR, SCCO, FCX, MP, NEXA

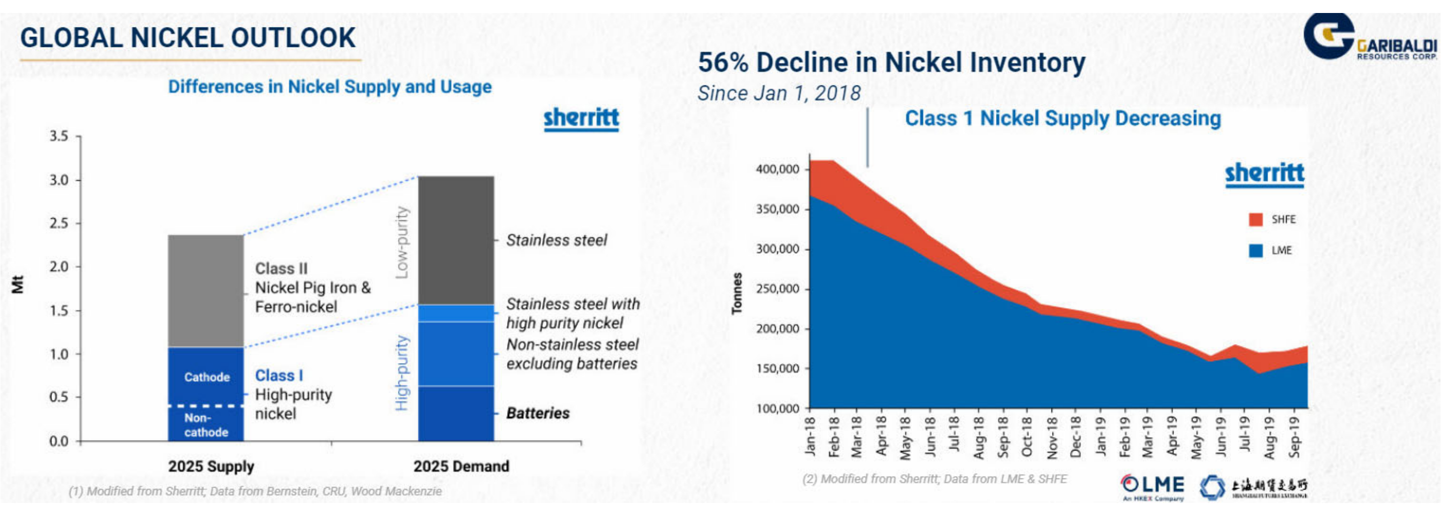
The Global Iron Ore Mining industry consists of companies that mine iron-bearing ores that are primarily hematite, magnetite and taconite. In addition to ore extraction, mining includes the development of mine sites and the processing of ore mined into a concentrate or pellet form. The iron ore and iron ore pellets are then sold as an input to blast furnace steel production. The global iron ore market is highly fragmented with small and large vendors. The market is highly competitive and dominated by large global vendors who have a vast geographical presence, with production facilities located worldwide. The key points affecting competition are price, quality and range of products offered, reliability, operating costs and shipping costs. The big players are taking advantage of economy of scale to squeeze small competitors and gain market share.

The worldwide market for Iron Ore is expected to grow at a CAGR of roughly 8.8% over the next five years, will reach $252B USD in 2024, from $152B million USD in 2019. China continues to have a strong appetite for Iron Ore with imports reaching a record high in July 2020. China's imports are expected to increase to 1.12 billion tons this year, though that estimate is lower than a previous forecast for 1.3 billion. Purchases are expected to climb in 2021 and reach 1.3 billion in 2022.



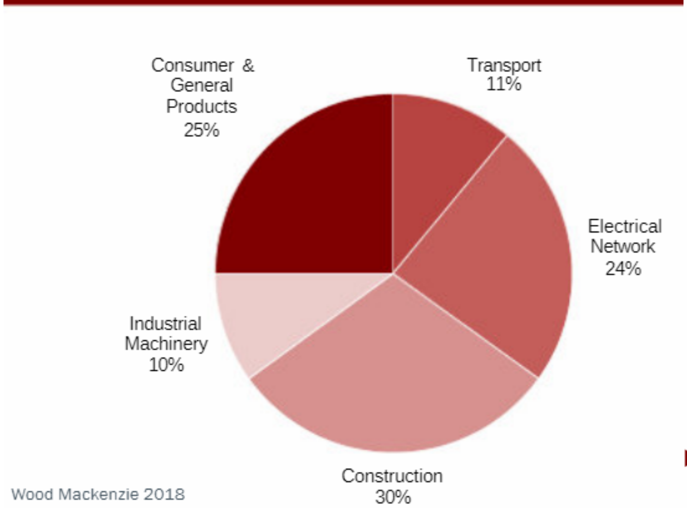




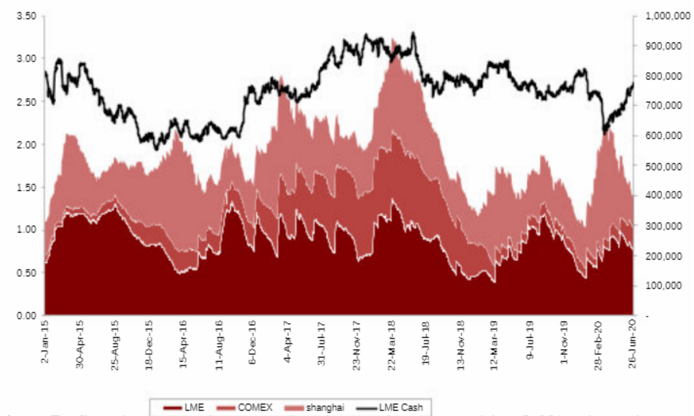


Copper can be rolled, drawn, cast, or extruded into a myriad of products. Common applications include building construction (44 percent), electric and electronic products (19), transportation equipment (20), consumer and general products (11), and industrial machinery and equipment (6). Approximately 70 percent of copper is used as a conduit for electricity. Approximately one-third of copper production is supplied from scrap with the remainder coming from mining of virgin materials. As with any commodity, the price is set by supply and demand, with demand increasing as construction and electronics manufacturing increase. Additionally, copper and the U.S. dollar have a negative correlation; whenever the dollar rises, copper prices fall, and vice versa. Freeport (FCX) and Southern Copper (SCCO) are the main pure plays in the US while other top producers include Coldelco, Glencore, BHP, KGHM, First Quantum, Rio Tinto, and Antofagasta. Internationally, the market for copper is one of the largest of all metals behind iron and aluminum. The size of the global market for refined copper is over $200B and expected to reach $310B by the end of 2026, a CAGR of 5.1%. Prices are closely tied to activity in China, which accounts for roughly half of global copper consumption.

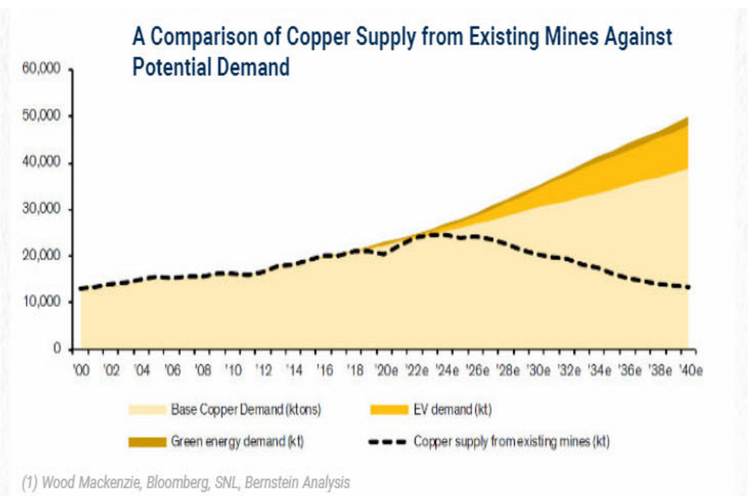
Copper Consumption by End-use

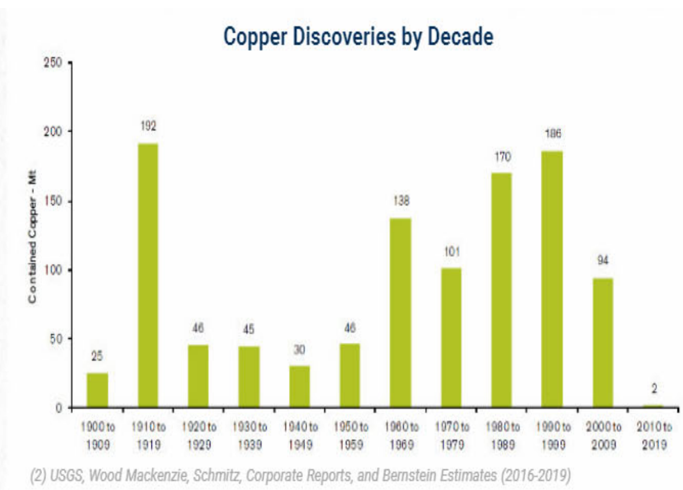


LME Copper Cash Price vs. Inventories

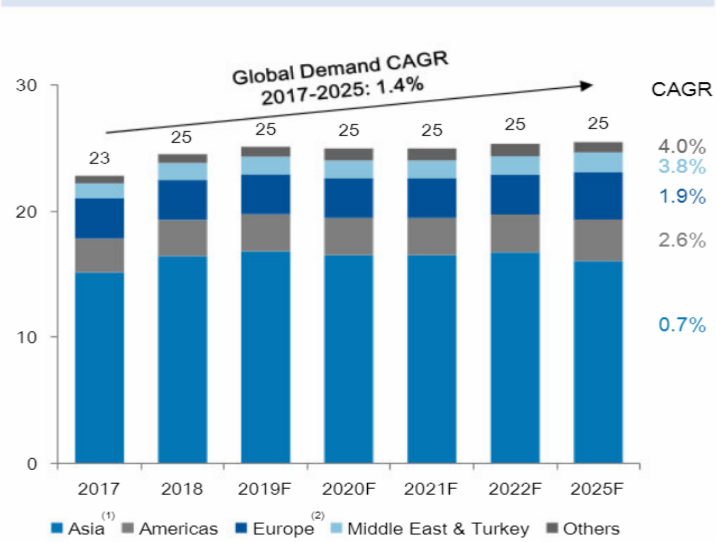


- Refined copper inventories have decreased by 34%, since its peak in March, 2018.

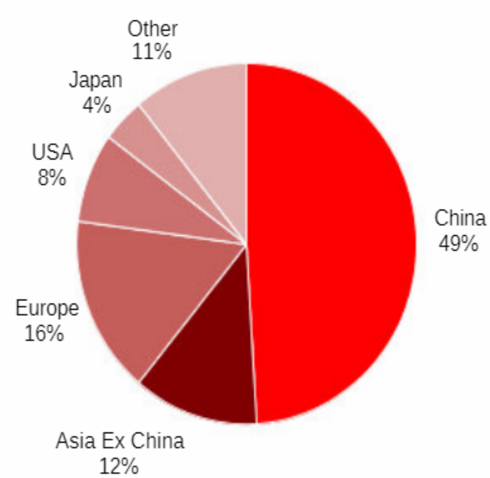




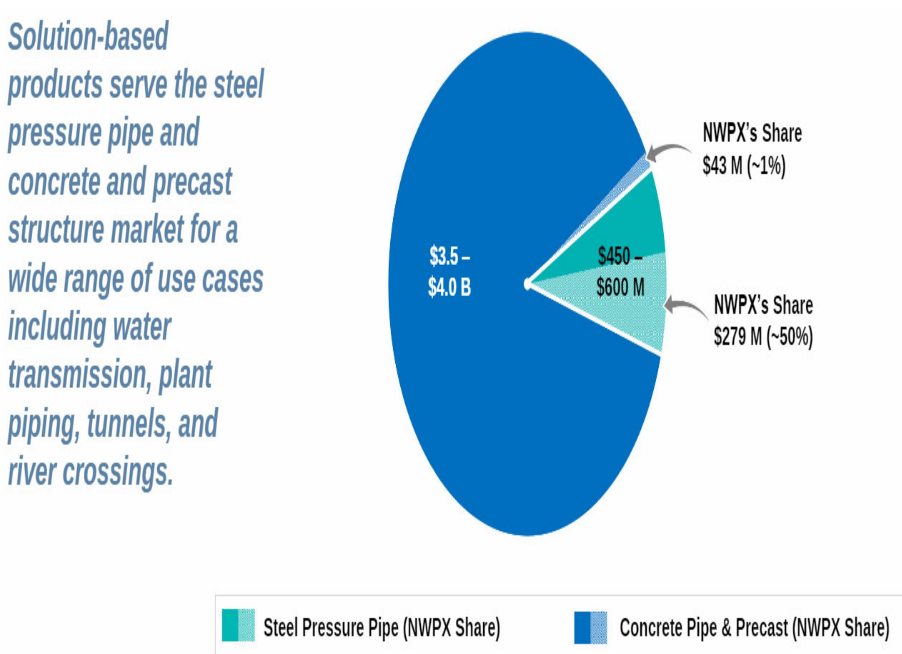
Copper Demand (mt)

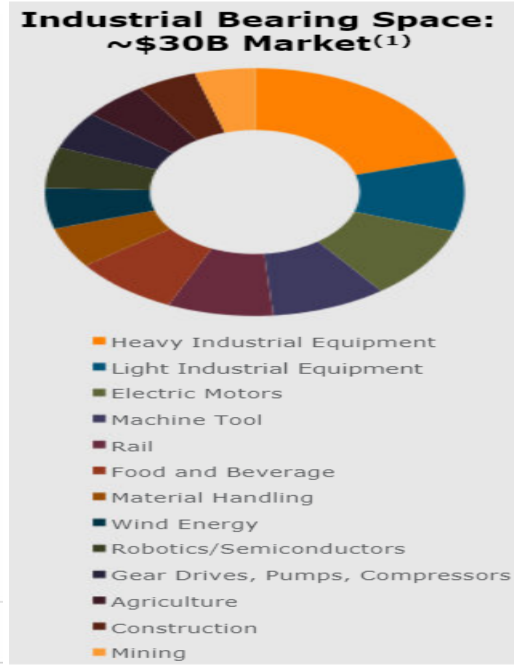


Copper Consumption by Region



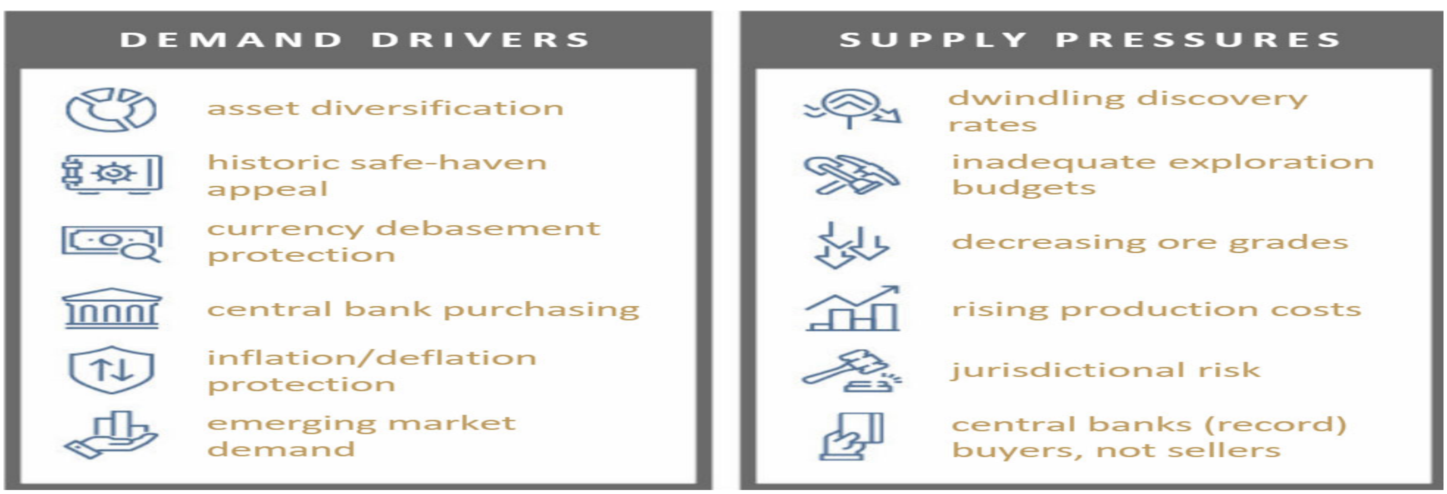
Specialty Metals & Products: EAF, TKR, KMT, ATI, CRS, PRLB, DM, MLI, MTRN, AZZ, BOOM, HAYN, IIIN, NNBR, NWPX, GHM



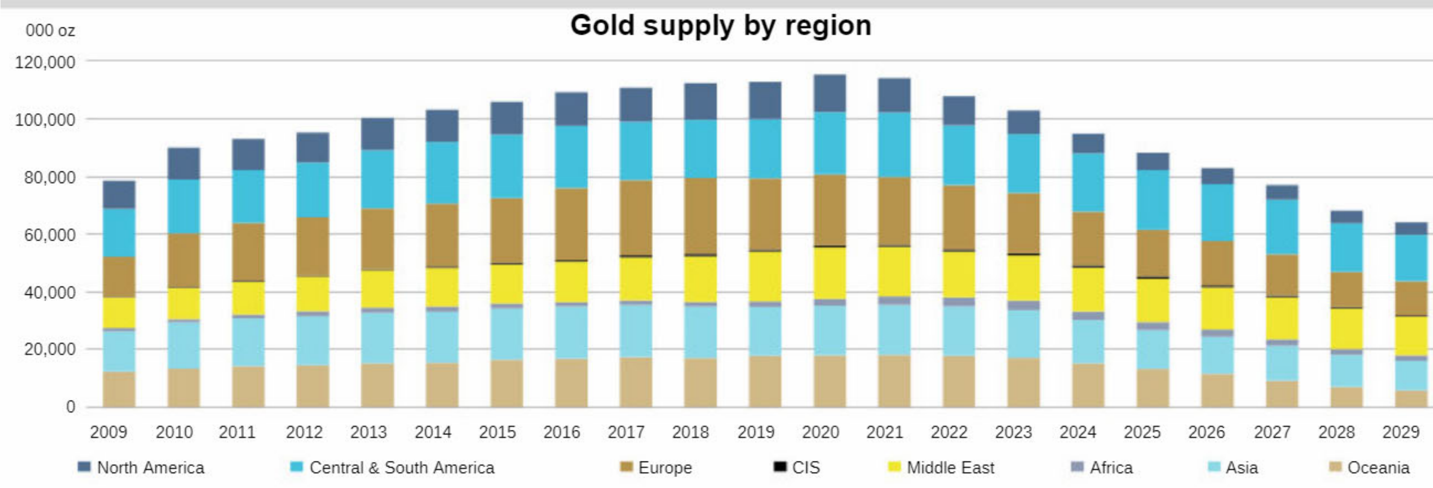


Precious Metal Components: NEM, GOLD, FNV, AEM, WPM, KL, AU, RGLD, GFI, SBSW, KGC, BVN, PAAS, BTG, AUY, NG, AG, AGI, SSRM, HMY, PVG, IAG, CDE, OR, EGO, HL, SAND, HBM, MAG, SVM, SA, SILV, NGD, FSM, MUX, GSS, GORO, EXK

Metals and precious metal mining stocks are very volatile and require a great deal of savvy to trade on a short-term basis. The group is sensitive to foreign exchange rates, macroeconomic factors, operating and capital cost pressures, and commodity price swings. In terms of valuation, it is best to focus mostly on price to net asset value (P/NAV) and, to a lesser extent, price to cash flow (P/CF). P/NAV is very useful indicator of long-term value of the underlying reserves.



The key components of gold supply are global mine production (63%) and scrap (37%), with a tiny percentage for producer hedging. Demand for gold falls into four categories. Jewelry accounts for the largest share of final demand at around 40-45%. Jewelry demand is seasonal. The fourth quarter is the strongest quarter due to Diwali, Christmas and other end of year festivals when jewelry gifts are common. Industrial demand is dominated by the electronics sector, but also includes dentistry and other industrial and decorative applications. Industrial and dental uses account for approximately 13% of gold demand; Investment demand is 30% of demand. Gold will be driven by the enormous fiscal and monetary policy stimulus that is currently ongoing around the world. S&P Global Market Intelligence forecasts lower global gold production beyond 2022 due to declining reserves and expect that by 2024 more than 15% of global gold production will come from mines that are not yet in production. Given that the price of gold is currently at or near an all-time high, while declining reserves remain a major challenge across the industry, many mining companies will be incentivized to increase exploration and development spending on gold projects.



Silver has a strong link to gold as it has historically similarly been used as a store of value and medium of exchange. The key difference between gold and silver is that a significant portion of the demand for silver is derived from the industrial sector, mainly electronics applications. This has caused silver to often trade like a hybrid of both gold and an industrial metal and boosted its volatility relative to gold. On the supply side, mine production remains the mainstay of silver supply, accounting for around 75% of the total. Mine supply has exhibited modest growth, averaging 4% per year over the past five years. However, scrap silver has grown by over 28% in recent years - now accounting for nearly 25% of total supply. Silver is a critical component in solar panels. As we transition the global energy system towards a lower hydrocarbon economy, the demand for solar panels will simply lead to a lot more silver demand.

World Silver Supply & Demand

For period ending December 31, 2019; in million ounces

Supply		Demand	
Mine production	837	Industrial	511
Recycling	170	Jewelry	201
Other	17	Silverware	60
		Photography	34
		Net physical investment	186
TOTAL	**1,023**		**992**

Outlook for Precious Metals Prices

Gold Prices

($/oz)

Gold Market Fundamentals

- Unprecedented levels of global fiscal and monetary stimulus
- Growing geopolitical risks and macro uncertainty
- Mine supply expected to decline
- Low/negative interest rate environment
- Investment and central bank demand

Silver Market Fundamentals

- Attractive, growing, diverse demand drivers
- Nearly ~70% of global mine supply derived as by-product
- Highly correlated to both gold and copper
- Small, illiquid market leads to high volatility

Industry Themes

- Silver is an important metal for the transition to a low carbon economy as it is used in solar panels, electrical applications in EV, and a key component for 5G buildout
- Aerospace is a key market for several metals (steel, aluminum) and is under a lot of pressure from the pandemic, but also a likely trough with a strong recovery seen in the upcoming years

Management Commentary

Southern Copper (SCCO): "At this point, the copper price seems to be driven basically by 2 factors: expectations of lack of supply in major producing countries such as Chile and Peru due to COVID-19 outbreaks and an increase in China's demand in this scenario of an economic recovery for this country. Since the pandemic is affecting both supply and demand, at this point, it is difficult to assess the long-term effects of this crisis on the copper market balance and consequently on copper prices."

Reliance Steel (RS) on end-markets: "Well, the ones that look bright, automotive, and that has been a good one. We took a pretty good jolt when the pandemic hit. It hurt us to about 50% of our toll processing business. And that's what our automotive business is, its toll processing. That was hard, but we managed through. We were able to rightsize quickly, and we were able to ramp back up. So that business has come back nicely, and we're there for our customers. Energy is -- it is what is. That was not pandemic-related, that was technology. And we just dealt with it. We're going to be a player, and we want to dominate. We want to be there for our customers in that area. It's just going to be a smaller piece of the pie. Aerospace is tough right now. The commercial aerospace is very difficult and still playing out, and we're managing through that -- those levels. The defense part of the aerospace is doing quite well, and we participate in that. That's a nice piece of business -- that's a nice business for us. Semiconductor has been a bright spot, and we're involved with that. We like that. The other types of business are okay. Non-res construction, which is 1/3 of our business, actually, and we throw infrastructure spending in there, that's been okay. That's been good. We've -- I've used this terminology now since 2009 that it's been a slow burn up, and it continues to do that."

Constellium (CSTM) on EV and Packaging markets: "But overall, when you step back, as you pointed out, aluminum is a light metal, it is providing a lot of benefits in terms of fuel efficiency, emissions or range for electric vehicles. It's going to continue to grow in the automotive applications. That's good for us overall. That's the first horse we've got to make sure we're on. The second one is the technology front, where we are also investing. North America happens to be the stronger market now because of all the new product introduction in cans, the preference away from plastic towards other packaging, first and foremost, can being very sustainable. And I'll just remind everybody that the can sheet market in North America is 1.8 million tons, a little bit more maybe. And so even a small percentage change, it's quite a few tons for us, right? And that at our profitability levels per ton, this can become very meaningful very quickly. That's what we are after. And I'm very encouraged by the developments in these markets."

Worthington (WOR) on construction markets… "The one thing that we are watching is the starts numbers and the Architectural Billings Index, and the starts right now are great. The Billings Index is not so great. So that sort of leads you to be a little bit cautious about, let's call it, calendar '21 activity. Interestingly, for our construction JVs, which are WAVE and ClarkDietrich, they're behaving a little bit different. WAVE's volumes are off. Their profit is off more than their volume just because of some allocation changes at the parents. So I don't see a lot of concern there. But on the ClarkDietrich side, their business actually is holding up very well and is very strong."

Timken (TKR) on wind market… "So on wind, second half of the year, expected to continue to be up double digits. Long term, expect it to continue to become a bigger part of the portfolio and expect this to have a broader product offering and the secular growth trend of that, I think remains very strong. That being said, there will be some level of cyclicality and pauses and booms in that market. So not ready to call '21 on that. But '20, including the second half, is going to be an excellent year of top line growth. But the solar side of the business that really came with Cone Drive acquisition has really performed very strong as well."

Newmont (NEM) on its assets…"Among our 12 operating mines and 2 joint ventures, we have 8 world-class assets, each of which delivers more than 500,000 gold equivalent ounces per year, at all-in sustaining costs of less than $900 per ounce, and with a mine life that exceeds 10 years. Importantly, all are located in top-tier jurisdictions that we define as countries classified in the A and B ratings ranges by each of Moody's, S&P and Fitch. We firmly believe that we have the right-sized portfolio to generate sustainable returns from our world-class responsibly managed assets located in the best gold mining jurisdictions."

Industry Summary

- China is the key driver of metals demand and the place to focus for industrial demand indicators
- Commodities tend to do well as expansions mature and inflation pressures start to grow with declining spare capacity in the economy, but they also tend to rally early in economic expansions
- Construction activity is a major driver for the industrial metals and the Architectural Billings Index and Dodge Momentum Index are two reliable indicators
- Steelmaker performance is closely tied to prices driven by supply/demand, the former mainly from construction and automotive industries and overall a cyclical industry tied closely to GDP
- Aluminum has several positive secular growth demand drivers moving forward such as light-weighting and a move to aluminum packaging
- Emerging trends such as sustainability, light weighting and miniaturization, automation, fuel efficiency and electrification are impacting the dynamics of the metals industries
- Copper has limited investment avenues but among the industrial metals has one of the stronger demand outlooks but 2020 was an inflection year where supply overwhelmed demand, though surpluses expected to peak in 2021
- Specialty Metals look to have the best investment opportunities where pricing is less sensitive and value-added processes to create materials that capitalize on growing megatrends results in strong demand
- Digitalization is coming to the mining industry, expecting smart mining to be a $20B market by 2025 from $6.8B in 2019
- Nickel is one of the more compelling metals to be invested with the demand far outweighing supply driven by EV batteries
- Some key drivers and market indicators across end-markets include Architectural Billings Index, Infrastructure Spending, and Housing for Non-Residential Construction; Agricultural Exports and Construction Machinery New Orders for Heavy Industry; SAARS & Consumer Confidence for Automotive; Defense Spending, Build Rates, Backlog for Plane Orders and Passenger Air Miles for Aerospace; and Oil & Gas Rig Counts, Oil Prices, and Drilling Activity for Energy.

OptionsHawk Executive Summary and Top Picks

The Metals group is closing 2020 strong and with the weak USD and potential for a reflationary environment it could continue in 2021 with support from an economic recovery backdrop and strength in China. I personally favor the Aluminum & Copper markets as well as specialty plays with company-specific growth drivers.

Rio Tinto (RIO) continues to be the best-in-class name for exposure to multiple industrial metals and also offers a strong yield. **Steel Dynamics (STLD)** tops the steelmaker group yet again as the highest quality operator while **Nucor**

(NUE) is a solid company and **Reliance (RS)** a more resilient distribution model. **Commercial Metals (CMC)** stands out among the small caps as a quality own.

For the Aluminum & Coal group **Warrior Met Coal (HCC)** screens well in the challenged coal group with high margins and FCF. **Kaiser (KALU)** is a small cap Aluminum name that underperformed in 2020 due to Aerospace exposure but is a high margin quality operator that sets up well for 2021. **Constellium (CSTM)** another small cap name that is cheap and sees a lot of bullish options positioning. Lastly, **Arconic (ARNC)** is a favorite name with auto & packaging exposure, pricing power, and a strong cost structure. **Ciner (CINR)** is an intriguing value name with solid operations in the soda ash business. Lastly, in Copper, **Southern Copper (SCCO)** continues to screen attractive across the entire metals group with high FCF, strong margins, and stable growth in all environments.

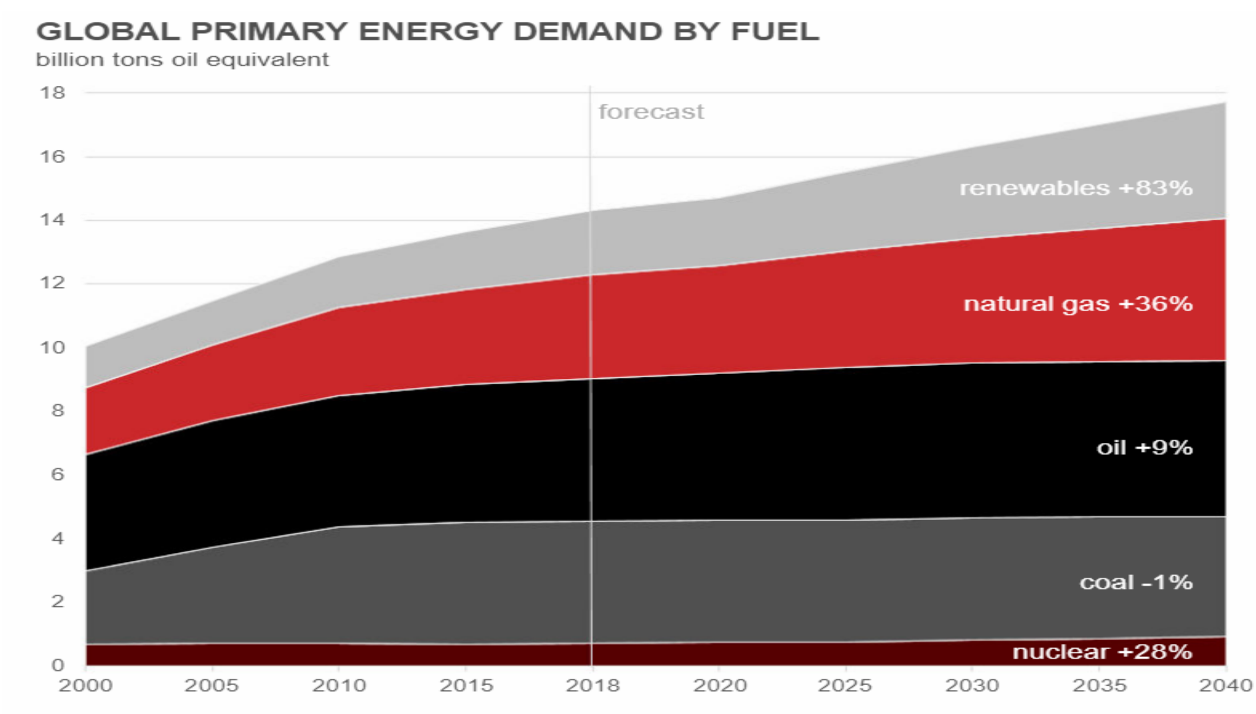
In the specialty products group, there are several interesting companies. **Proto Labs (PRLB)** has long been a favorite on the additive manufacturing theme and continues to be a strong growth story. **Timken (TKR)** a long-time quality name with a lot of exposure to auto/truck OEMs. **DMC Global (BOOM)** is a very small company that screens impressive for margins, ROIC, and FCF while **Northwest Piper (NWPX)** is a very attractive value that screens strong and a play on water infrastructure with its pipes. **Materion (MTRN)** is an attractive small cap in the advanced materials space with diverse end-markets while **AZZ (AZZ)** a maker of specialty equipment for power generation that has high margins and strong FCF.

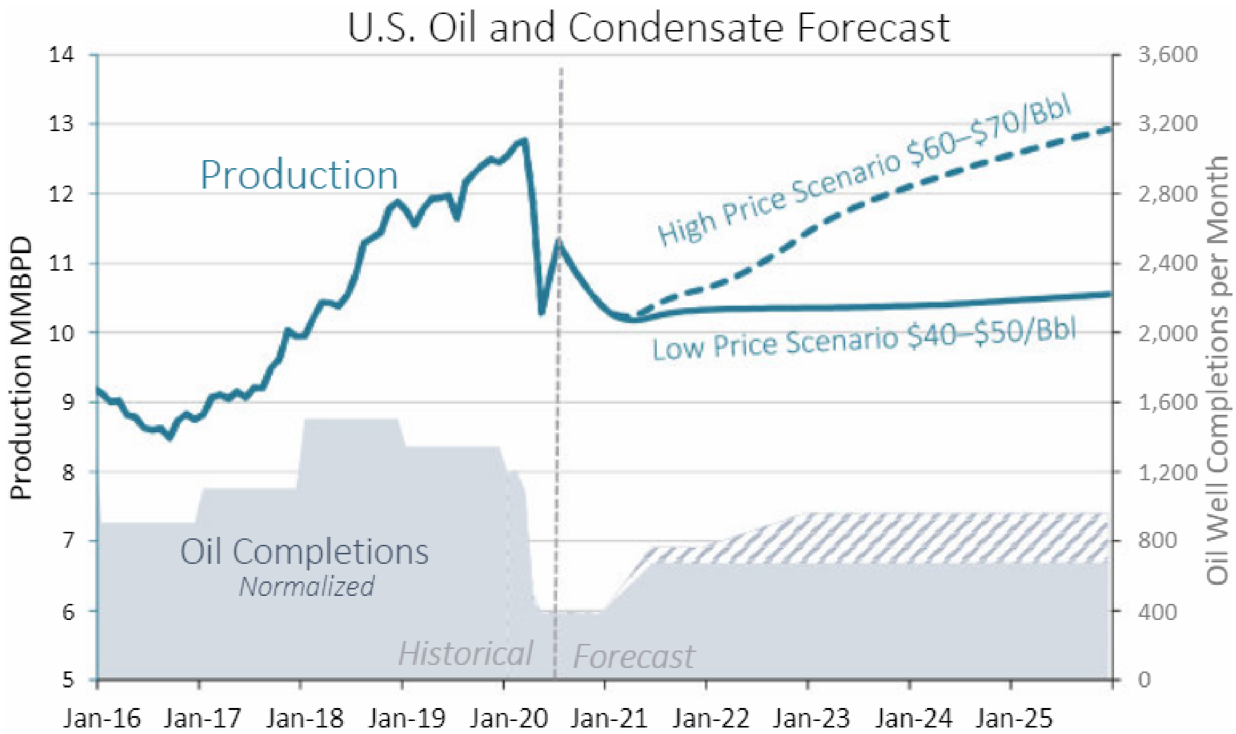
The precious metals group tends to move in correlation to the underlying price moves without much alpha from individual names but **Newmont (NEM)** is the best-in-class gold miner with the highest quality assets. **Pan-American (PAAS)** and **Wheaton (WPM)** are the other two quality larger cap owns. **Anglo (AU)** and **Sibayne Stillwater (SBSW)** are two others than screen well versus peers.

<u>Energy</u>

Industry Synopsis

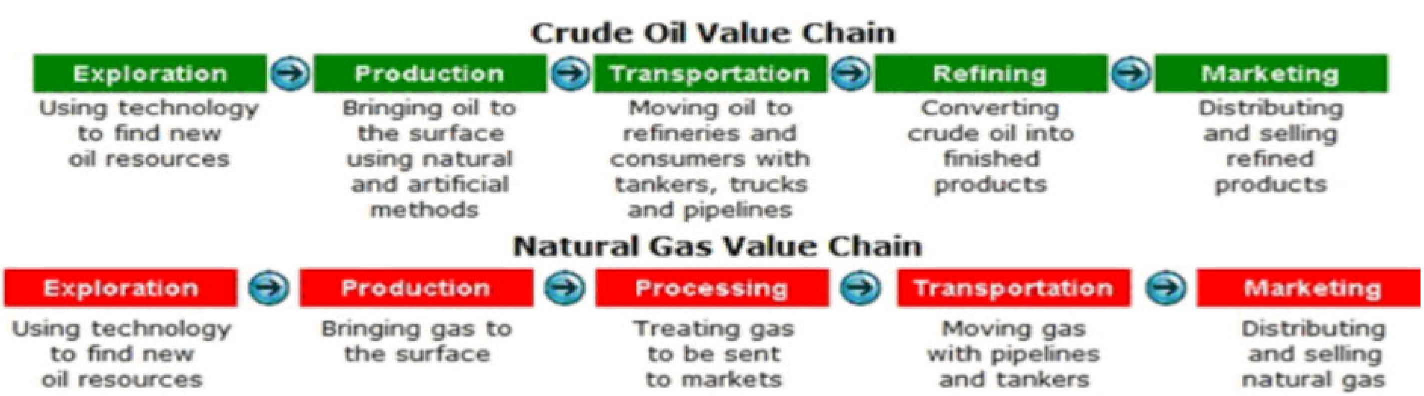
The oil & gas industry, also known as the energy sector, relates to the process of exploration, development, refinement of crude oil and natural gas. Oil and gas prices depend on the supply and demand for the commodity. As the demand for the product falls, so does the price. As prices increase, more investment goes into drilling projects and inventing more efficient techniques. So, the supply for oil and gas is price-driven. The Organization of the Petroleum Exporting Countries (OPEC) controls 75% of the reserves and 43% of oil production. Therefore, they exert a large influence on the supply and price of oil. On the other hand, segments of consumption drive the demand. The main segments are industrial consumption, residential consumption, and power generation.





Like the Metals & Mining group, the Oil & Gas E&P names also operate in a cyclical nature and much of the trading is closely correlated with the underlying commodity, Oil or Gas, and the weekly data points on supply and demand. Seasonality shows that February and April are strong months for the E&P names, while September, November and December tend to be weak.

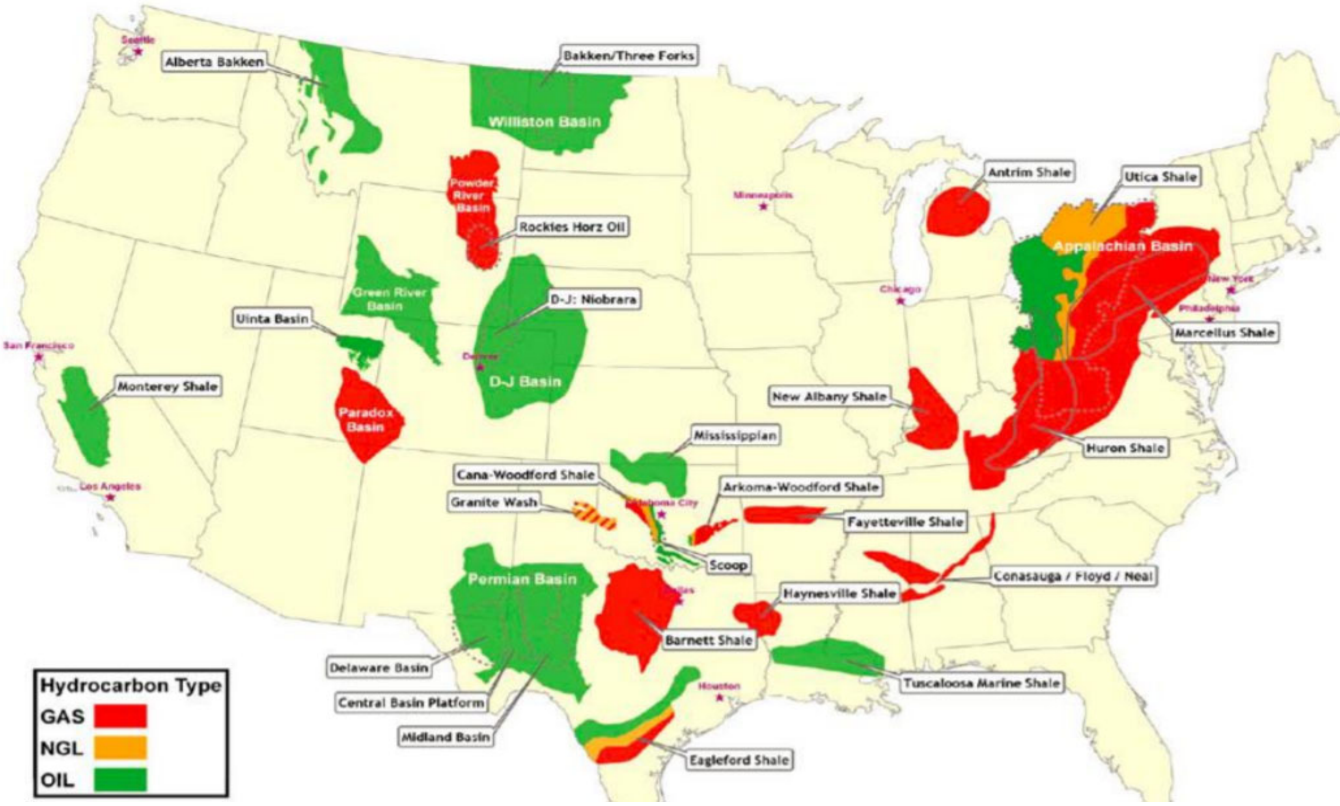
The group can really be divided into two, the Oil producers and Gas producers. While many names produce both, the percentage of production is generally skewed in one direction, and the notable Natural Gas dominant producers are AR, COG, SWN, EQT and RRC. Another way to divide the group is with onshore and offshore, the latter mainly featuring ESV, DO NE, RDC, RIG, and HP. Lastly, in the entire Energy complex, the companies are often separated into Upstream, Midstream, Downstream, Services, and Integrated Majors. Another name for the upstream industry is exploration and production (E&P) since the industry finds and produces crude oil and natural gas. It also comprises of service companies that assist the E&P processes, e.g., rig operators, engineering and scientific firms, and equipment manufacturers. After the upstream industry finds and produces oil and gas, the midstream companies store and transport the products. Midstream companies work to connect the petroleum-producing areas to population centers where the customers are. The connection is done through pipelines, rails, tankers, and trucks. Also, midstream companies possess the properties of upstream and downstream producers. For example, some companies own processing plants to remove sulfur and natural gas liquids. While midstream companies deliver products, the downstream segment refines, markets, and distributes the end product to consumers. End products include gasoline, jet fuel, heating oil, and diesel. The end products are dependent on the complexity of the refinery. Some are capable of producing multiple types to be in line with current demands.



Source: Oil & Gas Journal

The three categories of reserves are proved, probable, and possible reserves. Each category comes with a different probability of recovery. For example, the recovery rate of a proved reserve is 90%. On the other hand, resources provide less certainty relative to reserves. It is further split into contingent and prospective, with contingent resources offering more potential for recovery.

Exhibit 15: US basins



The industry is currently undergoing an efficiency drive that is driving up well productivity rates and lowering breakeven prices as drilling has slowed down due to lack of demand and oversupply.

Investment Considerations

In evaluation this group, EV/EBITDA and P/FCF are valuable, but better metrics that are not as easily found such as EV/Proved Reserves, EV/2P and EV/Daily Production can give better insight. Many analysts prefer to use EV/DACF vs. P/CF as firms with higher levels of debt, or more leverage, will show a better P/CF ratio. This multiple takes the enterprise value and divides it by the sum of cash flows from operating activities and all financial charges that include interest expense, current income taxes and preferred shares. It is also always important to understand the cost leaders, names that can withstand down-cycles better with stronger balance sheets and a lower cost of breakeven. Similar to Financials, the balance sheet is often the most important with these stocks, as the reserves are the asset that will generate future revenues/earnings. The debt/cash flow ratio can be a useful gauge of balance sheet health. Revenues are difficult to model with the wild price swings, and a sensitivity analysis can be performed for an expected range and probability of outcomes, but also have to take into account the company's hedging efforts. P/E and Revenue multiples lose a lot of value because Energy companies have large depreciation numbers, impairment charges, write-downs, and unusual tax situations. EBITDAX is also a modification often used, the X being exploration expenses. Acreage valuation is another method using transactions in the various regions as a guide to figure out $M/Acre. Reserve replacement ratio is yet another metric for this industry and is a company's reserve additions for a given year divided by its production for that year. Return of Capital Employed (ROCE) is often used as a measure of capital efficiency as well as drilling rate of return.

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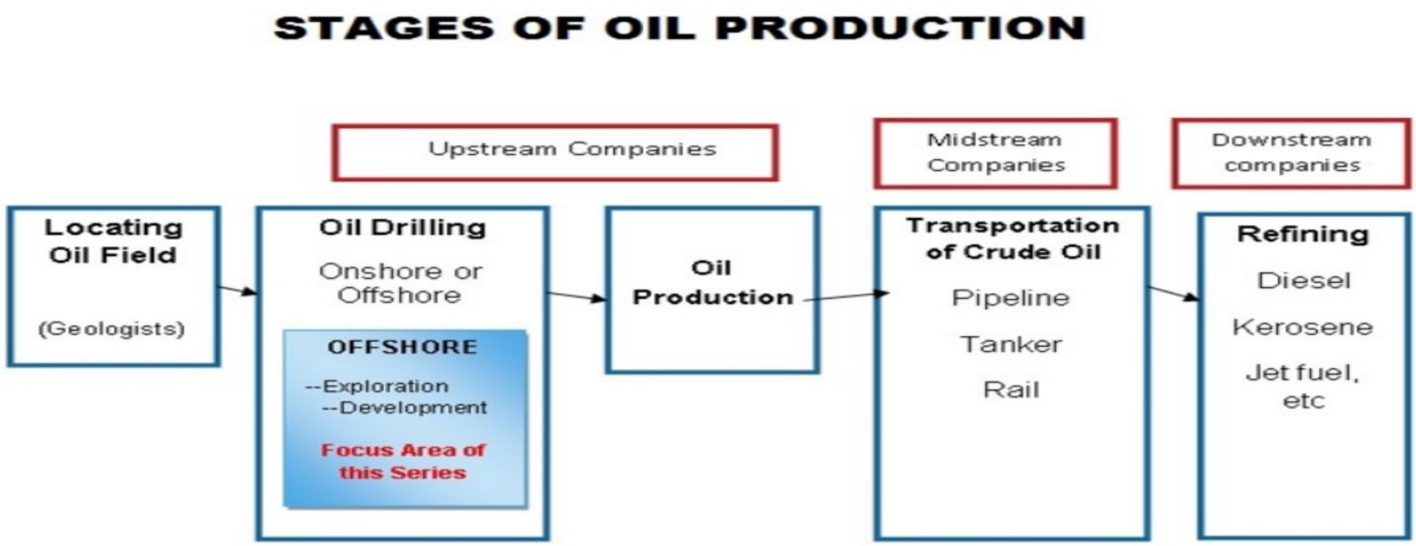
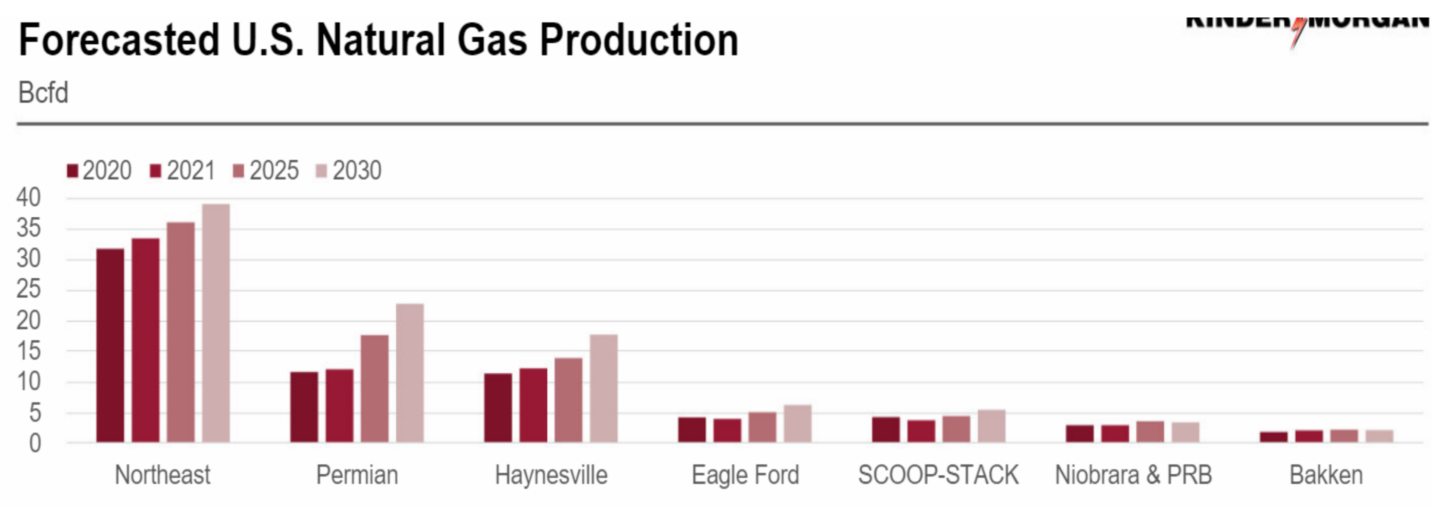


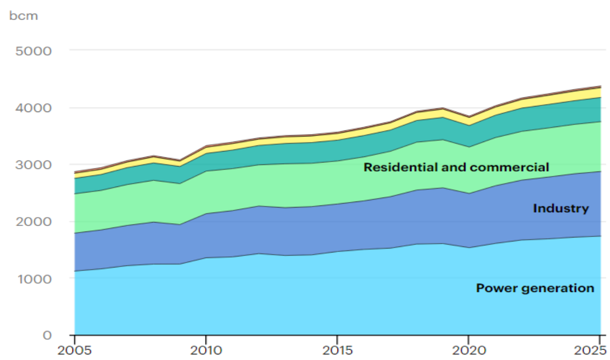
There is no shortage of real-time data and analysis in these markets with the EIA and IEA releasing monthly reports breaking down production, rig counts and more by region.

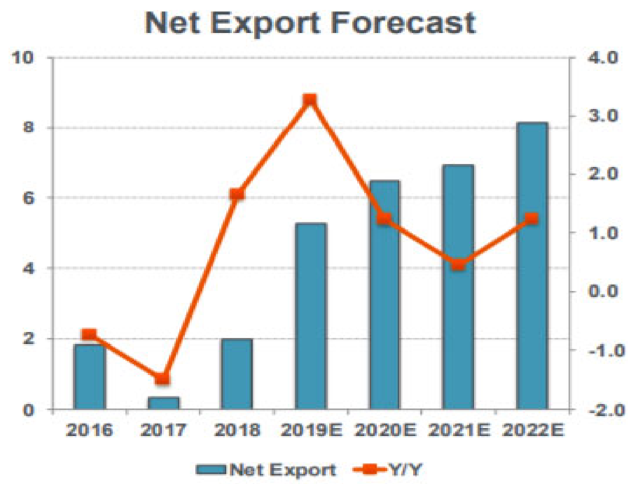
EIA expects drilling activity to rise later in 2021, contributing to U.S. crude oil production returning to 11.2 million b/d in the fourth quarter of 2021. On an annual average basis, EIA expects U.S. crude oil production to fall from 12.2 million b/d in 2019 to 11.5 million b/d in 2020 and 11.1 million b/d in 2021. After a 4% drop in 2020, natural gas demand is expected to progressively recover in 2021 as consumption returns close to its pre-crisis level in mature markets, while emerging markets benefit from economic rebound and lower natural gas prices. For Natural Gas, exports represent the largest source of structural demand growth.

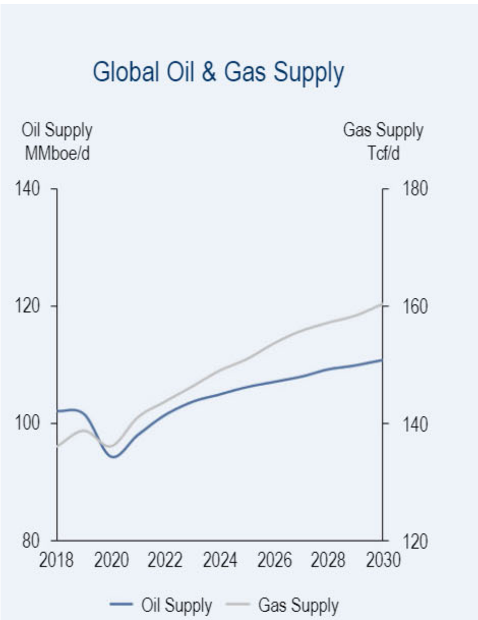


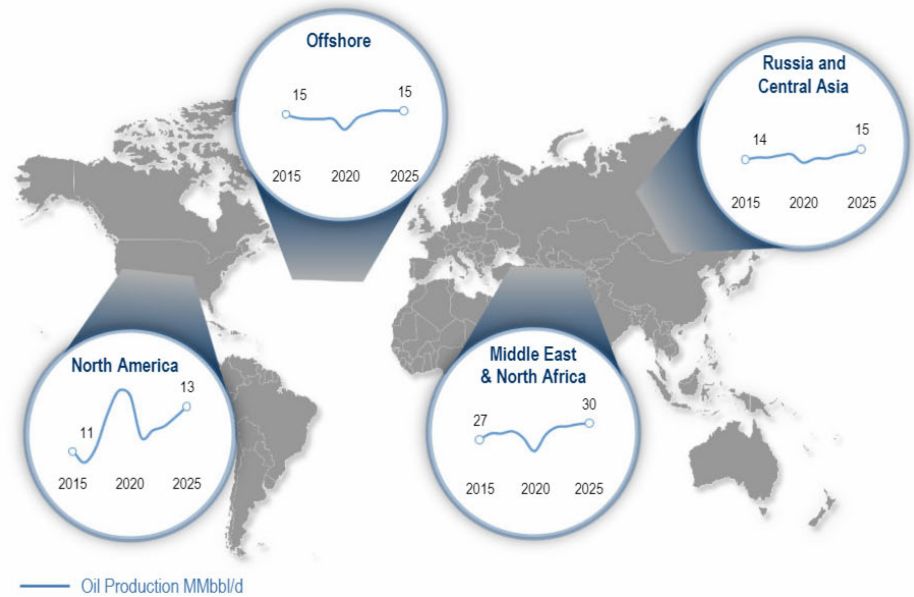
Global natural gas demand per sector, 2005-2025

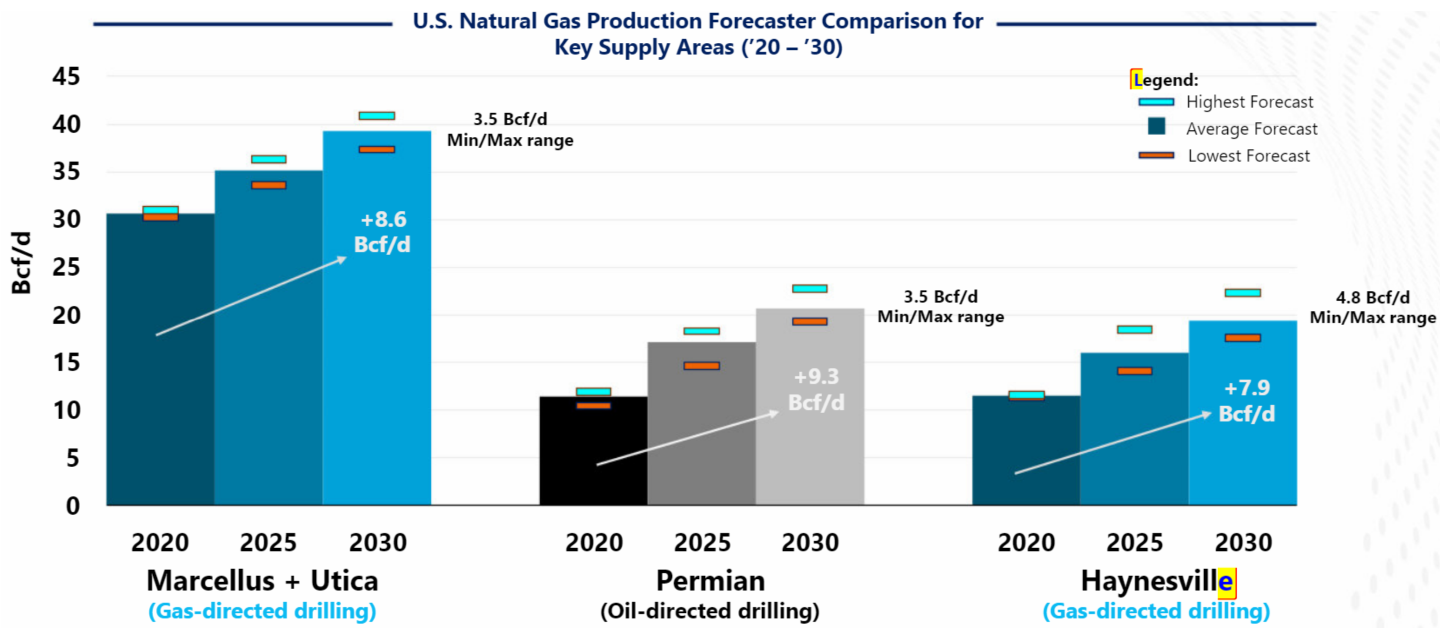
Open

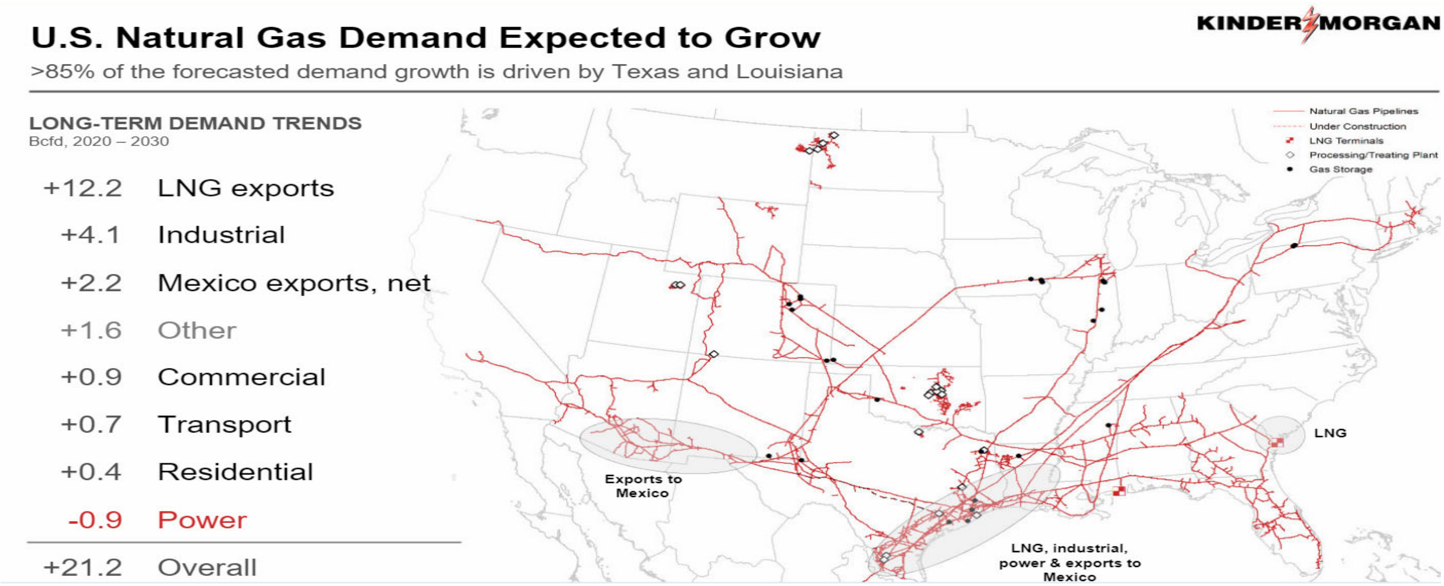


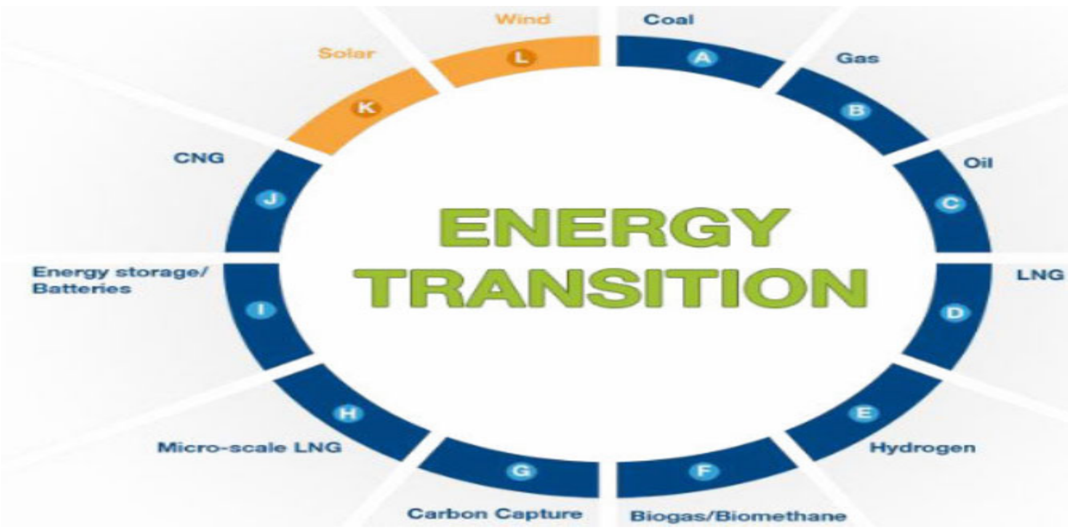












Oil & Gas Exploration (Upstream) Components: XOM, CVX, COP, EOG, PXD, HES, OXY, CXO, COG, CLR, FANG, NBL, PE, NFG, TPL, DVN, EQT, APA, MRO, WPX, XEC, CNX, OVV, RRC, SWN, HP, BSM, MUR, MGY, PDCE, CRK, MTDR, DEN, AR, WLL, PTEN, MNRL, SBR, TALO, KOS, RDS.B, TOT, BP, PBR, EQNR, E, EC, CNQ, SU, CVE, SSL, YPF, CPG, GPRK, SNP, PTR

The E&P industry had undergone major changes as managements face the worst oil crisis in decades and forced to pivot a focus to cash returns, right-sizing balance sheets and return cash to investors in a recovery scenario. With oversupply the push for production growth is no longer primary and instead moving to a cash return model. The model shift will be tested if oil prices recover incentivizing management to start ramping up production again but until then the model has changed. E&P's need to increase free cash margin, whether through portfolio change, cash cost reduction or lower spending.

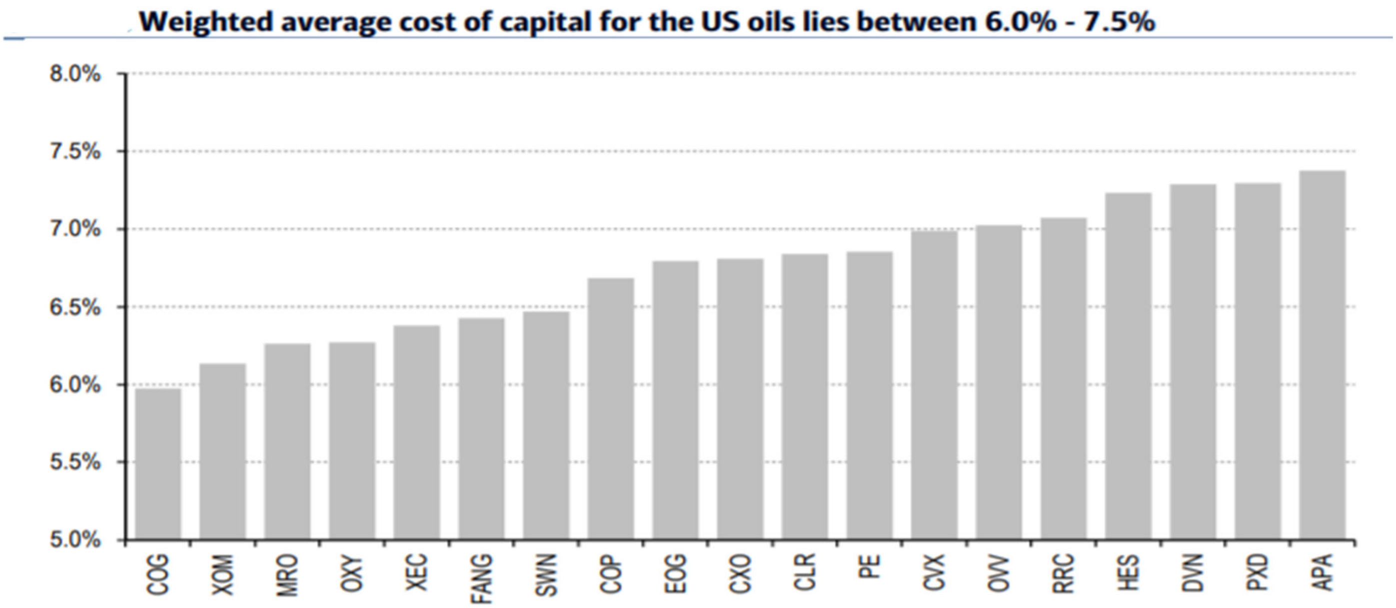
Parsley Energy (PE) and Devon Energy (DVN) have echoed the sentiment of a change across the industry:

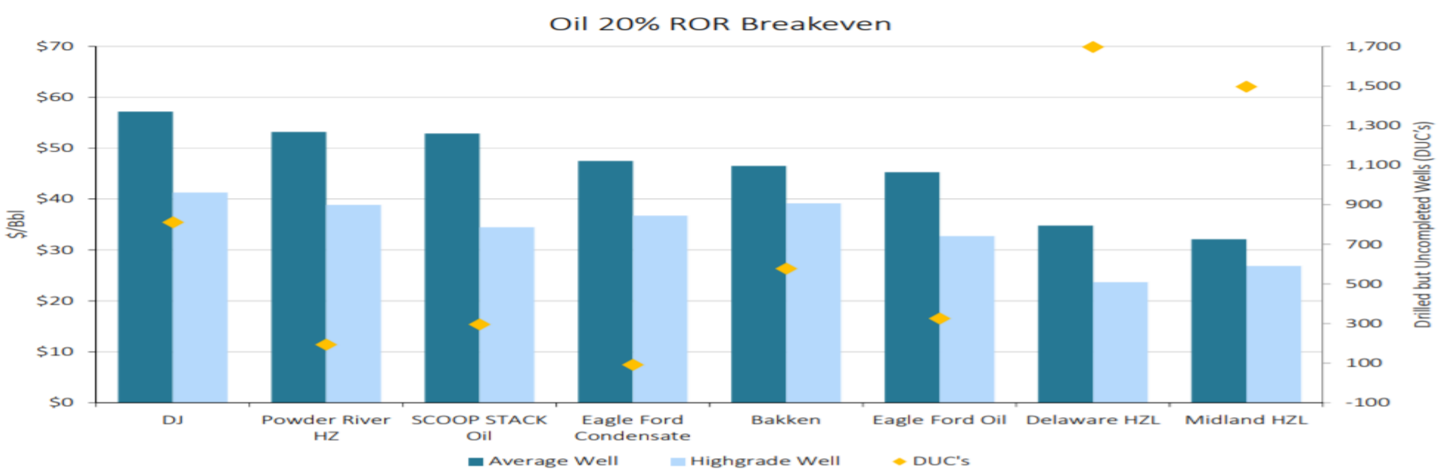
"E&Ps are in a battle for investment relevance, not a battle for global market share. Allocating growth capital into a global market with artificially constrained supply is a trap our industry has fallen into time and time again" – PE CEO

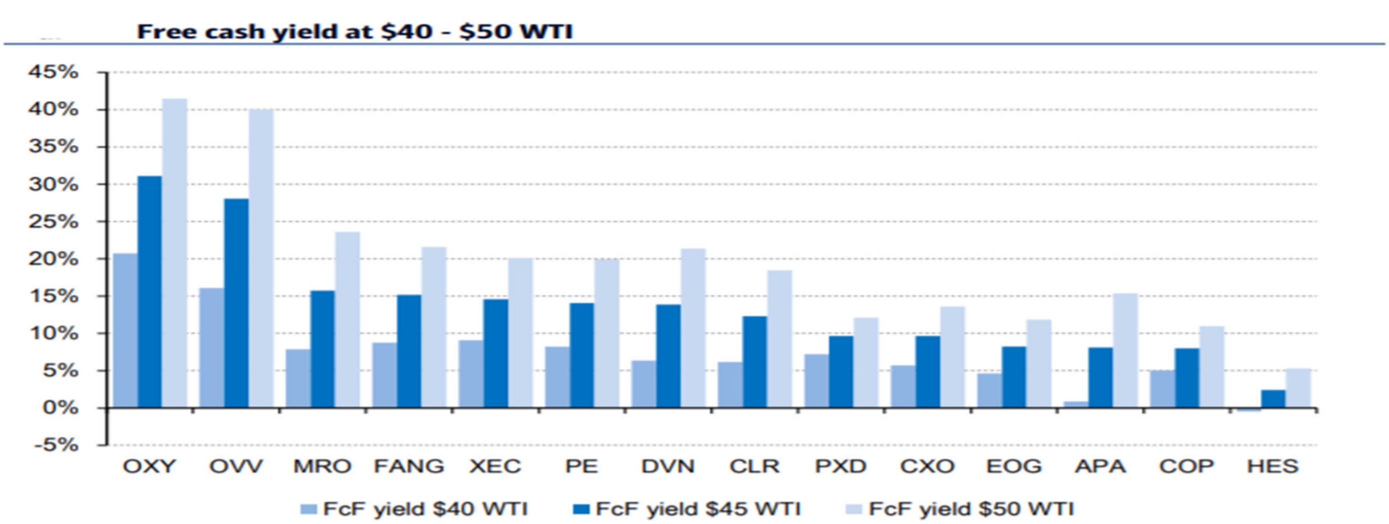
"any successful strategy must be grounded in supply & demand fundamentals … traditional E&P growth models of the past are not viable going forward. … a successful company must deploy a highly-disciplined, financially-driven business model that prioritizes cash returns" – DVN CEO

M&A is another theme to watch with the Devon (DVN) / WPX (WPX) $2.56B merger announced in September while in July Chevron (CVX) paid $5B for Noble Energy (NBL). In October, Conoco (COP) announced a $9.7B all-stock deal for Concho Resources (CXO) and Pioneer (PXD) a $4.5B deal for Parsley (PE). Cenovus (CVE) and Husky Energy then combined in a $2.9B Canadian oil sands deal. Consolidation opportunities are out there with G&A per BOE of production high at names like CLR/MRO where value can be created via mergers.

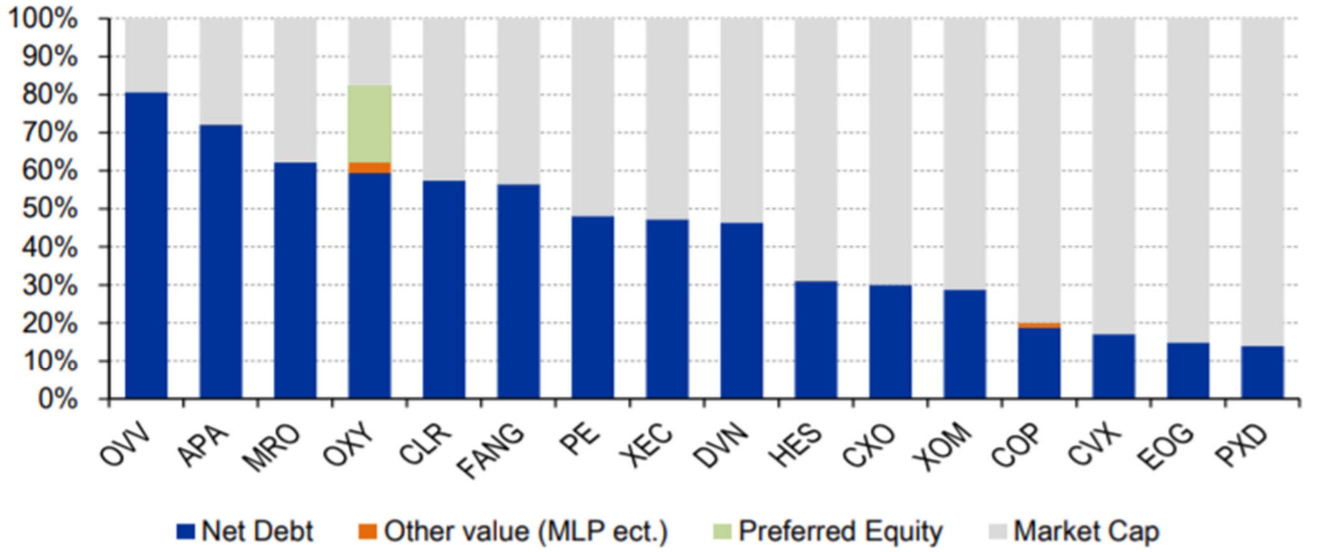
Under this new framework I will mostly focus on mid-cap and larger E&P names as the small cap names are less attractive in low price environments and better used for quick trading vehicles when prices gain short-term momentum swings. Natural gas has seen a surge in Q4 2020 on supply cuts and LNG demand rising the highest price since 2019.

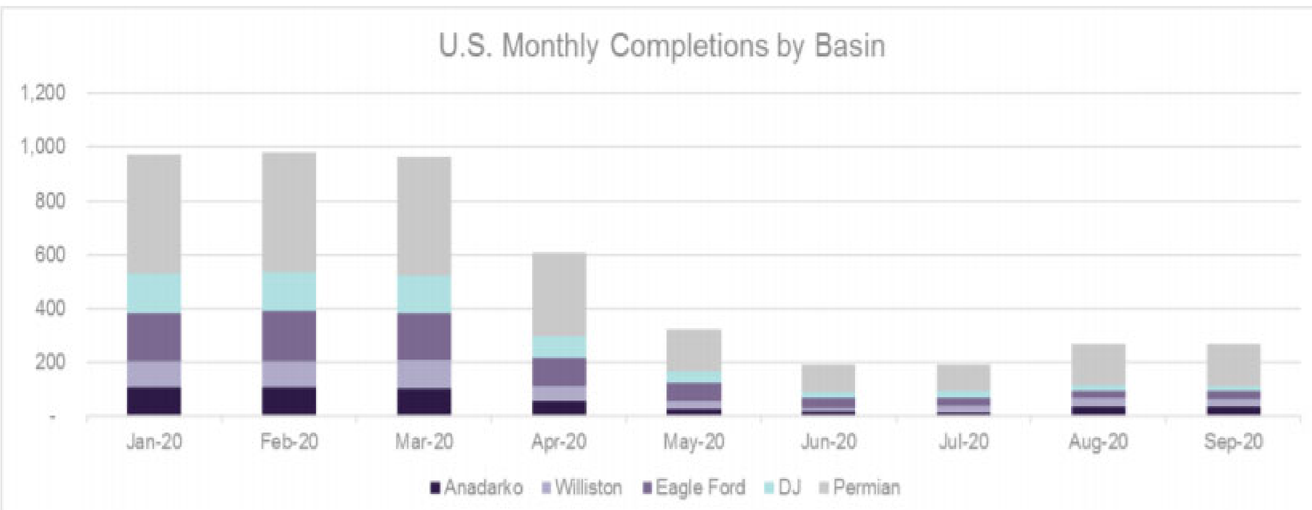




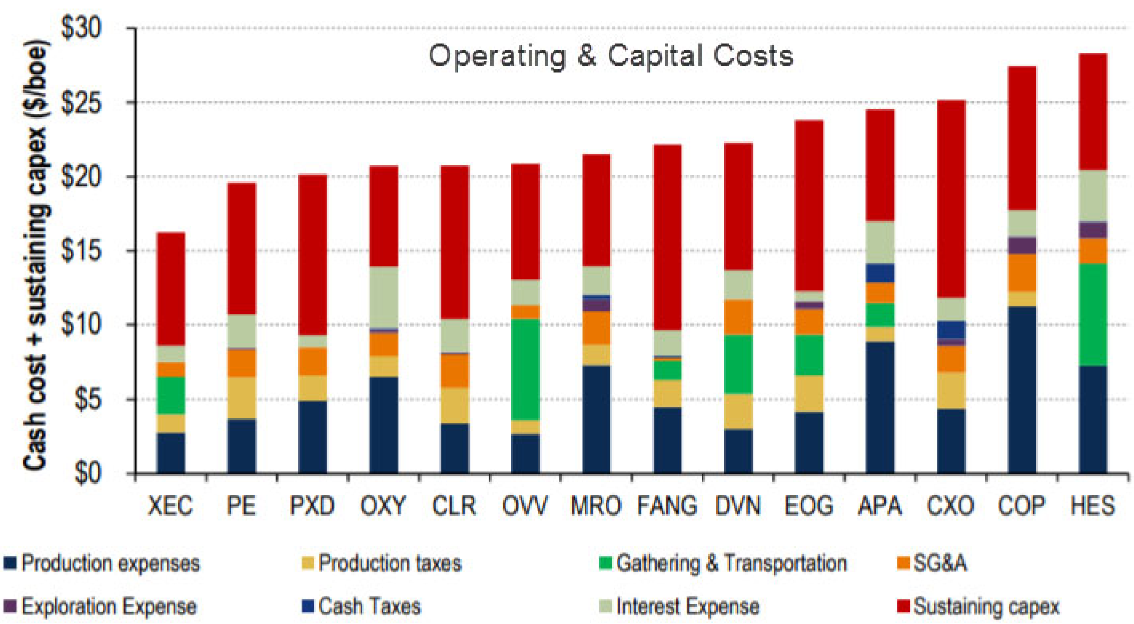


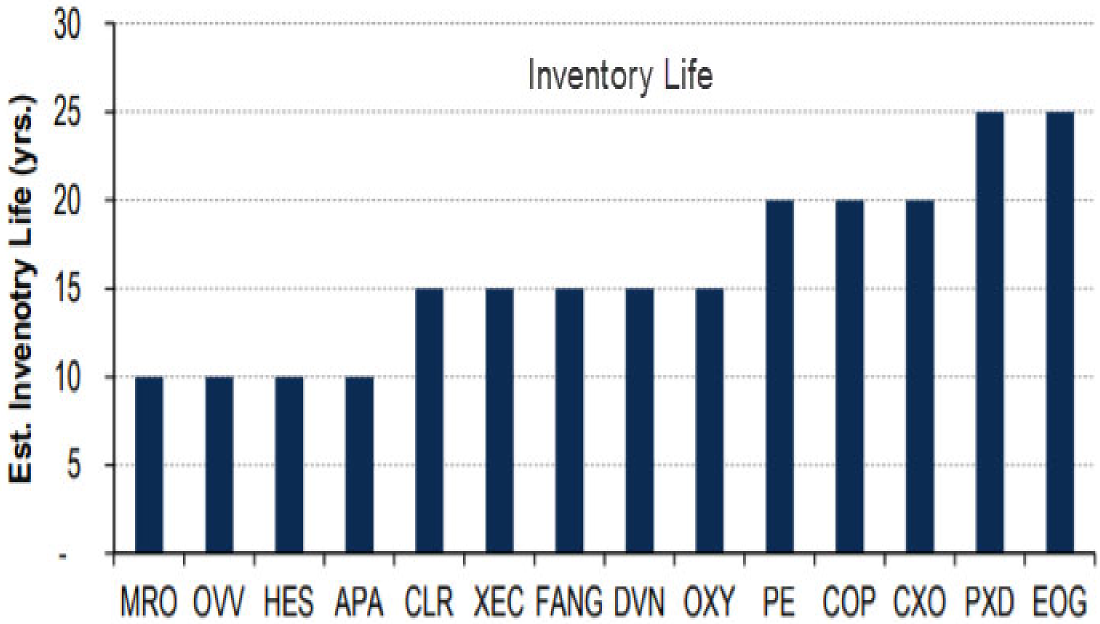
US E&P: capital structure as at end 2Q20





Source: EIA Drilling Productivity Report

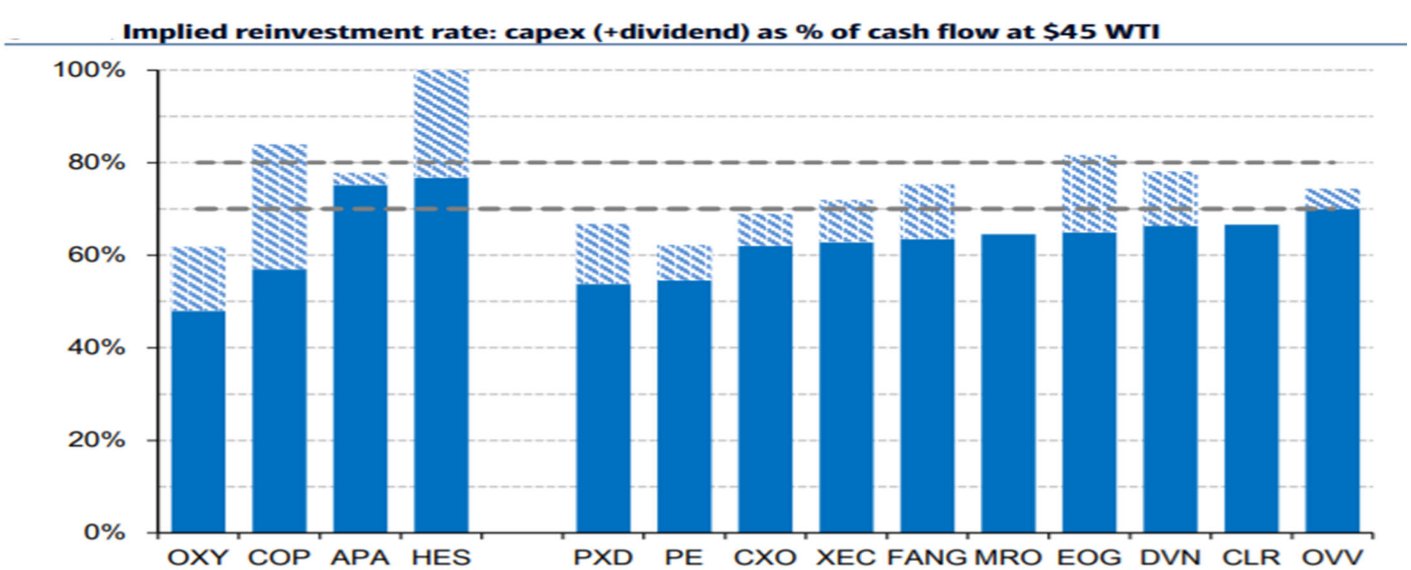




	OXY	PE	MRO	COP	APA	HES	DVN	PXD	CLR	CXO	FANG	EOG	XEC	OVV
Oil yield	57%	63%	51%	55%	54%	51%	45%	55%	55%	63%	61%	55%	31%	28%
Oil prod. (kbd)	658	114	173	654	178	155	144	200	165	192	173	440	77	151
Boe prod. (kbd)	1,160	181	341	1,191	329	305	318	363	300	305	285	800	245	541
Sustaining capex ($mm)	2,900	600	1,000	3,800	1,100	1,000	950	1,350	1,200	1,400	1,295	3,400	625	1,500
Capex per barrel oil	$12.07	$14.42	$15.84	$15.92	$16.90	$17.69	$18.14	$18.49	$19.93	$19.98	$20.56	$21.17	$22.38	$27.22
Capex per boe	$6.85	$9.07	$8.04	$8.74	$9.15	$8.98	$8.18	$10.19	$10.96	$12.58	$12.44	$11.64	$6.99	$7.60

Industry Themes

A move to lower growth, cash return model. The below chart shows at $45 WTI the implied reinvestment rate for companies:



Truist does a nice job of breaking down the E&P names by their regional focus with key valuation metrics included:

Company	Ticker	Price 10/16/20	Truist Securities PT	Truist Securities Rating	Mkt. Cap.	Enterprise Value	1wk Rtn.	YTD Ret.	N. Debt/ 2020E EBITDA	Mboepd 2020E	Mboepd 2021E	EBITDA 2020E	EBITDA 2021E	EV/MBOEPD 2020E	EV/MBOEPD 2021E	EV/EBITDA 2020E	EV/EBITDA 2021E
Bakken/Three Forks Shales																	
Abraxas Petroleum Corporation	AXAS	$0.14		Not rated	$24	$208	-18.7%	-59%	11.5x	5.1	5.2	$17.7	$42.9	$40.6	$39.7	11.7x	4.8x
Continental Resources, Inc.	CLR	$13.16	$18.00	Hold	$4,805	$10,918	-2.2%	-62%	4.5x	290.4	282.8	$1,279.7	$1,868.2	$37.6	$38.6	8.5x	5.8x
EOG Resources, Inc.	EOG	$37.42	$61.00	Buy	$21,788	$25,141	-0.4%	-55%	0.7x	741.6	777.7	$4,633.3	$6,234.5	$33.9	$32.3	5.4x	4.0x
Enerplus Corporation	ERF	$1.94	$3.00	Hold	$432	$844	-4.9%	-73%	1.3x	88.9	84.5	$273.2	$311.4	$9.5	$10.0	3.1x	2.7x
Hess Corporation	HES	$38.06		Not rated	$11,690	$19,911	0.0%	-43%	2.8x	334.5	317.4	$2,306.7	$1,974.6	$59.5	$62.7	8.6x	10.1x
Marathon Oil Corporation	MRO	$4.07	$4.00	Hold	$3,213	$8,272	-4.5%	-70%	3.1x	374.1	331.0	$1,632.1	$1,740.2	$22.1	$25.0	5.1x	4.8x
Northern Oil and Gas, Inc.	NOG	$5.18	$10.00	Buy	$233	$1,220	-12.4%	-78%	2.7x	31.3	36.2	$337.5	$374.6	$39.0	$33.7	3.6x	3.3x
Oasis Petroleum Inc.	OAS	$0.11		Not rated	$36	$2,910	-27.7%	-97%	3.7x	64.7	67.0	$743.9	$576.8	$45.0	$43.5	3.9x	5.0x
Occidental Petroleum Corporation	OXY	$10.09	$25.00	Buy	$9,385	$57,666	-6.7%	-76%	6.3x	1331.1	1173.8	$5,965.6	$7,430.6	$43.3	$49.1	9.7x	7.8x
QEP Resources, Inc.	QEP	$0.94	NA	Hold	$227	$2,150	-5.3%	-79%	2.6x	80.3	73.7	$662.5	$472.3	$26.8	$29.1	3.2x	4.6x
Whiting Petroleum Corporation	WLL	$16.83	$32.00	Buy	$641	$1,035	-10.0%	NM	1.0x	98.1	89.0	$310.0	$397.5	$10.5	$11.6	3.3x	2.6x
WPX Energy, Inc.	WPX	$4.57	$8.00	Buy	$2,564	$5,747	-12.1%	-67%	2.0x	206.0	226.3	$1,543.6	$1,410.9	$27.90	$25.39	3.7x	4.1x
Average							**-8.7%**	**-68.9%**	**3.5x**	**303.8**	**288.7**			**$33.0**	**$33.4**	**5.8x**	**5.0x**
Canadian Oil Sands																	
Suncor Energy Inc.	SU	$11.88		Not rated	$18,119	$32,828	-7.6%	-64%	3.1x	696.0	785.0	$3,751.0	$5,961.6	$47.2	$41.8	8.8x	5.5x
Husky Energy Inc.	HSE-CA	$3.12		Not rated	$3,136	$10,578	-7.4%	-70%	7.7x	269.4	268.6	$804.3	$2,004.6	$39.3	$39.4	13.2x	5.3x
Cenovus Energy Inc.	CVE	$3.65		Not rated	$4,485	$11,897	-9.9%	-64%	7.8x	466.3	466.2	$723.7	$1,460.2	$25.5	$25.5	16.4x	8.1x
MEG Energy Corp.	MEG-CA	$2.45		Not rated	$741	$4,005	-15.5%	-67%	6.3x	80.3	86.5	$469.2	$522.0	$49.9	$46.3	8.5x	7.7x
Tourmaline Oil Corp.	TOU-CA	$17.42		Not rated	$4,717	$6,622	5.9%	14%	1.4x	307.0	319.6	$1,191.3	$1,585.3	$21.6	$20.7	5.6x	4.2x
Canadian Natural Resources Limited	CNQ	$17.60		Not rated	$20,786	$38,554	-1.6%	-46%	4.1x	1165.3	1206.9	$4,087.6	$6,183.9	$33.1	$31.9	9.4x	6.2x
Imperial Oil Limited	IMO	$12.42		Not rated	$9,117	$12,915	-1.4%	-53%	9.5x	392.4	419.3	$385.6	$1,682.8	$32.9	$30.8	33.5x	7.7x
Average							**-5.4%**	**-49.8%**	**5.7x**	**482.4**	**507.5**			**$35.6**	**$33.8**	**13.6x**	**6.4x**
Eagle Ford Shale (South Texas)																	
Abraxas Petroleum Corporation	AXAS	$0.14		Not rated	$24	$208	-18.7%	-59%	11.5x	5.1	5.2	$17.7	$42.9	$40.6	$39.7	11.7x	4.8x
Chesapeake Energy Corporation	CHK	$5.01	NA	Sell	$49	$3,548	17.9%	-97%	6.2x	430.3	383.3	$1,527.8	$1,099.4	$8.2	$9.3	2.3x	3.2x
Comstock Resources, Inc.	CRK	$5.66	$8.00	Buy	$1,316	$3,986	0.2%	-31%	3.5x	215.9	224.6	$769.5	$921.9	$18.5	$17.7	5.2x	4.3x
Devon Energy Corporation	DVN	$8.95	$16.00	Buy	$3,424	$6,433	-11.1%	-66%	1.8x	321.2	298.7	$1,472.9	$1,698.0	$20.0	$21.5	4.4x	3.8x
Earthstone Energy, Inc. Class A	ESTE	$2.73	$7.00	Buy	$177	$324	-6.2%	-57%	0.8x	13.8	13.9	$142.7	$135.9	$23.5	$23.3	2.3x	2.4x
Ovintiv Inc	OVV	$9.32	$12.00	Hold	$2,422	$10,794	-1.6%	-60%	3.8x	535.0	516.2	$2,042.3	$1,948.0	$20.2	$20.9	5.3x	5.5x
EOG Resources, Inc.	EOG	$37.42	$61.00	Buy	$21,788	$25,141	-0.4%	-55%	0.7x	741.6	777.7	$4,633.3	$6,234.5	$33.9	$32.3	5.4x	4.0x
Lonestar Resources US, Inc. Class A	LONE	$0.09		Not rated	$2	$544	-63.6%	-97%	NM	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Penn Virginia Corporation	PVAC	$9.67	$18.00	Buy	$147	$681	-3.7%	-68%	2.1x	24.0	26.3	$261.1	$246.2	$28.3	$25.9	2.6x	2.8x
Magnolia Oil & Gas Corp. Class A	MGY	$5.02	$7.00	Hold	$1,267	$1,511	-2.7%	-60%	0.6x	61.8	61.1	$331.4	$438.5	$24.5	$24.7	4.6x	3.4x
Marathon Oil Corporation	MRO	$4.07	$4.00	Hold	$3,213	$8,272	-4.5%	-70%	3.1x	374.1	331.0	$1,632.1	$1,740.2	$22.1	$25.0	5.1x	4.8x
Matador Resources Company	MTDR	$8.59	$15.00	Buy	$1,004	$2,880	-6.0%	-52%	3.3x	72.5	73.9	$475.0	$624.0	$39.7	$39.0	6.1x	4.6x
Murphy Oil Corporation	MUR	$8.55	$22.00	Buy	$1,313	$5,130	-1.6%	-68%	3.0x	167.3	161.4	$938.7	$1,011.4	$30.7	$31.8	5.5x	5.1x
SilverBow Resources Inc	SBOW	$4.29	$4.00	Hold	$51	$517	-1.6%	-57%	3.0x	30.1	32.4	$142.3	$174.7	$17.2	$16.0	3.6x	3.0x
SM Energy Company	SM	$1.52	$2.00	Hold	$174	$2,660	-11.1%	-86%	0.5x	122.6	122.3	$920.5	$712.2	$21.7	$21.8	2.9x	3.7x
Sundance Energy Inc.	SNDE	$2.23	$2.00	Hold	$15	$368	1.4%	-88%	3.9x	10.0	8.7	$91.9	$63.4	$36.9	$42.4	4.0x	5.8x

Niobrara Shale (D-J Basin)																	
HighPoint Resources Corp.	HPR	$0.21	NA	Hold	$45	$852	-18.6%	-88%	NM	29.3	24.5	$246.6	$180.5	$29.1	$34.7	3.5x	4.7x
Bonanza Creek Energy Inc	BCEI	$20.64	$19.00	Hold	$430	$521	0.7%	-12%	0.3x	24.6	24.6	$159.0	$153.6	$21.2	$21.2	3.3x	3.4x
Chesapeake Energy Corporation	CHK	$5.01	NA	Sell	$49	$3,548	17.9%	-97%	6.2x	430.3	383.3	$1,527.8	$1,099.4	$8.2	$9.3	2.3x	3.2x
Devon Energy Corporation	DVN	$8.95	$16.00	Buy	$3,424	$6,433	-11.1%	-66%	1.8x	321.2	298.7	$1,472.9	$1,698.0	$20.0	$21.5	4.4x	3.8x
EOG Resources, Inc.	EOG	$37.42	$61.00	Buy	$21,788	$25,141	-0.4%	-55%	0.7x	741.6	777.7	$4,633.3	$6,234.5	$33.9	$32.3	5.4x	4.0x
Occidental Petroleum Corporation	OXY	$10.09	$25.00	Buy	$9,385	$57,666	-6.7%	-76%	6.3x	1331.1	1173.8	$5,965.6	$7,430.6	$43.3	$49.1	9.7x	7.8x
PDC Energy, Inc.	PDCE	$12.77	$21.00	Buy	$1,272	$3,230	2.2%	-51%	2.2x	183.1	180.1	$931.5	$925.5	$17.6	$17.9	3.5x	3.5x
Whiting Petroleum Corporation	WLL	$16.83	$32.00	Buy	$641	$1,035	-10.0%	NM	1.0x	98.1	89.0	$310.0	$397.5	$10.5	$11.6	3.3x	2.6x
Extraction Oil & Gas, Inc.	XOG	$0.05	NA	Hold	$6	$2,354	-16.4%	-98%	NM	87.0	58.1	$379.5	$233.4	$27.0	$40.5	6.2x	10.1x
Average							**-4.7%**	**-67.7%**	**2.7x**	**360.7**	**334.4**			**$23.5**	**$26.5**	**4.6x**	**4.8x**
Permian Basin (West Texas)																	
Apache Corporation	APA	$9.37	$11.00	Hold	$3,537	$13,933	-3.1%	-63%	4.3x	433.6	393.2	$2,012.0	$2,712.0	$32.1	$35.4	6.9x	5.1x
Callon Petroleum Company	CPE	$4.67	$5.00	Hold	$185	$3,421	-11.0%	-90%	4.4x	99.4	91.7	$700.7	$673.6	$34.4	$37.3	4.9x	5.1x
Centennial Resource Development, Inc. Class A	CDEV	$0.69	NA	Hold	$192	$1,296	1.2%	-85%	4.7x	64.6	58.0	$244.7	$301.2	$20.1	$22.3	5.3x	4.3x
Cimarex Energy Co.	XEC	$25.55	$40.00	Buy	$2,607	$4,843	2.6%	-51%	2.5x	249.6	241.4	$829.0	$999.3	$19.4	$20.1	5.8x	4.8x
Concho Resources Inc.	CXO	$48.60	$66.00	Buy	$9,560	$12,730	7.9%	-45%	1.3x	311.7	301.8	$2,808.3	$2,490.1	$40.8	$42.2	4.5x	5.1x
Devon Energy Corporation	DVN	$8.95	$16.00	Buy	$3,424	$6,433	-11.1%	-66%	1.8x	321.2	298.7	$1,472.9	$1,698.0	$20.0	$21.5	4.4x	3.8x
Earthstone Energy, Inc. Class A	ESTE	$2.73	$7.00	Buy	$177	$324	-6.2%	-57%	0.8x	13.8	13.9	$142.7	$135.9	$23.5	$23.3	2.3x	2.4x
Ovintiv Inc	OVV	$9.32	$12.00	Hold	$2,422	$10,794	-1.6%	-60%	0.1x	535.0	516.2	$2,042.3	$1,948.0	$20.2	$20.9	5.3x	5.5x
EOG Resources, Inc.	EOG	$37.42	$61.00	Buy	$21,788	$25,141	-0.4%	-55%	0.7x	741.6	777.7	$4,633.3	$6,234.5	$33.9	$32.3	5.4x	4.0x
Diamondback Energy, Inc.	FANG	$29.29	$52.00	Buy	$4,623	$11,637	-4.6%	-68%	2.9x	292.9	283.8	$2,085.2	$2,280.8	$39.7	$41.0	5.6x	5.1x
Laredo Petroleum, Inc.	LPI	$9.05		Not rated	$109	$1,377	-4.6%	-84%	NM	85.2	82.1	$476.0	$441.1	$16.2	$16.8	2.9x	3.1x
Matador Resources Company	MTDR	$8.59	$15.00	Buy	$1,004	$2,880	-6.0%	-52%	3.3x	72.5	73.9	$475.0	$624.0	$39.7	$39.0	6.1x	4.6x
Occidental Petroleum Corporation	OXY	$10.09	$25.00	Buy	$9,385	$57,666	-6.7%	-76%	6.3x	1331.1	1173.8	$5,965.6	$7,430.6	$43.3	$49.1	9.7x	7.8x
Parsley Energy, Inc. Class A	PE	$10.31	$11.00	Hold	$3,894	$7,425	1.0%	-45%	2.6x	178.0	170.1	$1,220.9	$1,245.4	$41.7	$43.7	6.1x	6.0x
Pioneer Natural Resources Company	PXD	$90.26	$95.00	Hold	$14,828	$16,849	2.5%	-40%	1.1x	357.0	370.2	$2,248.1	$2,786.6	$47.2	$45.5	7.5x	6.0x
QEP Resources, Inc.	QEP	$0.94	NA	Hold	$227	$2,150	-5.3%	-79%	2.6x	80.3	73.7	$662.5	$472.3	$26.8	$29.1	3.2x	4.6x
Ring Energy, Inc.	REI	$0.70	NA	Hold	$48	$407	-12.9%	-74%	4.5x	8.0	7.7	$69.9	$59.0	$51.0	$53.0	5.8x	6.9x
SM Energy Company	SM	$1.52	$2.00	Hold	$174	$2,660	-11.1%	-86%	2.7x	122.6	122.3	$920.5	$712.2	$21.7	$21.8	2.9x	3.7x
WPX Energy, Inc.	WPX	$4.57	$8.00	Buy	$2,564	$5,747	-12.1%	-67%	2.0x	206.0	226.3	$1,543.6	$1,410.9	$27.9	$25.4	3.7x	4.1x
Average							**-4.3%**	**-65.5%**	**2.7x**	**289.7**	**277.7**			**$31.6**	**$32.6**	**5.2x**	**4.8x**
GOM & International																	
Apache Corporation	APA	$9.37	$11.00	Hold	$3,537	$13,933	-3.1%	-63%	4.3x	433.6	393.2	$2,012.0	$2,712.0	$32.1	$35.4	6.9x	5.1x
Hess Corporation	HES	$38.06		Not rated	$11,690	$19,911	0.0%	-43%	2.8x	334.5	317.4	$2,306.7	$1,974.6	$59.5	$62.7	8.6x	10.1x
Occidental Petroleum Corporation	OXY	$10.09	$25.00	Buy	$9,385	$57,666	-6.7%	-76%	6.3x	1331.1	1173.8	$5,965.6	$7,430.6	$43.3	$49.1	9.7x	7.8x
Talos Energy, Inc.	SGY	$7.04		Not rated	$514	$1,495	1.4%	-77%	1.9x			$463.8	$502.2			3.2x	3.0x
W&T Offshore, Inc.	WTI	$1.70		Not rated	$241	$841	-6.1%	-69%	4.3x	40.5	43.2	$137.4	$177.5	$20.8	$19.5	6.1x	4.7x
Average							**-2.9%**	**-65.6%**	**3.9x**	**534.9**	**481.9**			**$38.9**	**$41.7**	**6.9x**	**6.1x**
Haynesville (Ark-La-TX)																	
Chesapeake Energy Corporation	CHK	$5.01	NA	Sell	$49	$3,548	17.9%	-97%	6.2x	430.3	383.3	$1,527.8	$1,099.4	$8.2	$9.3	2.3x	3.2x
Comstock Resources, Inc.	CRK	$5.66	$8.00	Buy	$1,316	$3,986	0.2%	-31%	3.5x	215.9	224.6	$769.5	$921.9	$18.5	$17.7	5.2x	4.3x
Goodrich Petroleum Corporation	GDP	$9.20	$11.00	Buy	$127	$231	1.8%	-8%	1.5x	22.9	24.8	$70.1	$91.3	$10.1	$9.3	3.3x	2.5x
Average							**6.6%**	**-45.5%**	**3.8x**	**223.0**	**210.9**			**$12.3**	**$12.1**	**3.6x**	**3.4x**
Marcellus Shale (Northeast)																	
Antero Resources Corporation	AR	$3.55	$3.00	Hold	$953	$7,333	-4.3%	25%	4.5x	576.1	575.3	$898.5	$856.0	$12.7	$12.7	8.2x	8.6x
Chesapeake Energy Corporation	CHK	$5.01	NA	Sell	$49	$3,548	17.9%	-97%	6.2x	430.3	383.3	$1,527.8	$1,099.4	$8.2	$9.3	2.3x	3.2x
CNX Resources Corporation	CNX	$10.13	$14.00	Buy	$2,274	$5,781	-4.7%	14%	2.8x	223.5	250.3	$869.0	$905.1	$25.9	$23.1	6.7x	6.4x
Cabot Oil & Gas Corporation	COG	$19.10		Not rated	$7,613	$8,739	0.9%	10%	1.3x	390.8	399.7	$774.0	$1,386.3	$22.4	$21.9	11.3x	6.3x
Montage Resources Corp.	ECR	$5.17		Not rated	$186	$873	-5.1%	-35%	3.2x	97.2	98.2	$206.2	$263.8	$9.0	$8.9	4.2x	3.3x
EQT Corporation	EQT	$14.71	$16.00	Buy	$3,760	$8,377	0.1%	35%	3.0x	671.7	678.2	$1,550.9	$1,719.1	$12.5	$12.4	5.4x	4.9x
Range Resources Corporation	RRC	$8.27	$5.00	Hold	$2,118	$5,377	2.6%	71%	5.7x	375.7	366.8	$569.3	$738.1	$14.3	$14.7	9.4x	7.3x
Southwestern Energy Company	SWN	$2.77	$3.00	Hold	$1,502	$4,079	-5.1%	14%	3.8x	387.9	517.6	$641.7	$1,176.1	$10.5	$7.9	6.4x	3.5x
Average							**0.3%**	**4.6%**	**3.8x**	**394.1**	**408.7**			**$14.4**	**$13.8**	**6.7x**	**5.4x**
Midcontinent (Oklahoma / North TX)																	
Chesapeake Energy Corporation	CHK	$5.01	NA	Sell	$49	$3,548	17.9%	-97%	6.2x	430.3	383.3	$1,527.8	$1,099.4	$8.2	$9.3	2.3x	3.2x
Continental Resources, Inc.	CLR	$13.16	$18.00	Hold	$4,805	$10,918	-2.2%	-62%	4.5x	290.4	282.8	$1,279.7	$1,868.2	$37.6	$38.6	8.5x	5.8x
Devon Energy Corporation	DVN	$8.95	$16.00	Buy	$3,424	$6,433	-11.1%	-66%	1.3x	321.2	298.7	$1,472.9	$1,698.0	$20.0	$21.5	4.4x	3.8x
Gulfport Energy Corporation	GPOR	$0.27	NA	Hold	$43	$1,955	-59.0%	-91%	4.0x	171.7	173.3	$467.1	$511.2	$11.4	$11.3	4.2x	3.8x
Marathon Oil Corporation	MRO	$4.07	$4.00	Hold	$3,213	$8,272	-4.5%	-70%	3.1x	374.1	331.0	$1,632.1	$1,740.2	$22.1	$25.0	5.1x	4.8x
Occidental Petroleum Corporation	OXY	$10.09		Buy	$9,385	$57,666	-6.7%	-76%	5.8x	1324.2	1162.7	$6,489.9	$7,660.8	$43.5	$49.6	8.9x	7.5x
Cimarex Energy Co.	XEC	$25.55	$40.00	Buy	$2,607	$4,843	2.6%	-51%	2.5x	249.6	241.4	$829.0	$999.3	$19.4	$20.1	5.8x	4.8x
Average							**-9.0%**	**-73.2%**	**3.9x**	**451.7**	**410.5**			**$23.2**	**$25.0**	**5.6x**	**4.8x**

Powder River Basin (WY/MT)																	
Devon Energy Corporation	DVN	$8.95	$16.00	Buy	$3,424	$6,433	-11.1%	-66%	1.8x	321.2	298.7	$1,472.9	$1,698.0	$20.0	$21.5	4.4x	3.8x
Chesapeake Energy Corporation	CHK	$5.01	NA	Sell	$49	$3,548	17.9%	-97%	6.2x	430.3	383.3	$1,527.8	$1,099.4	$8.2	$9.3	2.3x	3.2x
EOG Resources, Inc.	EOG	$37.42	$61.00	Buy	$21,788	$25,141	-0.4%	-55%	0.7x	741.6	777.7	$4,633.3	$6,234.5	$33.9	$32.3	5.4x	4.0x
SM Energy Company	SM	$1.52	$2.00	Hold	$172	$2,660	-11.1%	-86%	2.7x	122.6	122.3	$920.5	$712.2	$21.7	$21.8	2.9x	3.7x
Average							**-1.2%**	**-76.1%**	**2.9x**	**403.9**	**395.5**			**$21.0**	**$21.2**	**3.8x**	**3.7x**
Tuscaloosa Marine Shale (South MS/North LA)																	
Comstock Resources, Inc.	CRK	$5.66		Buy	$1,316	$3,986	0.2%	-31%	3.6x	215.0	225.3	$737.4	$917.2	$18.5	$17.7	5.4x	4.3x
Ovintiv Inc	OVV	$9.32	$12.00	Hold	$2,422	$10,794	-1.6%	-60%	3.8x	535.0	516.2	$2,042.3	$1,948.0	$20.2	$20.9	5.3x	5.5x
Average							**-0.7%**	**-45.7%**	**3.7x**	**375.0**	**370.7**			**$19.4**	**$19.3**	**5.3x**	**4.9x**
Utica Shale (Northeast)																	
Antero Resources Corporation	AR	$3.55	$3.00	Hold	$953	$7,333	-4.3%	25%	4.5x	576.1	575.3	$898.5	$856.0	$12.7	$12.7	8.2x	8.6x
Chesapeake Energy Corporation	CHK	$5.01	NA	Sell	$49	$3,548	17.9%	-97%	6.2x	430.3	383.3	$1,527.8	$1,099.4	$8.2	$9.3	2.3x	3.2x
Montage Resources Corp.	ECR	$5.17		Not rated	$186	$873	-5.1%	-35%	3.2x	97.2	98.2	$206.2	$263.8	$9.0	$8.9	4.2x	3.3x
CNX Resources Corporation	CNX	$10.13	$14.00	Buy	$2,274	$5,781	-4.7%	14%	2.8x	223.5	250.3	$869.0	$905.1	$25.9	$23.1	6.7x	6.4x
EQT Corporation	EQT	$14.71	$16.00	Buy	$3,760	$8,377	0.1%	35%	3.0x	671.7	678.2	$1,550.9	$1,719.1	$12.5	$12.4	5.4x	4.9x
Gulfport Energy Corporation	GPOR	$0.27	NA	Hold	$43	$1,955	-59.0%	-91%	NM	171.7	173.3	$467.1	$511.2	$11.4	$11.3	4.2x	3.8x
Range Resources Corporation	RRC	$8.27	$5.00	Hold	$2,118	$5,377	2.6%	71%	5.7x	375.7	366.8	$569.3	$738.1	$14.3	$14.7	9.4x	7.3x
Average							**-7.5%**	**-11.2%**	**4.2x**	**363.7**	**360.8**			**$13.4**	**$13.2**	**5.8x**	**5.4x**

Industry Valuations

I put together a sheet breaking down all the key metrics for the Oil & Gas Upstream names. The industry is in a new era of capital discipline, realizing it needs to be ready to navigate downturns in pricing. The global oil market continues to struggle with over-supply while demand disruptions from the pandemic remain, though recovering in Auto seeing limited recovery in Aerospace. Monetization of assets remains a major theme in the industry with companies focusing on higher rate of return wells. When assessing this group there are so many industry-specific metrics to observe but overall I am looking for cost leaders (efficient drilling), strong balance sheets, capital discipline, and a higher Oil mix and trading at a reasonable valuation.

Majors

Majors	EV	EV/DACF FY21	EV/(EBITDA-CAPEX) FY20	Debt/EBITDA FY20	ROCE	Oil Mix	2020 Production	2021 Production Growth	EV/Production	Production (Operating) Costs per BOE	Acreage	Proved Oil Reserves (PR)	EV/PR (Oil)
XOM	212,988	6.4X	5.40	1.09	4.78%	58%	2386000	-2%	89.27	$17.00	Permian;	14598000000	14.59
CVX	172,209	8.7X	6.03	0.66	4.02%	66%	1865000	-1%	92.34	$15.00	Permian;	6521000000	26.41
OXY	57,644	5.3X	6.34	2.40	-17.53%	63%	580000	-1%	99.39	$13.23	Permian; Middle East	3940000000	14.63
COP	46,214	5.4X	4.83	0.92	12.31%	85%	778000	8%	59.40	$15.00	Bakken, Eage Ford, Niobara	5315000000	8.70

Mid & Large Cap E&P

Majors	EV	EV/DACF FY21	EV/(EBITDA-CAPEX) FY20	Debt/EBITDA FY20	ROCE	Oil Mix	2020 Production	2021 Production Growth	EV/Production	Production (Operating) Costs per BOE	Acreage	Proved Oil Reserves (PR)	EV/PR (Oil)	Proved Gas Reserves
Large Cap E&P														
EOG	25,241	4.1X	3.16	0.70	9.58%	51%	456200	6%	55.33	$10.52	Permian, Bakken, Eagle Ford, Powder River	2434109000	10.37	1.52E+11
HES	19,617	7.7X	4.43	2.48	-4.05%	61%	169000	-9%	116.08	$10.00	Bakken, Guyana, Gulf of Mexico	931000000	21.07	4.51E+10
PXD	16,627	5.4X	4.37	0.70	8.93%	59%	211104	5%	78.76	$8.11	Permian & Eagle Ford; Midland	885733000	18.77	4.25E+10
APA	14,100	5.9X	4.45	2.08	7.32%	52%	239415.26	-9%	58.90	$16.30	Egypt, North Sea, Midland Basin	737123000	19.13	4.65E+10
CXO	12,605	4.9X	2.90	1.35	2.61%	61%	209230	4%	60.24	$9.80	Permian	619000000	20.36	6.51E+10
FANG	11,933	4.9X	2.98	1.67	6.03%	73%	187721	1%	63.57	$7.70	Permian	1652009000	7.22	3.17E+10
CLR	11,197	4.9X	4.16	1.61	7.53%	57%	197991	6%	56.56	$3.75	Bakken, STACK, SCOOP	760187000	14.73	1.46E+11
MRO	8,360	3.7X	2.81	1.66	4.99%	55%	210000	-6%	39.81	$5.75	Bakken, STACK, SCOOP, Permian, Eagle Ford	877000000	9.53	5.57E+10
DVN	7,147	3.5X	2.84	1.84	4.08%	44%	147000	-4%	48.62	$4.30	STACK; Delaware	487000000	14.68	4.59E+10
OVV	9,943	3.8X	2.59	1.68	6.73%		164400	5%				1334300000	7.45	1.86E+11
PE	7,684	5.7X	3.79	1.54	5.44%	70%	86751	-3%	88.58	$11.70	Permian; Midland; S. Delaware	474127000	16.21	2.01E+10

Natural Gas Focused E&P

Majors	EV	EV/DACF FY21	EV/(EBITDA-CAPEX) FY20	Debt/EBITDA FY20	ROCE	Oil Mix	2020 Production	2021 Production Growth	EV/Production	Production (Operating) Costs per BOE	Acreage	Proved Oil Reserves (PR)	EV/PR (Oil)	Proved Gas Reserves
Gas Levered E&P														
RRC	5,296	6.3X	5.06	3.97	3.45%	10%	10109	2%	523.85	$1.34	Marcellus Shale; N. Louisiana	1012768000	5.23	3.43E+11
COG	8,473	6X	6.26	0.84	19.65%	5%		2%	#VALUE!	$1.10	Marcellus and Eagle Ford	22000	385139.79	3.65E+11
SWN	4,180	3.7X	2.72	2.34	10.81%	10%	12830.601	-1%	325.79	$1.14	Appalachia; Fayetteville	681700000	6.13	2.44E+11
EQT	8,324		3.15	2.60	1.74%		2245.9016							4.72E+11

Management Commentary:

Conoco (COP) on its deal for **Concho (CXO)**: "This deal combines 2 best-in-class portfolios to create a resource base of approximately 23 billion barrels of oil equivalent with a less than $40 per barrel WTI cost of supply and an average cost of supply that's less than $30 per barrel WTI. Both Concho and ConocoPhillips bring investment-grade balance sheets to the deal. The combined entity balance sheet is strong and resilient. The combined company will be the largest E&P company in the world, with production of over 1.5 million barrels equivalent a day. We will be the most diverse and dependent with production coming from 4 distinct mega trends: conventional, unconventional, LNG and oil sands. We believe the industry is entering a new era, an era where low cost, high-quality operators will distinguish themselves."

Chevron (CVX) on renewable fuels: "The future of energy is lower carbon and we're delivering more alternative products to our customers. Recently, we announced first gas at our CalBio renewable natural gas joint venture in California and a new partnership with Brightmark. Our capital committed to RNG ventures is over $200 million. In renewable diesel, we're leveraging existing infrastructure to co-process biofeed at our El Segundo refinery, with start-up expected in the first half of next year. Also, we sell a range of branded biodiesels and are piloting the sale of R99 in Southern California."

EOG Resources (EOG) on the Macro outlook: "So going into '21, our view of the macro situation is we'll still largely be in an oversupplied market next year. So we don't anticipate growing volumes next year until we see the market conditions improve. So moving into '22 and '23, assuming we're now into an area where inventories have been pulled down and the market is no longer oversupplied, we see an opportunity to maybe grow again. And we'll stick with our reinvestment ratio of about 70% to 80%."

Diamondback (FANG) on industry consolidation: "We believe that consolidation in our sector is necessary as our sector is too fragmented, but that's changed rapidly. Industry consolidation has long been anticipated in U.S. shale and has been touted as an avenue to create scale and improve cost efficiencies. Today, Diamondback is a leader in cost and efficiency. The success of the acquisitions we've executed to date were largely driven by realizing hundreds of millions of dollars of savings through lower costs and higher returns than from the previous operators. Diamondback is not getting left behind if we don't do anything today, and we prefer not to make rash decisions at the bottom of the cycle. Patience will be rewarded at the end of the day, and we have the balance sheet, cost structure and asset-based -- asset base to be patient and ride out this downturn as brutal as it may be. To finish, we operate in a cyclical business. And while this downturn has been as severe as any in industry history, Diamondback has the size, scale, balance sheet, asset quality and cost structure to weather a prolonged downturn and thrive in the inevitable upcycle. We are generating and expect to continue to generate free cash flow, and we will allocate that free cash flow to our dividend and debt reduction until commodity prices meaningfully recover from current levels."

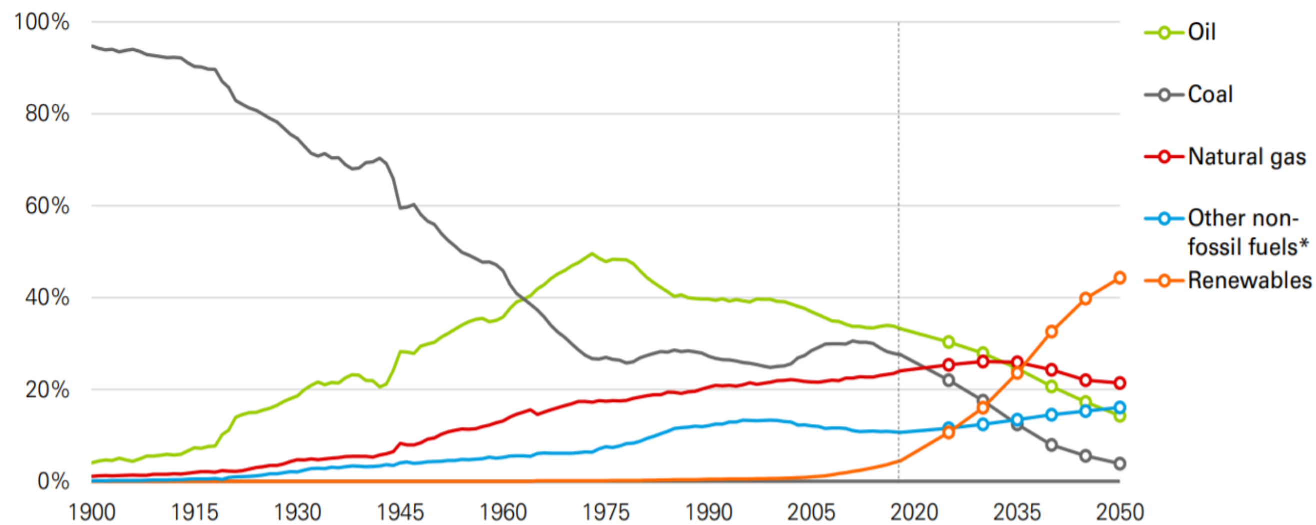
Hess (HES) on the recovery: "But at the end of the day, we're in a V-shaped recovery on demand. And obviously, yesterday's announcement by Pfizer, the great news about a very successful vaccine being available at the beginning of the year, obviously, we think that's going to have a big impact on the economy, on people getting back to work and people also flying, no less domestically, but globally. So we do think demand is V-shape recovery, on the road to recovery, slight pause right now because of the increase in COVID cases but as the vaccine gets distributed, that V-shape should continue throughout 2021. On supply, we think it's a U-shaped recovery. You talked about shale. U.S. crude and condensate production had been at the end of the year, 12.8 million barrels a day. We think it's closer to 10.5 million right now, mainly because of a low rig count. The rig count is at about 300. A little over a year ago, it was closer to 1,000. At that level, there's not enough well stock and new production to offset production declines. The IEA and the World Energy Outlook recently has said, the world needs to invest $500 billion to $600 billion a year to grow global oil and gas production to meet demand. Across the world, this year, that number is $300 billion. So while we're awash in oil today because of excess inventory because of COVID, as you go forward, once that supply overhang is dissipated and we get to pre-COVID levels in inventory, I think the world is going to realize that we actually need to invest more to grow oil supply. And at that time, prices should firm so that the best rocks, they get the best dollars to get the best returns. And that will be a combination of shale, but also conventional plays."

Range (RRC) on Natural Gas industry future: "On the environmental front, the natural gas industry has an advantaged position today and for the foreseeable future as the world moves towards cleaner, more efficient fuels. Within the natural gas industry, Appalachia has an advantage globally as an abundant, low-cost resource with leading environmental standards, and we believe Range is best positioned within Appalachia, as discussed in our most recent sustainability report. Another metric that we've discussed in the past is capital spending per unit of production where Range is, again, best-in-class amongst Appalachian peers. This low capital intensity that is unmatched amongst small and mid-cap E&P companies provides us a solid foundation for generating a top-tier free cash flow yield. While 2021 and even 2022 prices have improved considerably for natural gas and NGLs, we believe the forward curve remains below a sustainable long-term price. This is not a market that's incentivizing any growth."

Cabot (COG) looking ahead on Natural Gas after NYMEX prices hit a 25-year low: "While we are certainly not immune to lower natural gas prices, our low-cost structure, strong balance sheet and disciplined capital allocation strategy allow us to continue to generate corporate returns and free cash flow even in this current price environment. The good news is that we already experiencing significant tailwinds for the natural gas supply and demand outlook, driven by large declines in natural gas supplies across the U.S., coupled with an improving demand outlook heading into the winter heating season. As a result, since our early March, we have seen over a 35% increase in the NYMEX futures for 2022 to the current levels that are above $3, which would result in a material expansion of net income, free cash flow and return on capital employed next year. With the current natural gas futures in 2022 and beyond in backwardation, and well below the $3-plus environment we are anticipating in 2021, we do not believe this is the appropriate time to consider growing our production base."

Industry Themes

- ✓ Consolidation
- ✓ Capital Discipline
- ✓ Performance Efficiency
- ✓ Digital Push
- ✓ Decarbonization
- ✓ New Frontier of Energy Transition – Carbon Capture, Hydrogen, Energy Storage



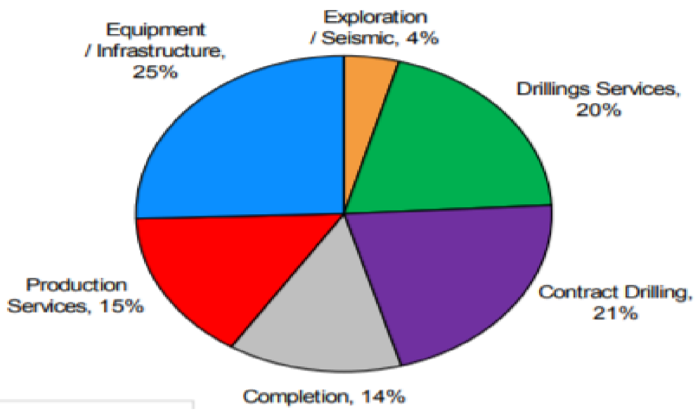
OptionsHawk Executive Summary and Top Picks

Sticking to the philosophy outlined above and being selective across the major categories, **Conoco (COP)** remains the preferred US Major. **Pioneer Natural (PXD)** is the top large cap E&P and **Diamondback (FANG)** the preferred mid-cap play. **Cabot (COG)** is the best-in-class Natural Gas name while **Cimarex (XEC)** a compelling small-cap value. **PDC Energy (PDCE)** would be a preferred small-cap more speculative name.

Oil & Gas Services Components: AROC, BKR, CHX, CLB, DRQ, DNOW, ERII, FI, FTI, GTLS, HAL, HLX, HP, LBRT, MRC, NESR, NEX, NOV, OII, PTEN, PUMP, RES, SLB, SOI, USAC, VTOL, WFT, WHD, WTTR

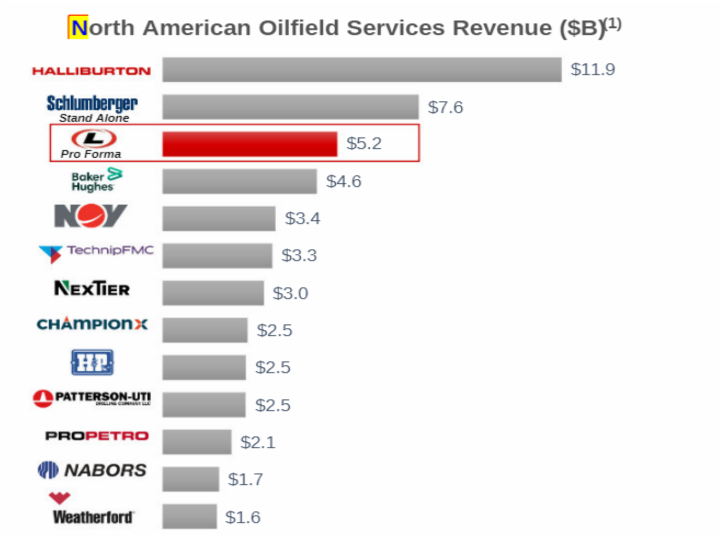
Several components from 2020 have been eliminated falling below the $300M market cap threshold with the oil crisis severely impacting names it is becoming an industry where only a few can survive and withstand the severity of this latest downturn.

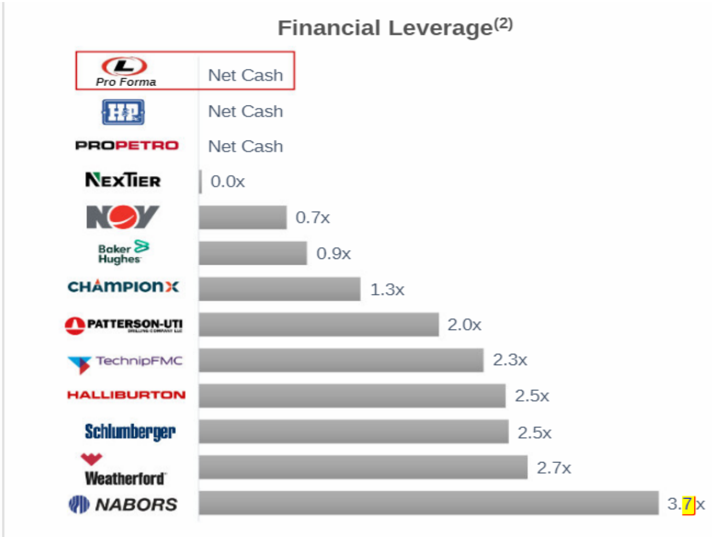
The Energy Services group also trades very correlated to its underlying commodity and is closely tied to the E&P companies as their CAPEX budgets directly impact demand for the services group. With the sharp downturn in Oil prices, a lot of companies cut production targets resulting in a major downturn in earnings for this group. Due to a combination of factors that include greater energy efficiency, slower economic growth, and higher demand for cleaner energy sources, the growth in capital investment for hydrocarbons has downshifted significantly from prior decades while growth in renewable sources of energy is accelerating. The group is often divided up into Diversified Services (BKR, HAL, SLB, CHX, NOV), Land Drillers (HP, PTEN, NBR), Offshore Drillers (RIG, NE), Offshore Equipment (HLX, OII), Equipment (APY, CLB, FET, NOV, WHD), Onshore Services (NINE), Pressure Pumping (PUMP, NEX, FTSI, LBRT, RES) and Frac Sand (SLCA). Oilfield services include Seismic, Reservoir Characterization, Drilling, Pressure Pumping, Fluids, Well Completion, Well Stimulation, Well Casing, Construction and On-Site Lodging.

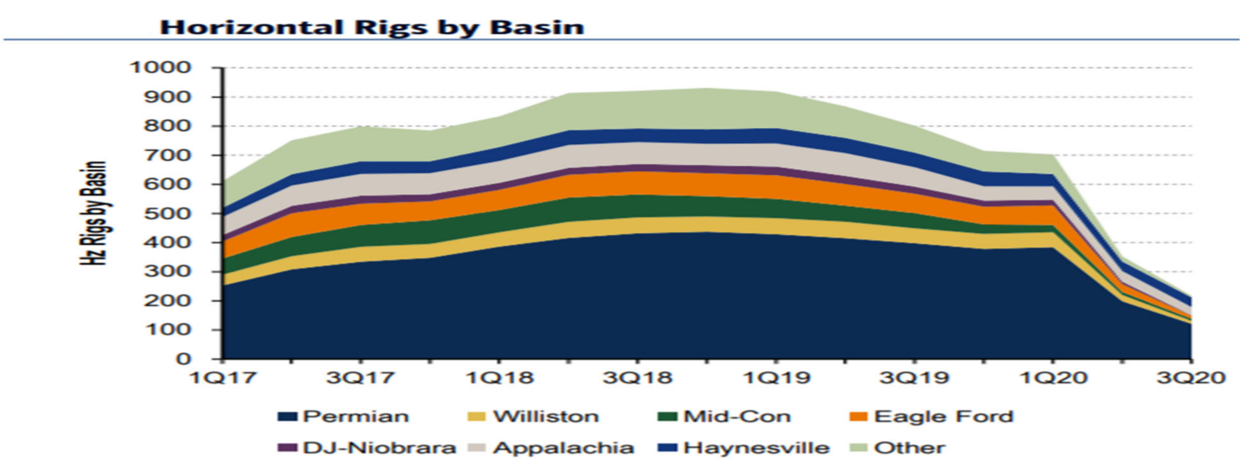


Ticker	Rating	BofA EV/EBITDA Multiples			Cons EV/EBITDA Multiples			BofA FCF Yield (Levered)			Cons FCF Yield (Levered)			BofA EV/Revenue Multiples			Cons EV/Revenue Multiples		
		2020E	2021E	2022E	2020E	2021E	2022E	2020E	2021E	2022E	2020E	2021E	2022E	2020E	2021E	2022E	2020E	2021E	2022E
Diversified Services																			
BKR	Buy	8.0x	7.4x	6.0x	8.2x	7.5x	6.0x	4.8%	9.5%	9.7%	3.1%	7.6%	8.0%	0.8x	0.9x	0.8x	0.9x	0.9x	0.8x
HAL	Buy	8.2x	8.4x	6.4x	8.5x	9.2x	7.4x	8.3%	9.2%	8.8%	9.3%	5.6%	5.1%	1.3x	1.5x	1.2x	1.3x	1.5x	1.3x
SLB	Neutral	8.7x	8.9x	7.3x	8.8x	8.7x	7.5x	7.6%	7.7%	9.4%	6.8%	9.1%	11.1%	1.6x	1.8x	1.5x	1.5x	1.6x	1.5x
Average		**8.3x**	**8.3x**	**6.6x**	**8.5x**	**8.5x**	**7.0x**	**6.9%**	**8.8%**	**9.3%**	**6.4%**	**7.4%**	**8.1%**	**1.2x**	**1.4x**	**1.2x**	**1.2x**	**1.3x**	**1.2x**
Land Drillers																			
HP	Neutral	9.8x	19.2x	6.5x	10.0x	17.2x	7.2x	17.4%	4.6%	4.3%	19.2%	0.2%	5.8%	1.3x	1.7x	1.1x	0.9x	1.7x	1.2x
PTEN	Underperform	6.2x	14.5x	6.4x	6.4x	11.7x	6.3x	23.1%	-2.5%	-2.3%	19.1%	3.6%	5.5%	1.2x	1.4x	1.0x	1.2x	1.4x	1.0x
Average		**8.0x**	**16.8x**	**6.5x**	**8.2x**	**14.4x**	**6.8x**	**20.3%**	**1.1%**	**1.0%**	**19.1%**	**1.9%**	**5.6%**	**1.2x**	**1.5x**	**1.0x**	**1.1x**	**1.5x**	**1.1x**
Offshore Drillers																			
RIG	Underperform	7.0x	9.2x	9.3x	8.4x	10.7x	10.1x	17.2%	-225%	3.3%	-35.9%	#######	-27.4%	2.6x	3.2x	3.0x	2.6x	3.0x	2.9x
Offshore Equipment & Services																			
HLX	Buy	4.5x	4.8x	4.7x	4.3x	5.7x	5.9x	16.3%	14.3%	6.7%	20.7%	16.3%	10.0%	0.8x	0.9x	0.9x	0.8x	0.9x	0.9x
OII	Neutral	5.2x	6.9x	5.7x	5.7x	7.3x	6.2x	7.2%	10.4%	10.7%	18.4%	15.7%	4.2%	0.5x	0.5x	0.5x	0.5x	0.5x	0.5x
Average		**4.8x**	**5.9x**	**5.2x**	**5.0x**	**6.5x**	**6.0x**	**11.8%**	**12.4%**	**8.7%**	**19.6%**	**16.0%**	**7.1%**	**0.6x**	**0.7x**	**0.7x**	**0.7x**	**0.7x**	**0.7x**
Equipment / Capital Light Companies																			
CHX	Buy	7.7x	7.4x	5.7x	10.2x	7.7x	6.2x	8.9%	14.6%	14.7%	9.7%	9.5%	13.1%	1.0x	1.0x	0.9x	1.2x	1.0x	0.9x
CLB	Neutral	12.4x	11.5x	8.6x	12.6x	12.2x	9.4x	9.4%	10.4%	12.4%	10.1%	7.7%	9.1%	2.0x	2.1x	1.8x	2.0x	2.1x	1.8x
NOV	Underperform	11.5x	13.9x	8.4x	11.5x	14.4x	8.0x	15.3%	10.5%	6.3%	13.7%	4.8%	6.0%	0.7x	0.8x	0.7x	0.7x	0.8x	0.7x
GTLS	Buy	15.2x	14.1x	11.1x	14.1x	13.5x	11.8x	5.9%	5.9%	7.7%	5.5%	6.6%	7.1%	9.6x	10.2x	7.3x	9.8x	10.7x	7.6x
WHD	Neutral	12.1x	13.5x	8.4x	12.2x	14.6x	8.8x	5.6%	5.5%	4.1%	7.0%	3.6%	4.6%	3.7x	3.9x	2.8x	3.7x	4.1x	2.9x
Average		**11.7x**	**11.7x**	**8.5x**	**12.1x**	**12.0x**	**8.8x**	**9.9%**	**10.3%**	**10.3%**	**9.8%**	**7.2%**	**8.8%**	**3.3x**	**3.5x**	**2.7x**	**3.4x**	**3.6x**	**2.8x**
Pressure Pumping																			
LBRT	Neutral	31.9x	6.0x	3.7x	41.6x	11.2x	5.4x	0.6%	2.0%	10.1%	1.9%	-2.0%	7.6%	1.6x	0.6x	0.5x	1.7x	0.9x	0.7x
NEX	Buy	6.8x	4.0x	2.5x	7.4x	5.7x	2.6x	1.0%	-5.4%	8.3%	-0.2%	-7.1%	-0.4%	0.4x	0.4x	0.4x	0.4x	0.4x	0.3x
Average		**19.4x**	**5.0x**	**3.1x**	**24.5x**	**8.5x**	**4.0x**	**0.8%**	**-1.7%**	**9.2%**	**0.9%**	**-4.5%**	**3.6%**	**1.0x**	**0.5x**	**0.4x**	**1.0x**	**0.6x**	**0.5x**

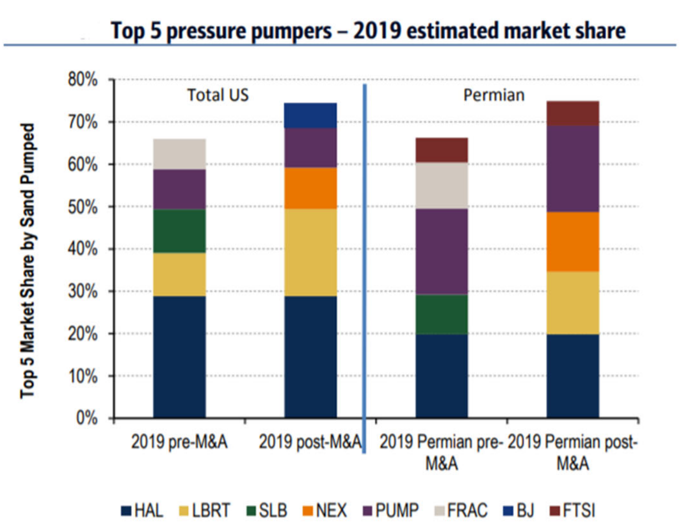
Drillers lease their rigs out to oil and gas companies for a daily rate (dayrate), which are very high during booms (E&P companies want to drill more wells and bid up prices for limited rigs) and very low during busts (no one wants to drill wells and oil companies ask for renegotiated rates). Land and offshore drillers are completely different markets – offshore rates are much more expensive, but maintenance is also much more expensive. Offshore oil, being relatively high on the cost curve, is also more susceptible to a downturn which leads to restructuring. The most well-known rig count is conducted by Baker Hughes. The active rig count suggests bullish oil activity as it means that producers are looking to increase production. The industry uses a number of metrics such as Rig utilization, Rig Operating Days, Drilling Day Rates, Operating Days to Wells Drilled, and more.

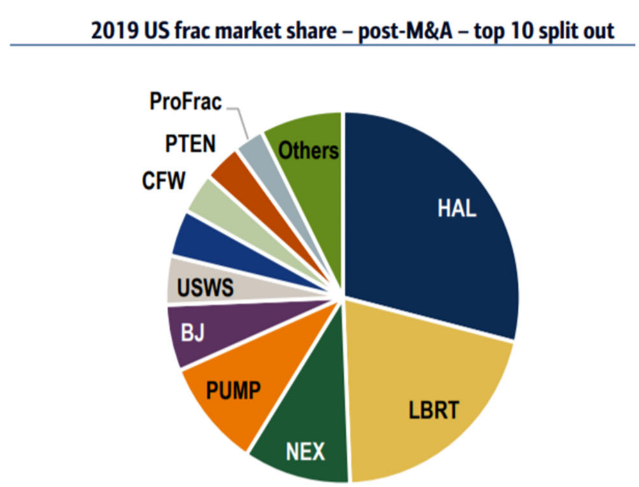


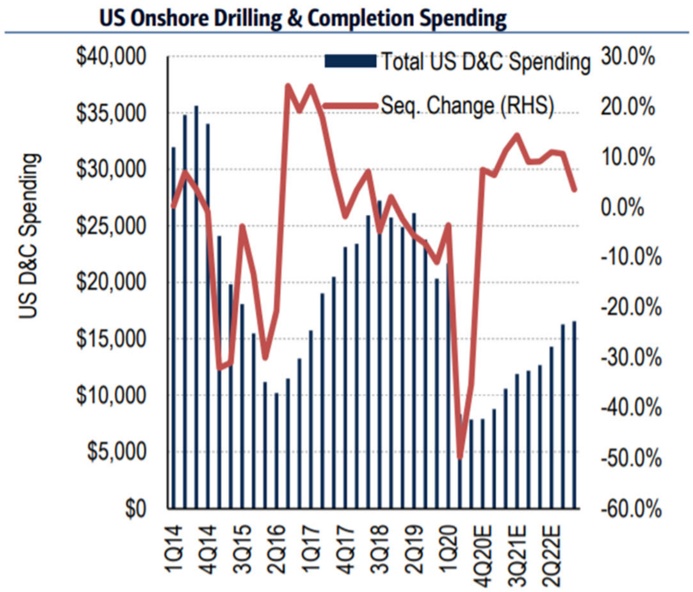


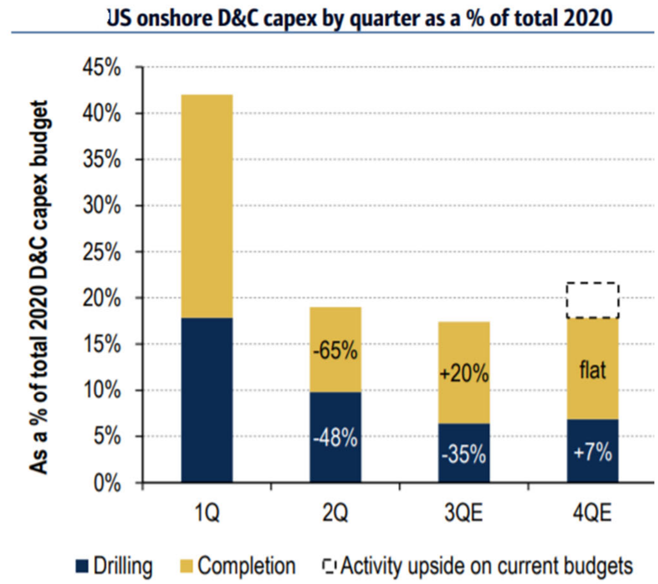


Source: Baker Hughes Rig Count









EV/EBITDA, EV/Revenues, EBITDA margins and looking at debt levels with balance sheet ratios will all be appropriate in analyzing this group. The stocks are still trading rich to historical EV/EBITDA around 8.5X. The group currently has an average EV/EBITDA of 11.4X, EV/Sales 2X, EBITDA margins 19.6%, and ROE of 2.1%.

Management Commentary:

Halliburton (HAL) on Digital & International: "Our digital framework, Halliburton 4.0, permeates all aspects of our business and enables the success of our other strategic priorities. As digital deployment and integration across the value chain accelerates, we believe that we'll continue to grow our current business, create new revenue opportunities and drive better returns for Halliburton. The international short-cycle producers have an opportunity to regain market share as a result of declining U.S. oil production. As demand starts to improve and outgrow supply, it should encourage international investments in both oil and gas, and our strong international business that now delivers the majority of our revenues is ready to power into the eventual recovery."

Baker Hughes (BKR) on growth areas: "Given the subdued upstream outlook, the primary growth opportunities we see within our existing product and service footprint are the broader industrial sector, specialty chemicals and non-metallic materials. On the industrial side, we see the opportunity to develop a solid industrial platform by leveraging the strongest core competencies within our TPS and Digital Solutions segments. Our efforts will be focused on delivering energy efficiency and process solutions, targeting adjacent, non-energy industrial sectors. In addition to industrials, we remain focused on driving growth in the non-metallic and chemical sectors. Due to the lower carbon footprint associated with non-metallics, we believe this segment provides significant opportunity for expansion as well as synergies with our upstream and chemicals businesses. In Chemicals, we see the opportunities to grow internationally, in the downstream segment and potentially into other adjacent specialty chemical markets to complement our current capability. The third pillar of our strategy is focused on positioning for new frontiers. As the energy landscape continues to evolve, we have spent considerable time evaluating key growth areas associated with the energy transition, and analyze where Baker Hughes can capitalize on these opportunities. Overall, we see a range of options for our technology with the greatest near-term potential in carbon capture, hydrogen and energy storage. Although it is still very early in the evolution of these 3 markets, we believe that Baker Hughes can play a key role in the future development of these areas with the technology we have in-house."

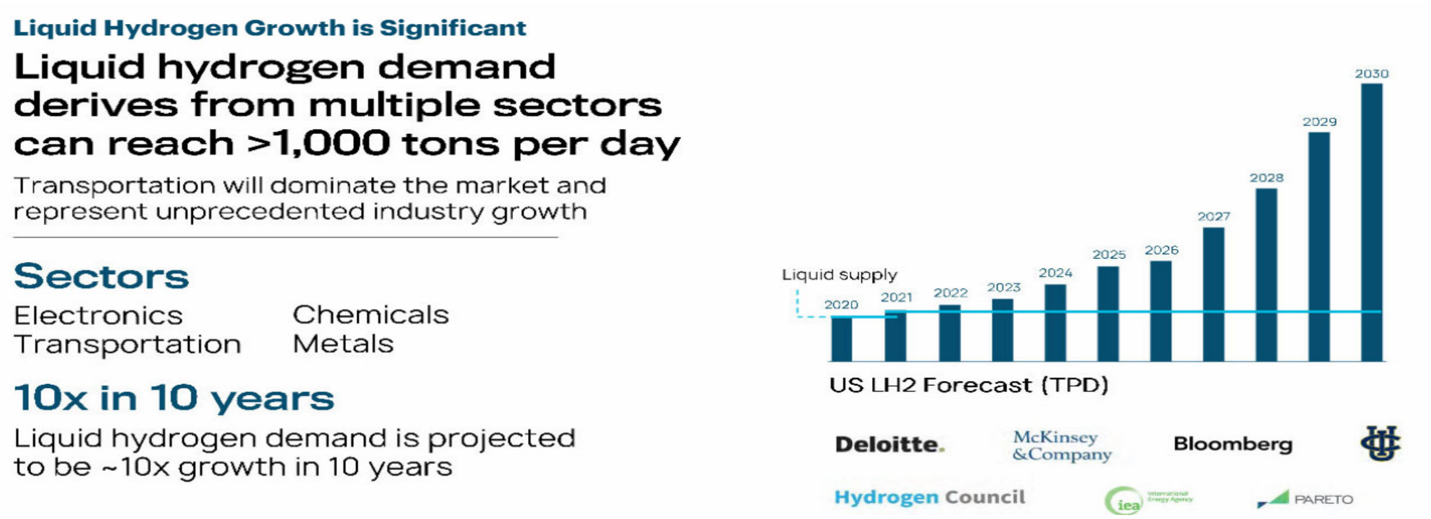
Schlumberger (SLB) on its New Energy portfolio: "Finally, we continued to develop our New Energy portfolio. We've progressed in hydrogen technology venture, Genvia, and the creation of a geothermal project development company which complements our low-heat geothermal venture, Celsius Energy. These exciting venture represents a mix of new, unique opportunities for Schlumberger to create a differentiated market position through the energy transition. In parallel, we continue to develop avenues to contribute to the decarbonization of oil and gas operations, leveraging our technology, expertise and execution platform to reduce our environmental impact while helping our customers reach their environmental goals."

TechnipFMC (FTI) on Biofuels and Hydrogen: "TechnipFMC also has a long history in the development of biofuels, offering advanced solutions to meet increasingly stringent climate targets. Biofuels can have substantial environmental benefits with the potential to reduce greenhouse gas emissions by up to 90% when compared to conventional fuels. TechnipFMC has a strong presence today with references in biodiesel, biojet fuel and bioethanol. Additionally, we have a strong relationship with Neste, the world's largest producer of renewable diesel where we have delivered 2 world-scale renewable fuel units utilizing their innovative NEXBTL technology, and we are currently executing an expansion project for our renewable products facility in Singapore. While biofuels have historically represented more of a niche opportunity, strong government and policy support combined with growing consumer demand is enabling more rapid development. Global demand for renewable diesel alone is projected to more than double by 2030. And in capital investment terms, this translates into a market opportunity that could exceed $3 billion through the end of the decade, driven by expansion projects, refinery conversions and new greenfield projects, all of which provide opportunity for TechnipFMC. Without question, the most widely discussed opportunity for the energy transition today is hydrogen. Hydrogen is a highly versatile, clean energy carrier that can be used as an industry feedstock or power source. The industry is rapidly evolving, and with further innovation, has the potential to fully decarbonize traditional sectors such as transportation and aviation. TechnipFMC is a clear market leader today with over 35% share of the installed base and a 50-year track record. More than 270 plants use our proprietary steam reforming technology. And when combined with our leading carbon capture solutions, we have the in-house capabilities to fully engineer and construct blue hydrogen plants."

OptionsHawk Executive Summary and Top Picks

The core businesses in this industry continue to face headwinds and look better positioned in 2022 as production may return to growth. There are some interesting ancillary opportunities within new energy frontiers such as Biofuels and Hydrogen while Digital is unleashing a new growth revenue stream.

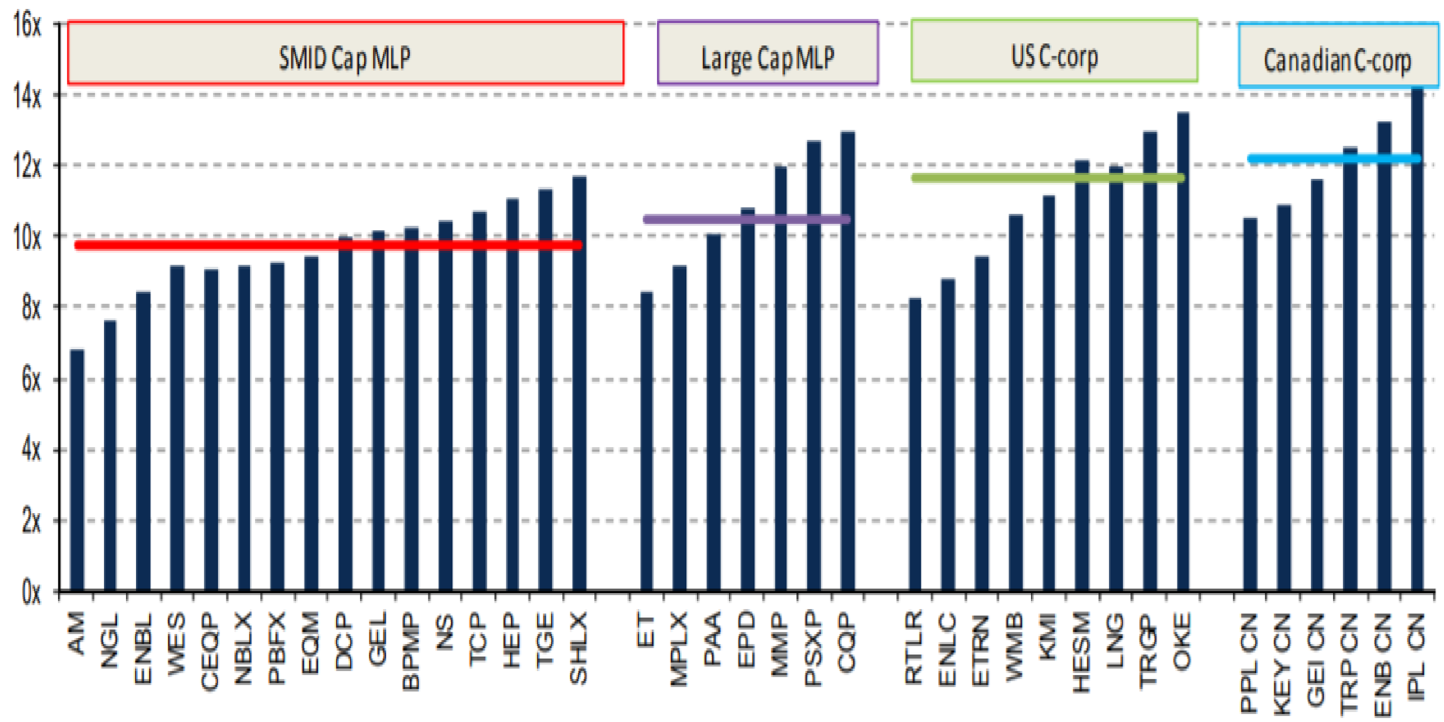
Among the big three there is not a lot of separation but **Halliburton (HAL)** looks to be the most financially sound, trades at the cheapest multiple, and has the best digital strategy and International exposure. In the next market cap tier I like **Chart Industries (GTLS)** for its positioning in Hydrogen and **ChampionX (CHX)** with merger synergies and a top operator. There are also two smaller speculative plays that stand out, **National Energy (NESR)** and **Energy Recovery (ERII)**.



Midstream Components: AM, AMID, ANDX, BPL, BPMP, BSM, CAPL, CEQP, CLMT, CNXM, CQP, DCP, DKL, ENB, ENBL, ENLC, EPD, EQM, ET, ETRN, FI, GEL, HEP, HESM, KMI, LNG, MMP, MPLX, NBLX, NGL, NS, OKE, PAA, PAGP, PBA, PBFX, PSXP, SEMG, SGU, SHLX, SRLP, TCP, TGE, TRP, WES, WLKP, WMB, RTLR, TRGP

The midstream energy group consists mainly of MLP's and traditional EBITDA-based multiples are often used to value the companies, and a group where dividend yield plays a larger role for investors and take into considering distribution history and growth. Similar to the other Energy-based industries, the underlying commodity determines much of the movements of these stocks as it impacts the demand for midstream operations, and as we saw earlier in 2016 when credit was a concern in the Energy industry from weak prices, much of this group sold off sharply and has yet to recover. The Distributable Cash Flow Coverage ratio is one way to evaluate the health of a MLP.

We group constituents into four categories: 1) SMID Cap MLP, 2) Large Cap MLP, 3) US Midstream C-corp and 4) Canadian Midstream C-corp. In general, C-corp midstream names trade on average at a premium to midstream MLPs. This may reflect a wider investor base and names with more run-time under the Midstream 2.0 business model.



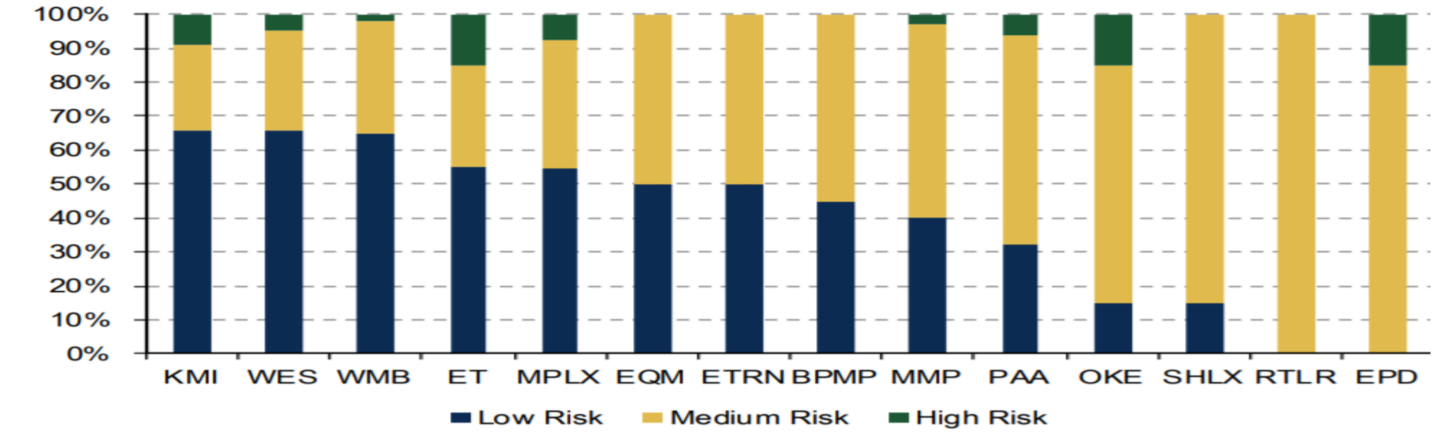
The midstream sector has evolved from a phase that prioritized growth (as defined by large capital budgets and outsized distribution growth) to a more mature stage focused on financial discipline, portfolio optimization and cash flow. Key themes in 2020 were Improving FCF, Exposure Types (Basin, Commodity Type, and Customers), Exports Driving Growth, and Consolidation/M&A. Given ongoing producer capital discipline, expect more measured production growth in 2020. As production growth moderates, midstream growth capex should slow overtime as well. Midstream management teams with clear strategies around returning capital to shareholders may be favored amongst Thus, key watch items include: showcasing flexibility on further debt repayment, dividend/distribution sustainability (or growth), and potentially buybacks. There is ongoing investor scrutiny around various exposure types, including: basin, commodity-type, contract-type and customer. Investors prefer diversity across each category and see higher risk for names with higher concentration (e.g. single basin with a single dominate customer).

Growing US exports of crude oil, NGLs and LNG has led to higher utilization of existing pipeline, storage and dock infrastructure and should drive the need for further expansions over the medium term. Exports provide opportunities for growth, but also expose the midstream sector to global risks such as trade, demand, and indirect commodity exposure dynamics.

The midstream sector has materially evolved on multiple fronts as the US shale revolution drove the need for significant build-out of North American oil and gas infrastructure. Given the US emergence as a net exporter of major energy commodities (crude oil, NGLs, natural gas), the midstream sector continues to mature with some pockets of growth (largely projects that support exports). There has been a structural shift in E&P behavior as companies focus on capital discipline, cost reduction and free cash flow. Consequently, production growth is expected to moderate, which in turn implies midstream growth capex should moderate as well. Similar to E&P’s, midstream names have focused on improving free cash flow, which will enhance their overall financial flexibility.

Larger distribution coverage allows for flexibility around debt reduction and growth capital funding. Another key factor investors are using to differentiate winners and losers in midstream is by commodity-type exposure. Contract types tend to fall into three categories with Low-Risk which are fee-based and non-volume sensitive, Medium Risk which are fee-based or fixed margin and sensitive to volume, and lastly High Risk which are non fee-based.

Figure 24: Contract exposure by company

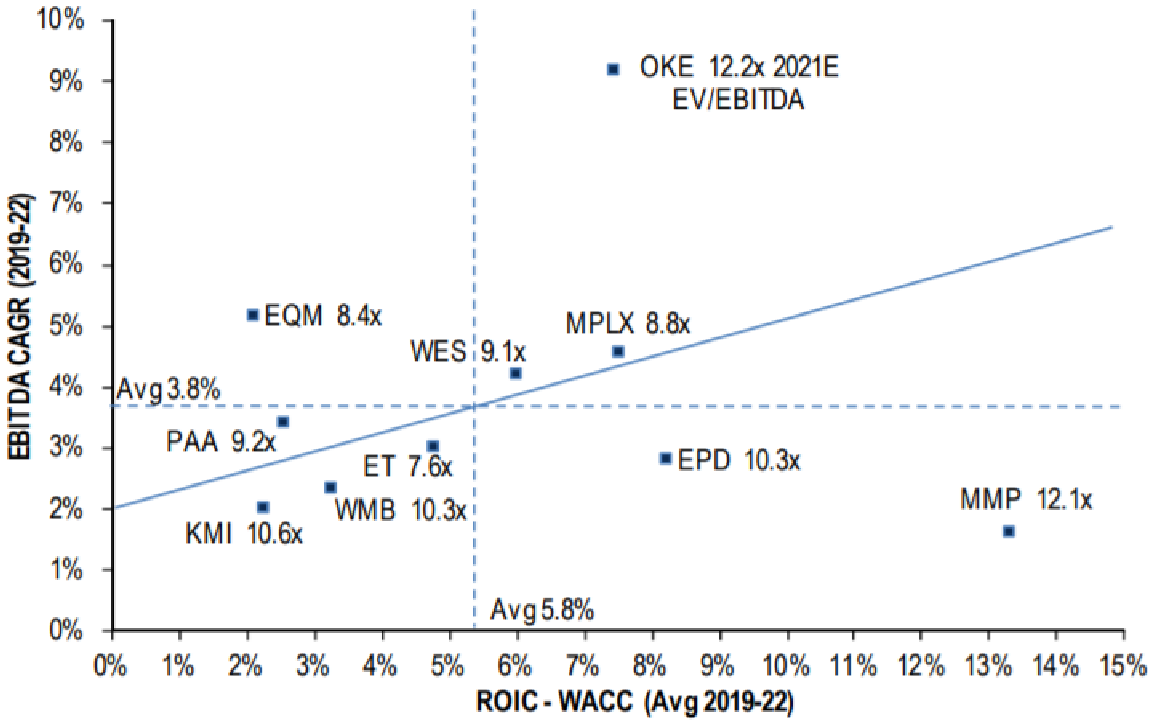


Products exposure (2020E EBITDA)							
Ticker	Crude	Natural Gas	NGL	Refined Products	Water	Other	Note
BPMP	90%	0%	0%	10%	0%	0%	*Natural gas exposure comes from Cleopatra (10.6% ownership), River Rogue*
EPD	24%	12%	51%	13%	0%	0%	*Other includes Petrochemicals segment*
EQM	0%	95%	0%	0%	5%	0%	
ETRN	0%	95%	0%	0%	5%	0%	
ET	25%	33%	32%	6%	0%	4%	*Other includes USAC*
KMI	5%	60%	0%	11%	0%	24%	*Based on EBDA approximations; include Co2 and Terminal segment*
MMP	41%	0%	0%	59%	0%	0%	*Assuming all marine storage exposure is crude*
MPLX	30%	28%	8%	18%	0%	17%	*Others include MPLX Terminal operations and ANDX Terminalling segment*
OKE	0%	33%	67%	0%	0%	0%	*Nat gas exposure assumes 50% of G&P income*
PAA	90%	1%	4%	0%	0%	4%	*Natural gas storage comprises of 50% of PAA's facilities EBITDA*
PAGP	90%	1%	4%	0%	0%	4%	*Other includes S&L*
RTLR	18%	2%	0%	0%	77%	3%	
SHLX	100%	0%	0%	0%	0%	0%	
WES	12%	67%	12%	0%	9%	0%	
WMB	0%	85%	15%	0%	0%	0%	*WMB is 60% G&P, but mostly handles dry gas*

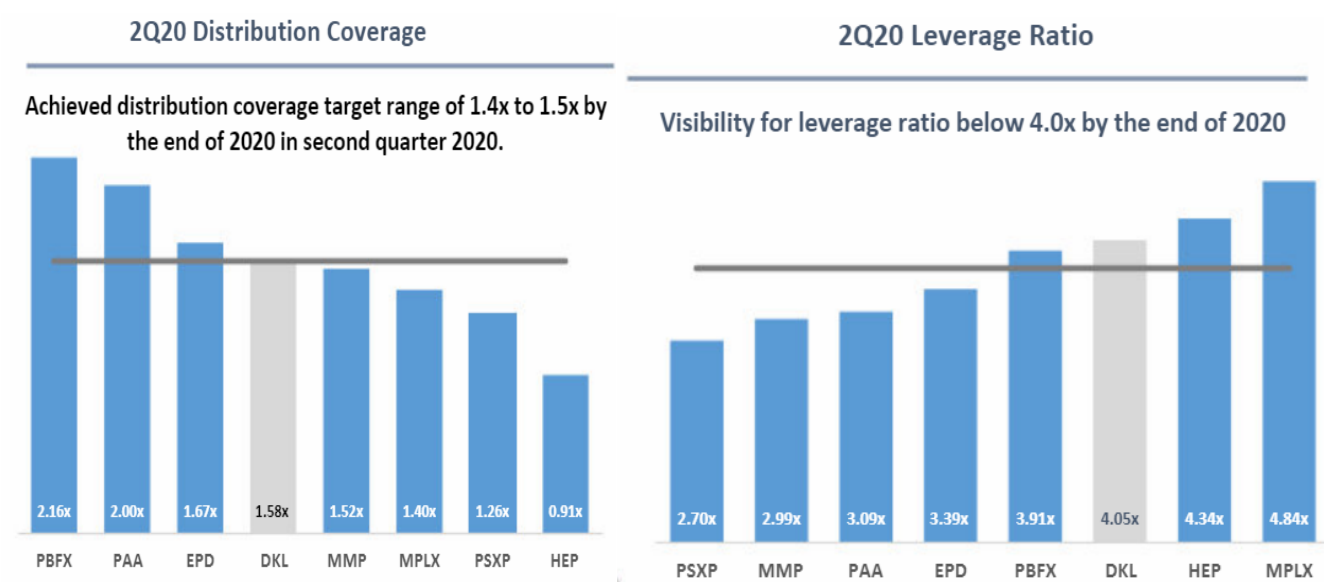
Model Type	Midstream 1.0	Midstream 2.0
Capex	Project capture plentiful	More competition as build-out growth matures: high-grading capital programs, JVs, etc
IDRs	Yes	No
Funding	Reliance on capital markets	Self-fund equity portion of capex program, assuming 50/50 debt equity
Leverage	Higher tolerance on leverage creep	Lower the better
Distribution Coverage	Full pay out model resulting in 1.0-1.2x coverage	Higher the better (1.3x or better as a soft reference)
Growth factors	Distribution/dividend per unit/share	DCF/unit (or share)
Valuation metric	Single factor: Yield	Multi factor: EV/EBITDA; P/DCF; potentially FCF yield

The Distributable Cash Flow Coverage ratio is one way to evaluate the health of a MLP. In general we want to concentrate on names with growing and safe distributions as these are utilized more as instruments for income rather than growth. Over the past few years, the MLP sector has lagged the overall market as well as the broader energy sector. This underperformance has been driven by a change in investor preferences for self-funded capital-spending plans, which is contrary to the typical MLP model that relies on continual equity and debt issuance to fund growth capital. Changes in pipeline rate-making policy and distribution cuts by several MLPs have negatively impacted investor sentiment towards MLPs. MLPs typically operate toll road or fee-based business models. Just as the company that owns the toll road makes a set fee per mile driven, regardless of the cost of the car, MLPs earn a set fee for each barrel of oil, cubic foot of natural gas, or ton of coal that is processed, transported, or stored, regardless of the cost of the hydrocarbon. The most common valuation metrics for MLPs are price to distributable cash flow (P/DCF), enterprise value to EBITDA (EV/EBITDA), yield spread to the 10-year Treasury, and the dividend discount model. Generally, price to earnings (P/E) is not used. MLPs invest so heavily in hard assets that depreciation accounting can occasionally make their earnings appear negative, while their cash flows continue to be stable and growing. For this reason, a multi-stage DCF discount model is preferred over all others. Since DCF is a measure of the cash flow available to be paid out to investors every quarter, it is a much more accurate reflection of the health and sustainability of an MLP.

ROIC-WACC versus expected 3-year EBITDA CAGR is a good way to look at relative valuation across the group. In general, a combination of higher growth rate and ROIC – WACC should deserve premium EV/EBITDA multiples and vice versa.



Warren Buffet announced a $9.7B transaction to acquire Dominion Energy midstream assets earlier this year, which instills come confidence in a value dislocation. The deal took place at 10X EV/EBITDA and signals that more barriers for new pipeline buildouts may mean better value for existing ones. Balance sheet resiliency and stability in cash flows are still the primary considerations in stock selection in this environment.



Management Commentary:

Kinder Morgan (KMI): "As we look ahead to the next cycle, I think we've got to make some distinction between commodities because I think one of the things that a lot of people are looking for is what's going to happen to U.S. shale and particularly oil because with the oil shale comes also NGL production in the U.S., energy markets as well as associated natural gas. The reason I say you have to distinguish between commodities a bit is because natural gas will still have to be produced in the United States to meet our domestic demand as well as global demand. And we can meet that from dry gas plays as well as we can meet it from associated gas plays or gas in association with oil production. We're heavily weighted toward natural gas, and we see that the long-term fundamentals for natural gas remaining strong. And so we're weighted to natural gas in terms of being over 60% of our current segment EBITDA, but also over 70% of our project backlog is natural gas-driven."

Williams (WMB) on business drivers: "We would just tell you that gas demand will be driving our business. And the forward market certainly is driving many of our customers to make plans for growth across a lot of our systems and transmission projects like Southeastern Trail, early in-service of Leidy South as well. And then finally, we're no longer dealing with the downward pressure due to the noncash deferred revenue step-downs that you just heard John talk about, and we don't expect to have the degree of deep-water shut-ins that we experienced this year from a number of different issues. So lots of nice growth drivers that are very predictable at this point. And we feel very confident about how those will shape up for '21 at this point."

Energy Transfer (ET) on NGL standout: "Our NGL segment continued to stand out during the third quarter, with NGL transportation volumes setting another record, primarily driven by record volumes on our Mariner East and Texas NGL pipeline systems. And our fractionation volumes also reached a new high during the quarter due to an additional ramp-up of volumes on Frac VII, which went into service earlier this year. And in early September, we were pleased to announce that we completed our Lone Star Express expansion project, significantly under budget, ahead of schedule. During the third quarter, we saw the highest average quarterly volumes yet through the Mariner East pipeline system with year-to-date 2020 NGL volumes up 40% over year-to-date 2019. Utilization of our Mariner pipelines and our Marcus Hook terminal continued to increase, leading to record amounts of propane transported through the pipeline as well as strong butane and ethane utilization."

Cheniere (LNG) on recovering LNG market: "As we move through this challenging period in the market and look forward, we continue to be bullish about the way the market is rebalancing, the strength of LNG demand recovery and the longer-term prospects for natural gas and LNG and as key vectors in the global energy transition. Despite the impact of lockdowns in many markets in the second quarter, the industry has still delivered net positive demand growth totals year-to-date. Unlike most other commodities, LNG demand grew 3% year-to-date through September, adding more than 7 million tons of consumption versus last year. The U.S. was the main beneficiary of that growth as exports increased by 34% or 8.3 million tons to approximately 33 million tons year-to-date. The reduction in LNG supply from curtailments helped divert a storage crunch in late summer and position the market to start responding positively to the rebound in gas and LNG demand, we are now seeing in many countries as we head towards the winter season."

Enterprise (EPD) on its Hydrogen business: "We're easily the largest midstream player in generating consuming and marketing hydrogen from processes in our petrochemical plants, specifically iBDH and PDH. We estimate that with the completion of our second PDH facility in 2023, we will produce about 150 million cubic feet of hydrogen, something over 100 million of pure hydrogen. You -- we use all of the hydrogen we can in our plants, and we sell the rest into the industrial gas market.

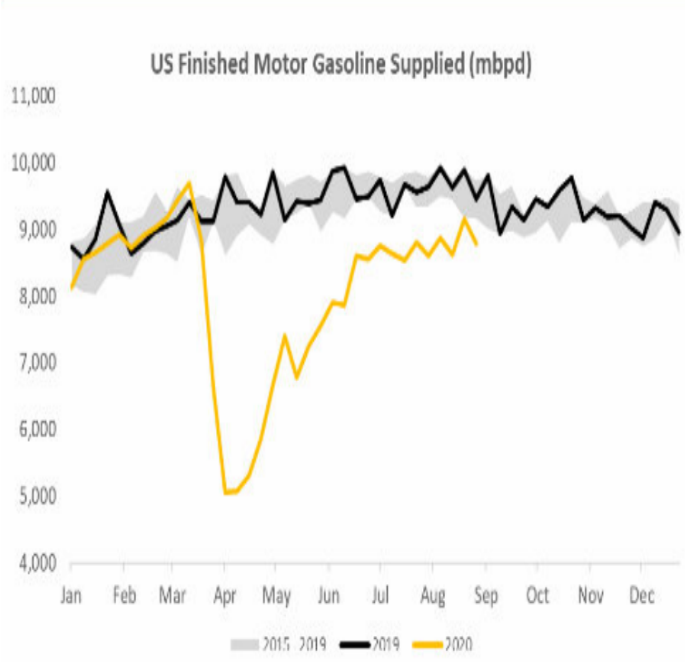
OptionsHawk Executive Summary and Top Picks

This is always a tricky group and not one I spend a lot of time investing as it lacks growth and more of a dividend investor area, so I tend to stick to the same quality names each year, **Magellan (MMP** and **PSX Partners (PSXP)**. **Enterprise (EPD)** is another higher quality name with a big 8.7% yield and **MPLX LP (MPLX)** is another higher quality name with stronger capital returns a top tier growth.

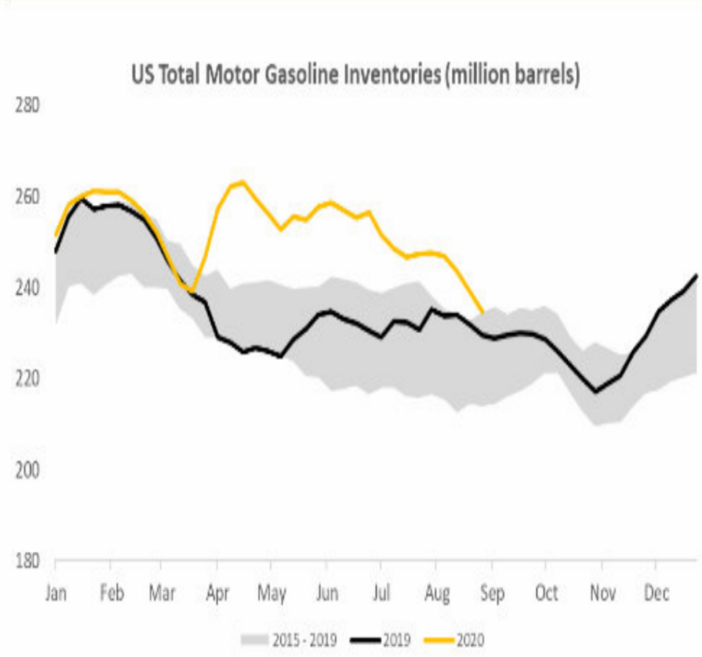
Refiner (Downstream) Components: PSX, MPC, VLO, HFC, UGP, CVI, VVV, PBF, DK, SUN, INT, PARR

Refining (Downstream in the oil & gas value chain) is where the primary industry raw material (crude oil such as WTI) is processed into refined products (gasoline, jet fuel and fuel oil) and sold to the end user. Refined products are piped off to storage via refined product pipelines where they are loaded to trucks and driven to points of sale (gas stations, airports). Refineries are capital intensive, with high fixed costs and low variable costs. While the midstream industry is quite stable, downstream is more volatile (but less so compared to upstream exploration & production).

US Gasoline Demand

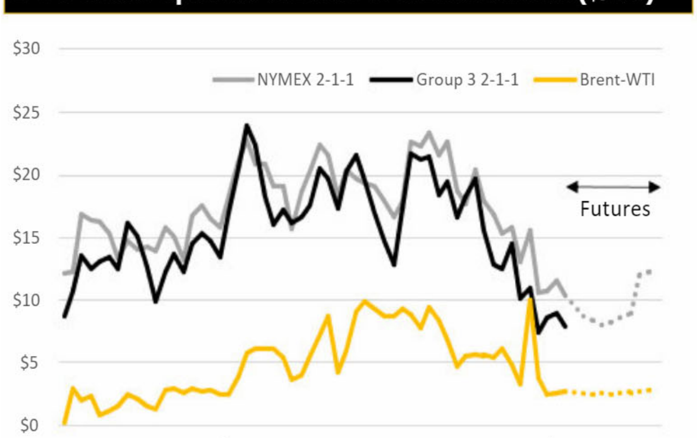


US Gasoline Inventories

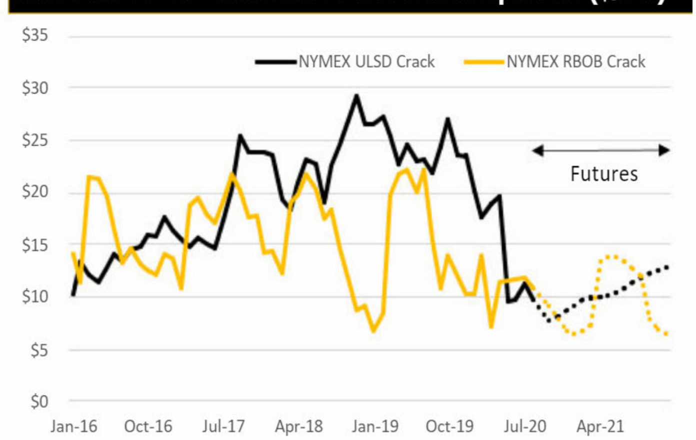


The refining group is one of the smaller ones and has always been one of the more correlated, the names tend to move together in multi-day trend moves, and much of it is tied to the crack spreads, the price of selected finished products minus the total barrels of crude needed to create those products. The crack spread benchmarks differ across various regions, and I provided a useful table below. It is a group that is great to trade, but less alluring to invest with the ever-changing margins leading to very inconsistent and volatile earnings. It is also a group where geographical presence is important due to the differing prices from supply/demand in different regions of the US, and the World for that matter. Every Wednesday the EIA releases oil demand and inventory data that can gauge US refined products demand, an indicator worth paying attention to for trading this space. Another metric in refining is the Nelson Complexity Index, which assigns a number to the complexity of a certain physical or chemical process, and scores the refinery on how much crude can be run by those complex processes in relation to the facility's overall processing capacity, the higher the number the better. Cost efficiency is also extremely important in this group as the companies have little pricing control, so refinery utilization is often a number observed as well as operational costs per barrel of produced product. Levered FCF Margin and ROIC are two key metrics for this group as overall industry dynamics leave little room for income/revenue growth, so cash flow generation is important.

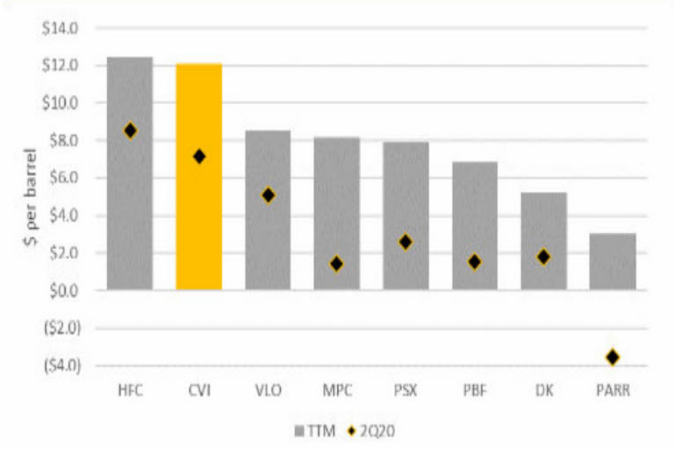
2-1-1 Crack Spreads & Brent-WTI Differentials ($/bbl)



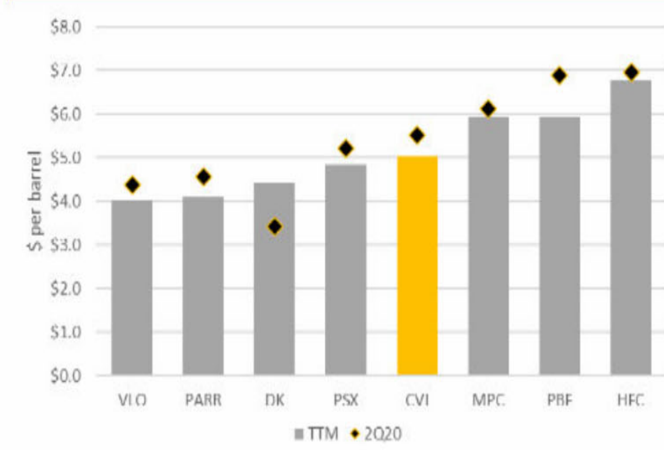
WTI-Based Gasoline and ULSD Crack Spreads ($/bbl)



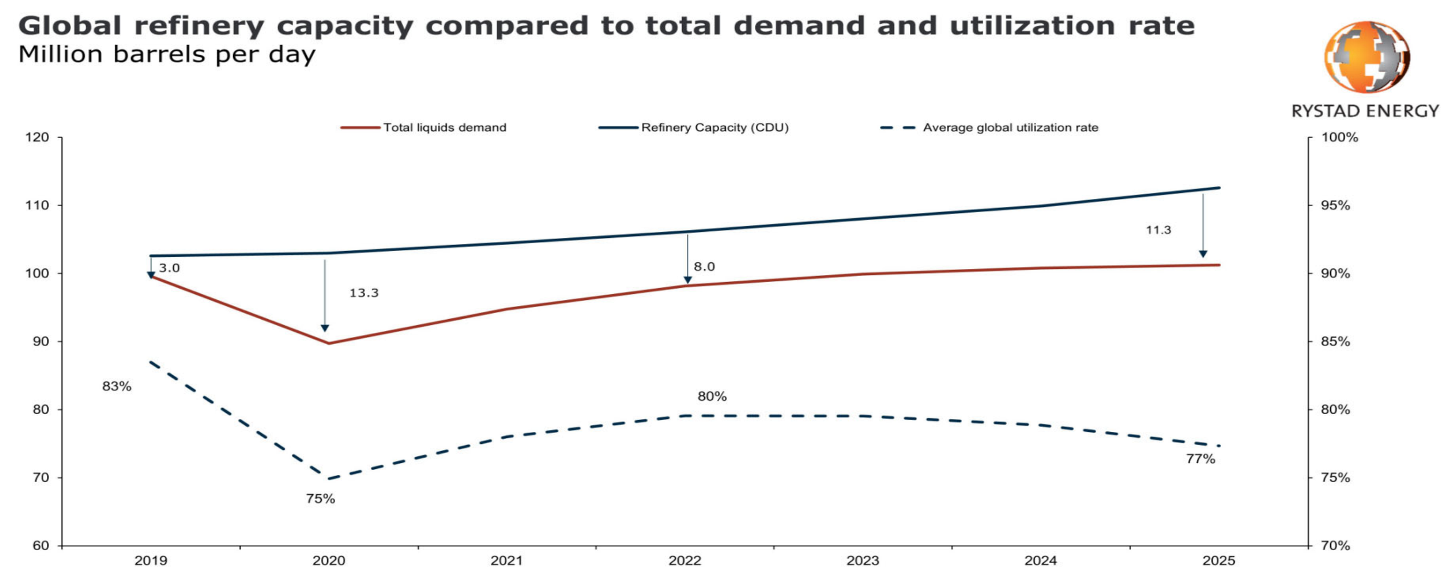
Consolidated Top-Tier Refining Margin[1]



Consolidated Low Cost Operator[2]



The industry is seeing a seismic shift with China set to surpass the US as the World's top refiner with its demand for plastics and fuel rising with a strong recovery while the US and Europe remain weak and also transition away from fossil fuels over the long run. One of the key drivers of new projects is growing demand for the petrochemicals used to make plastics. More than half of the refining capacity that comes on stream from 2019 to 2027 will be added in Asia and 70% to 80% of this will be plastics-focused, according to industry consultant Wood Mackenzie. Adding to the pain of refiners in the U.S. are regulations pushing for biofuels. That encouraged some refiners to repurpose their plants for producing biofuels. New and expanding projects from the beginning of 2020 and up until the end of 2025 are estimated to add about 13 million bpd of global capacity as Asian and Middle Eastern refiners complete scheduled expansions and new builds. In 2020, Rystad Energy projects a net growth of approximately 400,000 barrels per day (bpd). As a result, global refining capacity will be driven to 103 million bpd this year from 102.6 million bpd in 2019. With oil demand plunging in 2020, adjusted liquids demand will only reach 77.2 million bpd, causing utilization* to drop to a low of 75% for the year from 83% in 2019. As oil demand grows from 2021 onwards, refinery capacity utilization will too, reaching 78% in 2021 and peaking at 80% in 2022 and 2023. From that point, oil demand growth rates will fall behind those of refinery capacity additions and utilization will consequently fall and reach 77% in 2025.



Management Commentary:

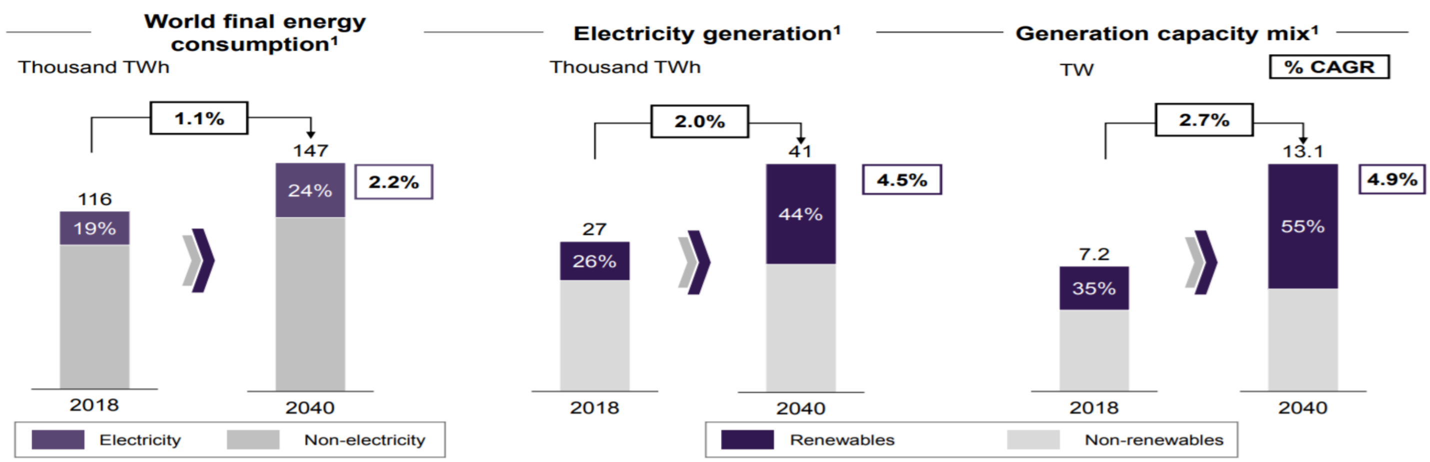
Valero (VLO) industry comments: "As we look ahead, we expect to see improvement in margins as product inventories approach the normal 5-year range. U.S. gasoline inventory is already in the middle of the 5-year range. And although distillate inventory is higher than the 5-year range, it's been trending downwards in recent weeks. Diesel demand should continue to improve, supported by winter heating oil demand and harvest season. Fall refinery turnarounds, coupled with recently announced and anticipated closures or conversions of less advantaged refineries, should also further balance supply."

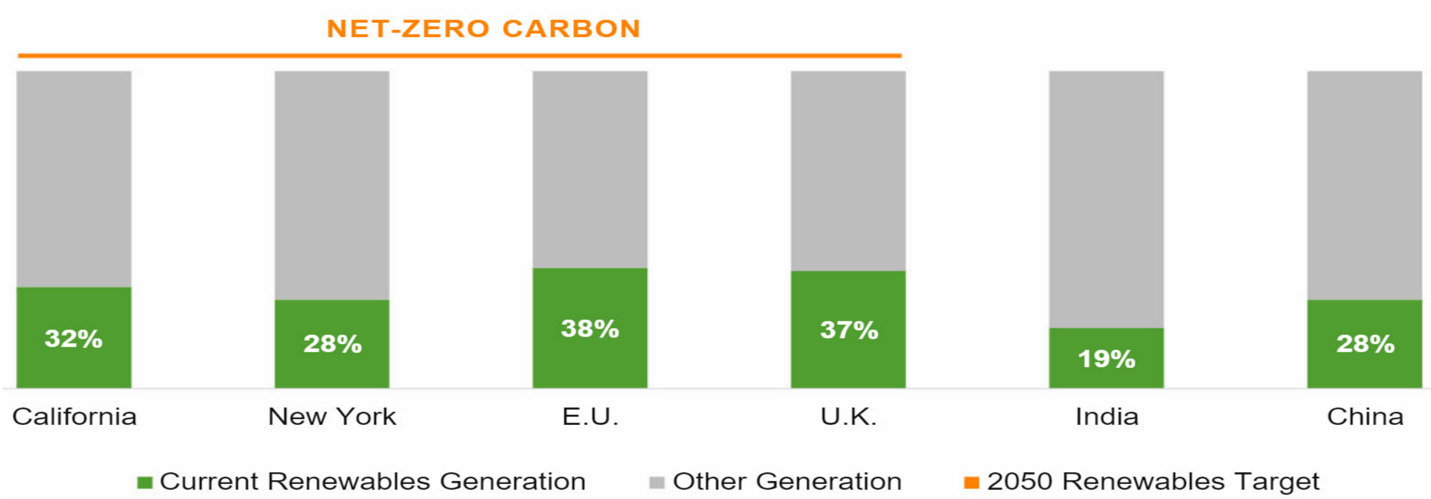
OptionsHawk Executive Summary and Top Picks

Refiners continue to be hit hard by the pandemic with margin contraction from the weight of too much supply and elevated inventory levels relative to demand. Globally, refined products consumption fell by almost 30% in Q1 and is projected to be 91.9m bbl/day in 2020, down 8% year on year. Until there is a meaningful sign of demand recovery which can lead to improving margins, the group is one to avoid. There has been a pick-up in road fuel demand but air travel continues to be weak. OPEC forecasts global refining throughput at around 75mn b/d this year and 79.8mn b/d in 2021, compared with 81.9mn b/d in 2019. OPEC does not see refiner returning to pre-COVID levels until 2023.

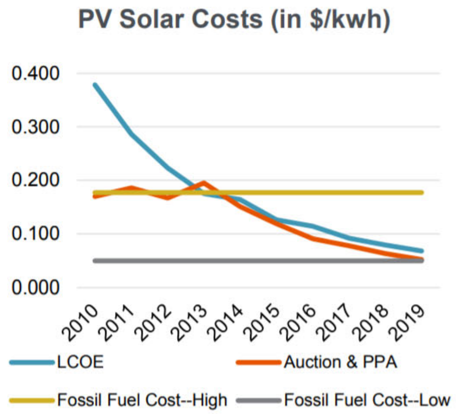
PSX fairs the best under a weak refining outlook with earnings generated from other businesses (chemicals, midstream, marketing). MPC sold its Speedway unit for $16.5B and now has optionality to reshape the company. VLO is more of a refining pure play exposed to the refining macro, and a better play when there is more clarity on a demand recovery. Into 2021 **Marathon Petro (MPC)** is the most attractively valued with room for margin upside and optionality. **Valvoline (VVV)** is another interesting name showing strong growth with Quick Lubes on an impressive streak of SSS growth.

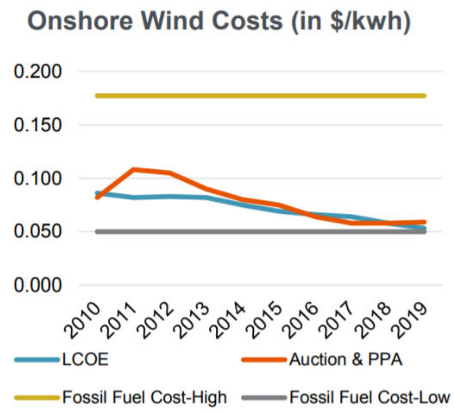
Renewable Energy Components: BE, FCEL, EVA, BLDP, PLUG, REGI, CSIQ, DQ, ENPH, FSLR, HASI, JKS, RUN, NOVA, MAXN, SEDG, SPWR, VSLR, ARRY, TPIC, AMSC, QS, ITRI

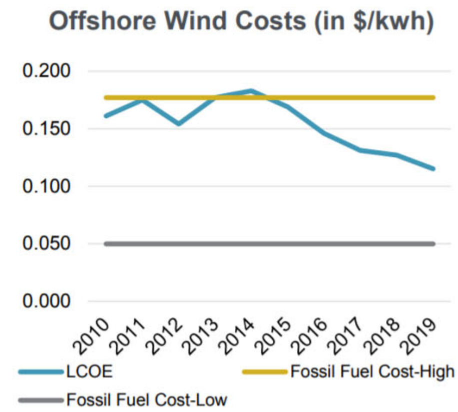


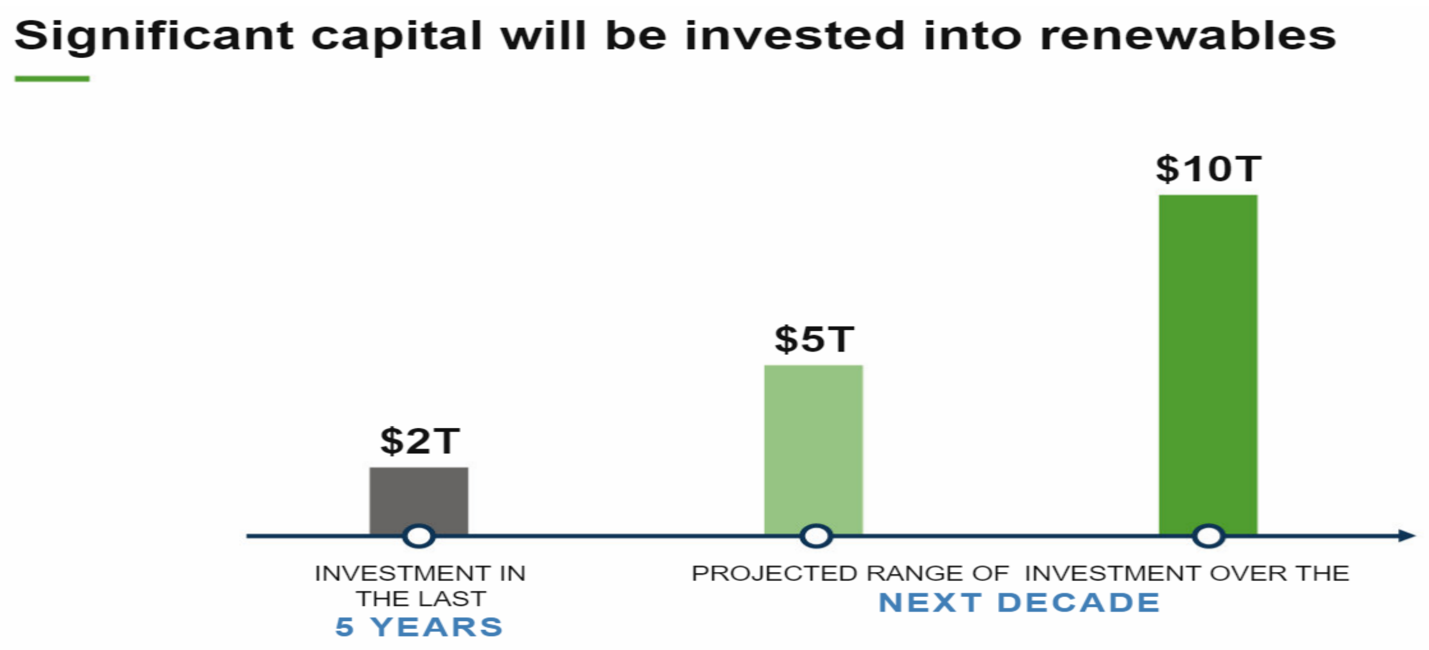


There are a limited number of ways to play the renewable energy group but for the most part we are looking at solar energy providers and Alternative Energy Utilities. Another emerging group of stocks are battery makers and hydrogen fuel. Solar has been a standout performer in 2020 with the Solar ETF up 145% making a strong move into the Election. Within solar you have the parts suppliers for the panels as well as the distributed power providers, and Semiconductors play a large role as well and will be covered later in this report. The two key legs supporting higher renewables penetration and the unfolding energy transition away from fossil fuels and toward less CO2 emissions are: declining renewable energy costs and strong policy support. In order for global CO2 emissions to decline 50% by 2040 from 2018 levels (as called for in the IEA Sustainable Development Scenario, which is the scenario most aligned with the ambitions outlined in the Paris climate agreement) cumulative investments of $71 trillion or ~$3.4 trillion per year over the 2019-2040 time period are required. This represents a meaningful step-up from the nearly $2 trillion annual pace of energy investment from 2017-2019. Siemen's Gamesa and Vestas Wind are two large foreign alternative energy names to follow closely.





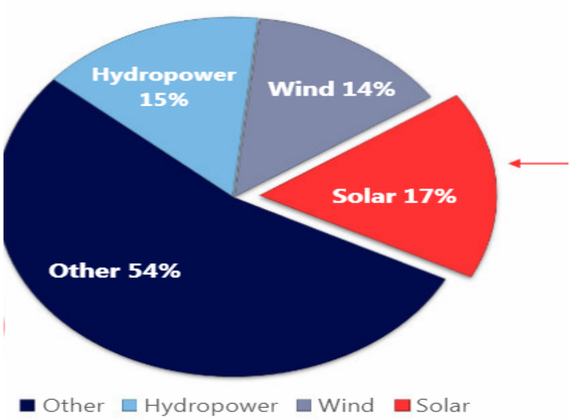




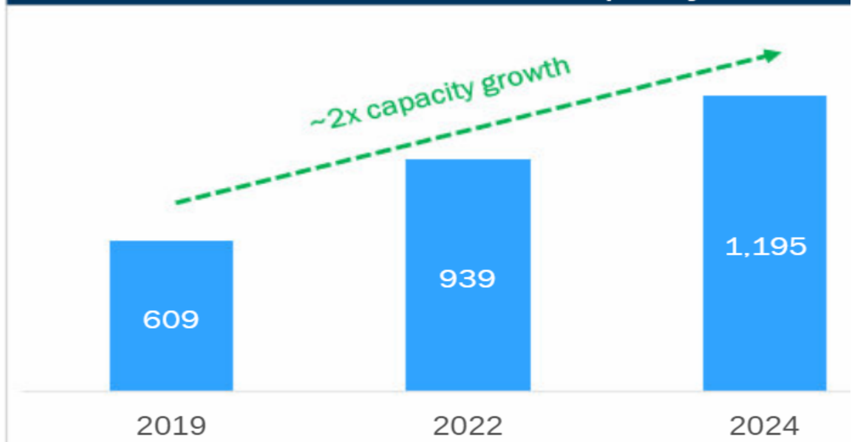
According to the IEA, renewable electricity generation is the world's fastest growing source of electricity, with its share increasing from 25% in 2018 to 30% by 2024 vs. a decline in coal's share and a stable share for natural gas. Coal still has the largest share of the power generation market in 2024 while hydro remains the largest source of renewable power generation. Wind and PV solar power generation will double to 7% and 5% of global total electricity, respectively, by 2024. Based on IEA projections, wind and PV solar are expected to provide 24% (IEA Stated Policies Scenario) and 40% (IEA Sustainable Development Scenario) of global electricity production by 2040. This is up from 7% (5% wind + 2% PV solar) in 2018. According to the IEA, utility-scale PV solar capital costs are 75% lower than in 2010, while electricity from onshore wind is ~25% cheaper today than it was ten years ago. Wind power has experienced tremendous growth with global capacity rising from ~5 GW in 1995 to ~625 GW in 2019. According to the IEA, wind energy provided ~5% of global electricity in 2018 and this is expected to reach 13% (IEA Stated Policies Scenario) to 21% (IEA Sustainable Development Scenario) in 2040. According to the IEA, PV solar provided just 2% of global electricity in 2018 and is expected to reach 11% (IEA Stated Policies Scenario) to 19% in 2040 (IEA Sustainable Development Scenario). The growth is driven by lower costs and policy support. According to the IEA, solar PV generation costs are estimated to decline by 15% to 35% for both utility-scale and distributed applications by 2024.

Compared to 2018 levels, cumulative solar PV capacity is expected to grow six fold by 2030, with a CAGR of nearly 9% up to 2050

2030 Renewables

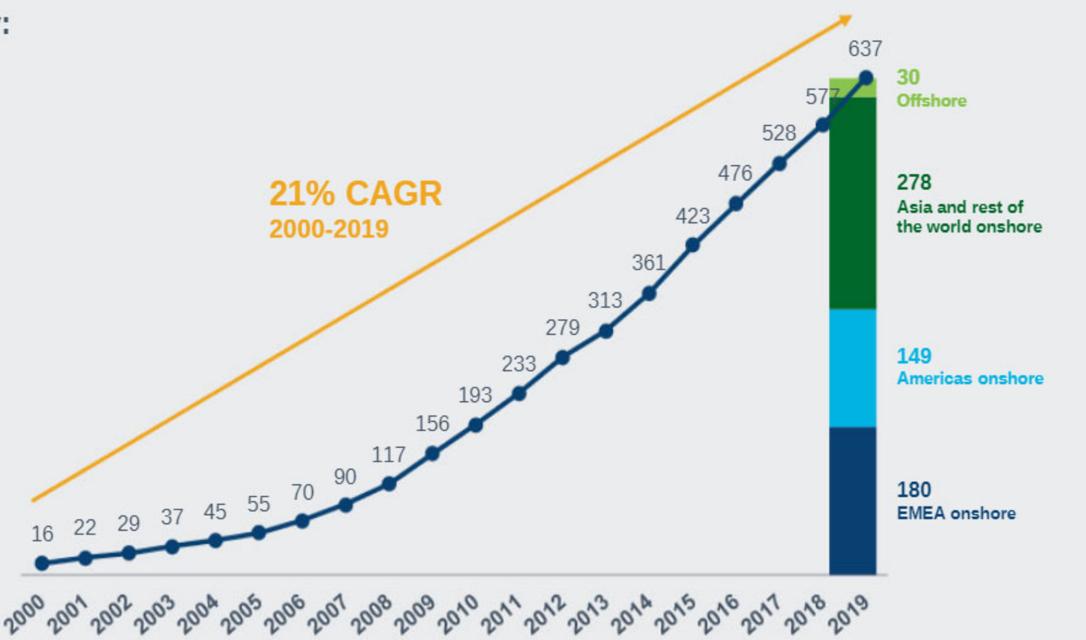


Cumulative Global Installed PV Capacity(1)



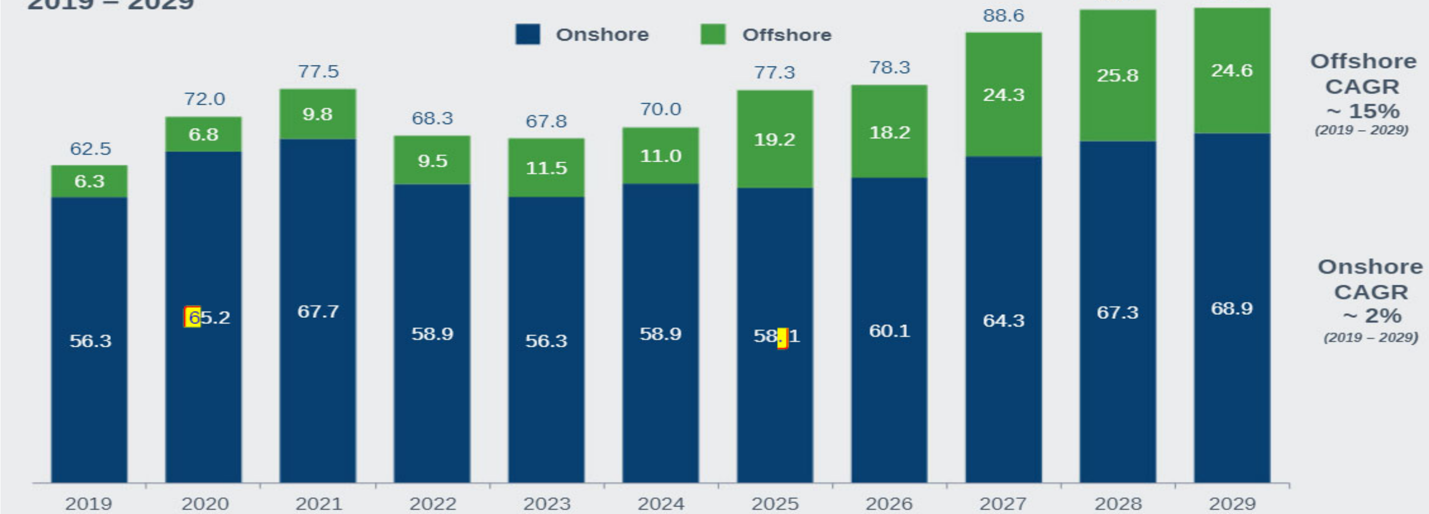
Rapid growth driven by:

- Decarbonization
- Increasing cost competitiveness through technological advancement
- Supportive global policy initiatives
- Global population growth and electricity demand
- Increasing C&I and utility demand
- Coal/nuclear decommissioning
- Repowering
- EV trends



Wind energy is a large and rapidly growing worldwide business

Estimated Annual Installed Global Wind Capacity (GW): 2019 – 2029



Management Commentary:

Solar Edge (SEDG) on new products: "In our currently marketed products, we continue to see strong demand for our storage-compatible inverters with approximately 6,500 Energy Hub inverters delivered this quarter in the U.S. and over 8,000 more storage-compatible inverters shipped to Europe and Australia. Our current global installed base of DC-coupled residential storage system is about 50,000 systems installed all with third-party batteries. We believe that installers and homeowners appreciate the benefits and maturity that comes with having 1 fully integrated solution that has proven itself in multiyear scenarios of backup, self-consumption and that enables grid services. This, of course, leads to the timing of the availability of our own residential battery. While we are still aiming for initial shipments this year, as previously communicated, it is more likely that this will happen only in early 2021, pushing meaningful ramp-up and consequently battery-related revenues to Q2 and Q3 of next year."

SunRun (RUN) on market trends: "We expect improving net customer margins and accelerated growth to continue into 2021. Consumer desire for clean, affordable and resilient power is stronger than ever, with increased outages from storms and wildfires, combined with more time spent at home. The U.S. is at early stages of significant innovation in electrifying our buildings and transportation. Ongoing improvements in solar energy storage and electric vehicles are leading to an enhanced value proposition. And solar plus batteries will affordably replace more of consumers energy needs and together with EVs, will unlock virtual power plant revenue opportunities. Our Brightbox battery offering is now available in all of our active markets. Sales attachment rates hit a record high this quarter, and installations grew more than 45% compared to last year. We expect Brightbox installations to accelerate and grow over 100% next year. Our efforts to develop grid services markets across the country are progressing well, and we expect to announce meaningful virtual power plant contracts in the coming quarters. "

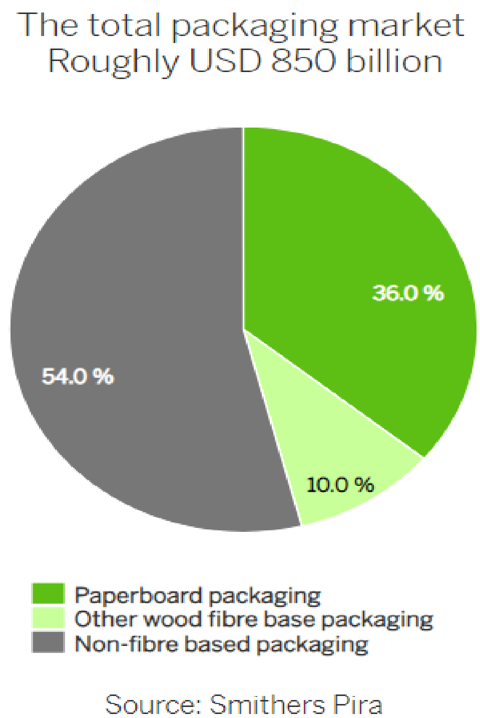
Array Tech (ARRY) on tracker market: "The drive to decarbonized energy is only accelerating, and we are a direct beneficiary of that transition. Solar with single-access trackers has proven to be one of the cleanest and lowest cost forms of generation, and we see demand for trackers growing faster than the overall market for solar as customers convert from fixed tilt. Moreover, customers are increasingly recognizing the superior reliability and durability of our tracking system, and that is leading to market share gains for our products. These factors, combined with our strong order book, give us confidence that we are very well positioned to have another year of substantial growth in 2021."

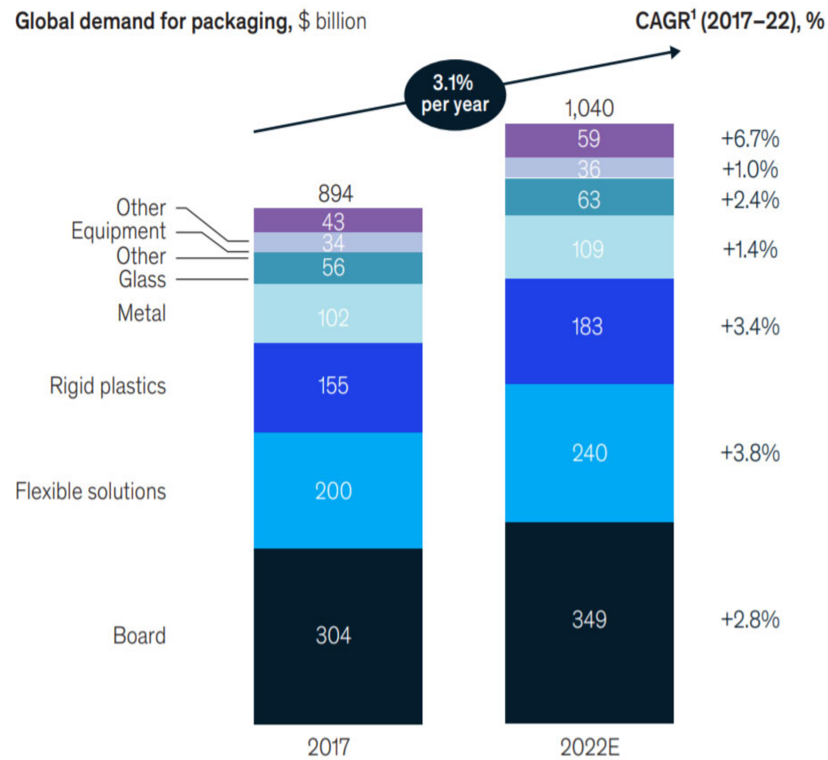
OptionsHawk Executive Summary and Top Picks

This group is full of exciting growth names as alternative energy continues to grow and take share from fossil fuels but there are a few I favor the most. **Sunrun (RUN)** is a residential solar name I have come to like with upside from its Brightbox battery offering. **Solar Edge (SEDG)** has always been a favorite and slipped up late in 2020 but seems 2021 will see new product revenues start to kick in after COVID-related delays. A new name this year **Array (ARRY)** is real intriguing and a nice "pick and shovel" way to play the solar growth trend. **Daqo New Energy (DQ)** is a high growth Chinese momentum play with the polysilicon market thriving. **Bloom Energy (BE)** is the best name in the hot fuel cell group with its Energy Server platform that has a massive market opportunity. **Enviva (EVA)** a nice small cap discovery in 2020 as a maker of utility-grade wood pellets displacing coal and has a large future opportunity. **TPI Composites (TPIC)** continues to have scarcity value as one of the few plays on the strong growth in Wind energy. **Renewable Energy (REGI)** is volatile but a great opportunity for disruption via biofuels.

Packaging and Paper Components: ATR, AVY, BERY, BLL, CCK, GEF, GPK, MYE, OI, PKG, SEE, SLGN, SON, TG, TRS, WRK, CLW, GLT, IP, MERC, NP, SWM, UFS, AMCR, MYE, PACK, UFPT, PTVE, MINI

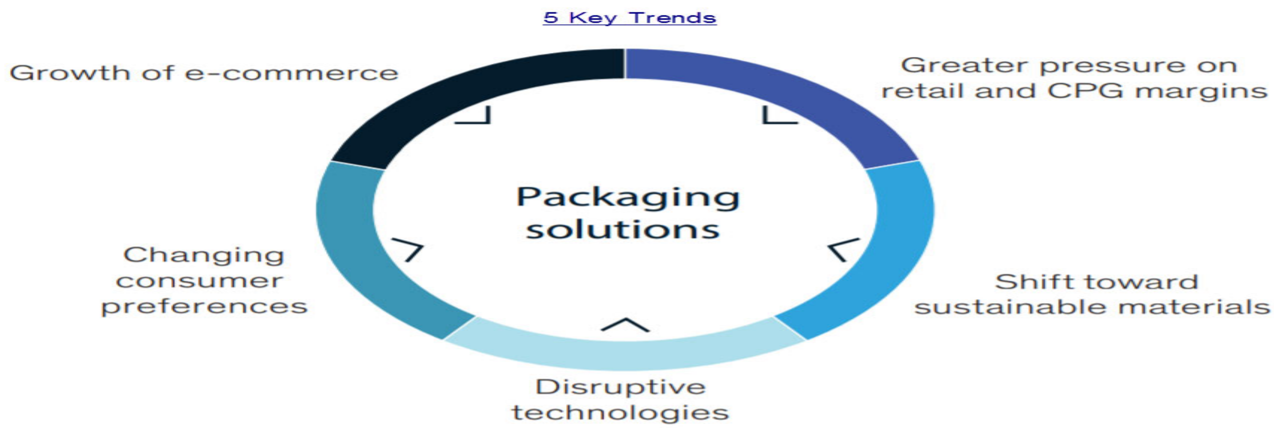
The packaging-solutions (PS) sector consists of companies providing packaging material, equipment, services, and full-fledged solutions. An important sector within industrials, packaging generates about $900B in annual revenues worldwide. The industry is highly fragmented, with the top 25 to 30 companies accounting for under 25 percent of the market. The packaging industry is typically broken into Rigid, Flexible, Paperboard, Plastic, Metals, Glass and Labels. Further, the packaging equipment group is often divided into Primary (filling, capping, sealing), Secondary (wrapping, placement), and Tertiary (case-packing, palletizing). For the stocks above, the breakdowns are as follows: Plastics: BERY, ATR, SEE; Paperboard: GEF, GPK, IP, WRK, PKG, KS; Metals/Glass: BLL, CCK, OI, SLGN. Sonoco (SON) is a diverse player that does not fit in one group and AVY mainly Labels. Among the many examples of P&C products are pharmaceutical pumps, aerosol valves, plastic and polyethylene containers, metal cans, cardboard, glass bottles, storage and waste bags, cushioning materials, giftwraps, and steel, fiber, and plastic drums. Flexible Packaging has been a strong growth trend in the group and has been taking share from Rigid. Mondi and Smurfit Kappa are two foreign large players to follow while Stora Enso is a leading provider of renewable solutions in packaging. Coveris and DS Smith are two other plays overseas.





The global packaging industry is expected to reach $1.05B trillion in 2024, a steady 2.8% CAGR 2020-2024. The bulk container packaging market was valued at $3.65B in 2019 and is expected to reach a value of $6.4B, by 2025, at a CAGR of 9.87%, over the forecast period, 2020-2025. The global plastic container market size is predicted to reach $77.5B billion by 2026, exhibiting a CAGR of 5.2% during the forecast period. The global rigid plastic packaging market size was valued at $216.8B in 2018 and is projected to reach $340.4B by 2026, growing at a CAGR of 5.6% from 2019 to 2026. The Paperboard Packaging Market size was $142.3B in 2019 and will grow at 3.5% CAGR between 2020 and 2026. The global metal packaging market is expected to reach at a market size of $150.7B by 2025 at a CAGR of 3.36% during the forecast period. The global glass packaging market was estimated at $56.6B in 2019, and it is expected to register a CAGR of 4.39%, to reach $73.3B by 2025. The global labels market is expected to reach $51B by 2027 at a CAGR of 5%. The Flexible Packaging market is seen growing to $269B by 2024 at a CAGR of 3.3%. Global urbanization has increased the demand for flexible packaging along with e-commence and technological advancements in barrier protection, active packaging and digital printing. The global sustainable packaging market size is expected to reach around $255B by 2026, growing at a CAGR of 7% over the forecast period.

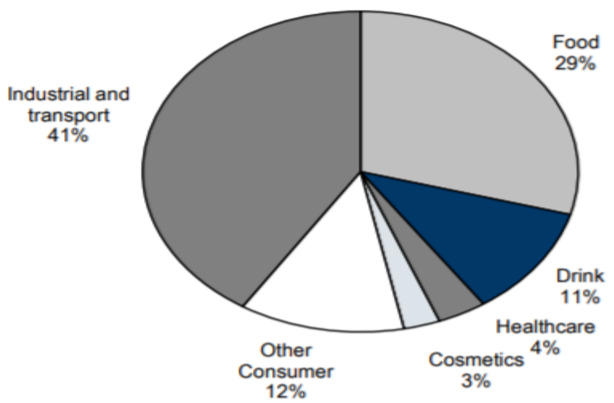
The industry is strongly tied to demands from consumer packaging, and raw material and energy costs play a key role. There is a strong correlation with consumer confidence as an indicator of personal consumption to the packaging industry. The seven success factors for companies in this sector are management of raw material inflation, reduction of waste, effective capital expenditure, operation performance measurement, profitability management, innovation, and supply chain management. Also, consumer shifts to online commerce has played a role in breaking out the winners and losers of this group. Though key end markets are often considered to have defensive characteristics, the industry is not immune to macroeconomic cycles. Consumer spending habits can have an impact on operating results. Cost control is crucial to a company's earnings performance. Importantly, the success of many players is heavily influenced by energy prices. A good number of products utilize oil-based materials. Volatile petroleum-based material prices can make cost management a challenge. Companies usually try to pass increased material costs on to customers. Containerboard is the most notable exception from the packaging industries' low raw material integration. Global industry leaders' integration level ranges from 60% long containerboard to 65% integration with an average of 120% integration (i.e. 20% net long position). The high integration levels translate into higher industry earnings in times with high containerboard prices and vice versa. Innovation is a significant driver and a key differentiator for success in the packaging market. Innovation is about finding new solutions that, for example, improves protection of the packaged product, extends shelf-life, protects brands while at the same time adds attractive design features that catches customers' attention. Packaging design and innovation is also about improving the environmental footprint of packaging through development of lighter weight packaging (less raw material, lower transport costs), increased reuse and recycling, and development of resealable packaging solutions to reduce food waste.

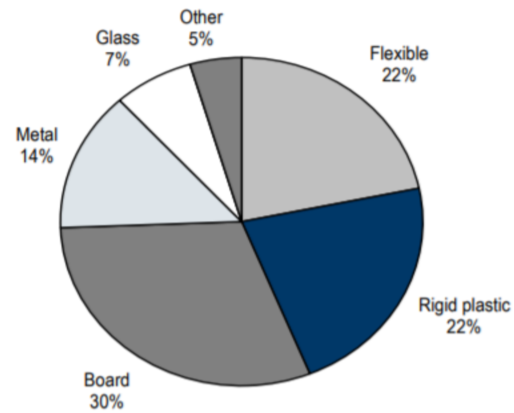


Back testing performance across the group leads to the conclusion that companies that can expand profit margins faster than revenue growth have done the best, so clearly an industry to focus on margin/efficiency leaders. When assessing the packaging market you can look both at the type of packaging used and the end-markets to determine areas of better growth and stronger trends.

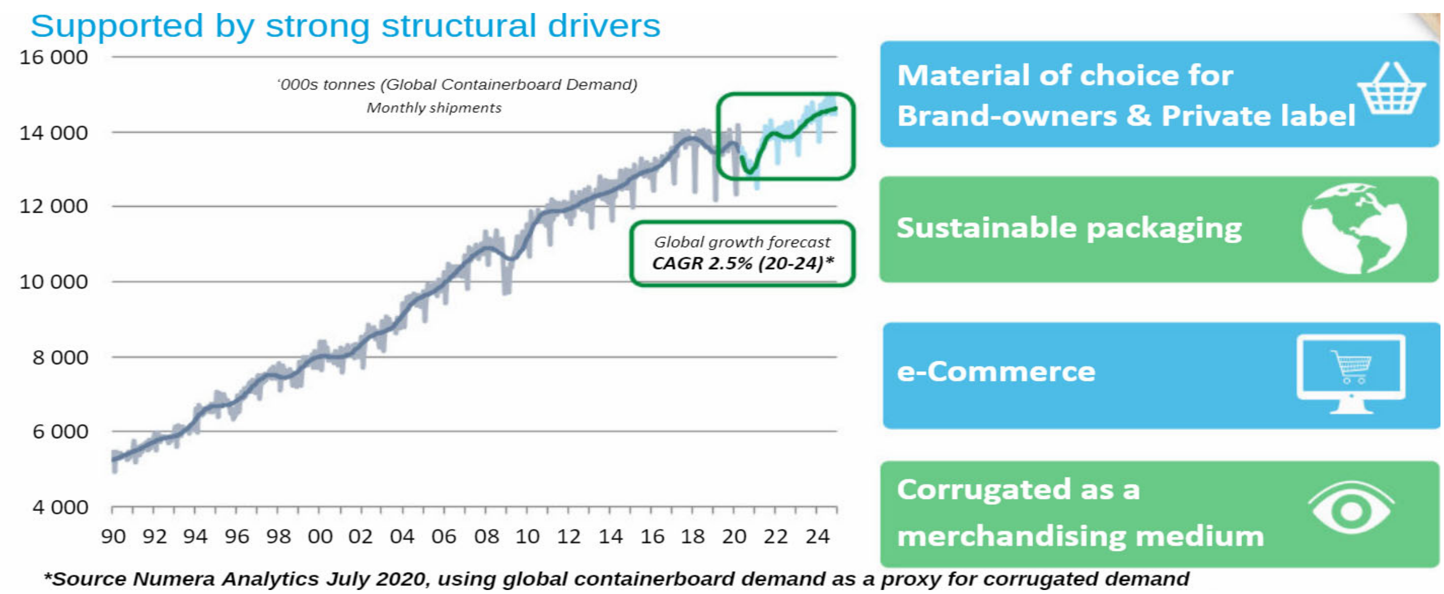
The containerboard group has recently outperformed on an improved pricing outlook ($50/ton raise in November), a key factor for the group. There has also been a surge in box demand in 2H20 and the impact of several projects into Q2 2021 increasing capacity may limit further pricing gains.

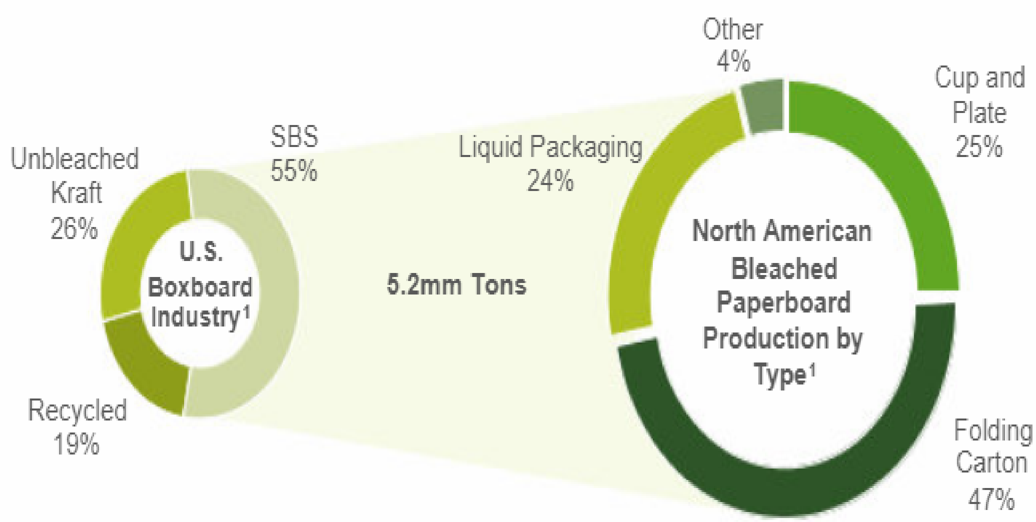
Economic growth, industrial production and consumer spending form the foundation for growth in packaging demand. However, there are several factors driving demand such as retail developments and globalization, e-commerce, life-style changes, demography, environmental and sustainability considerations. India and Africa are potential strong future growth market opportunities.



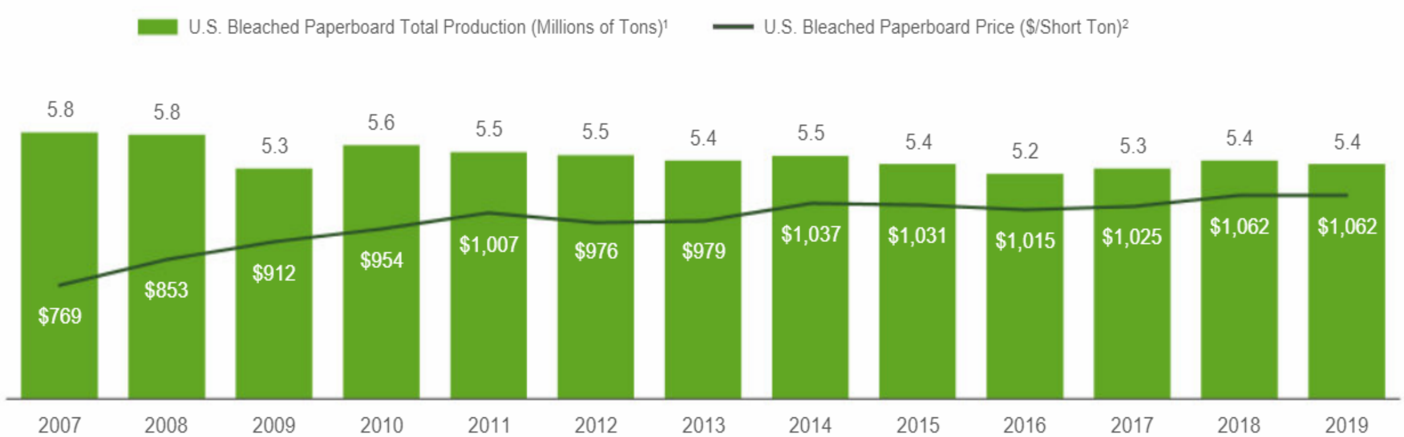


EV/EBITDA, Revenue Growth, EBITDA Margins, and Cash Flows are all important metrics to observe in this group. EBITDA-Capex spread has been found to be a useful measure of performance of packaging companies. Working Capital Metrics like days sales outstanding, says inventory outstanding, and says payable outstanding are also useful to assess management.



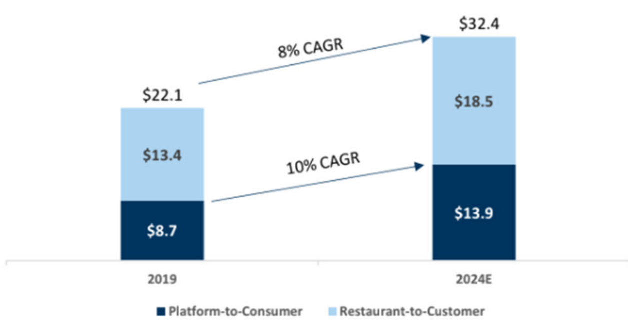


U.S. Bleached Paperboard Total Production and Price



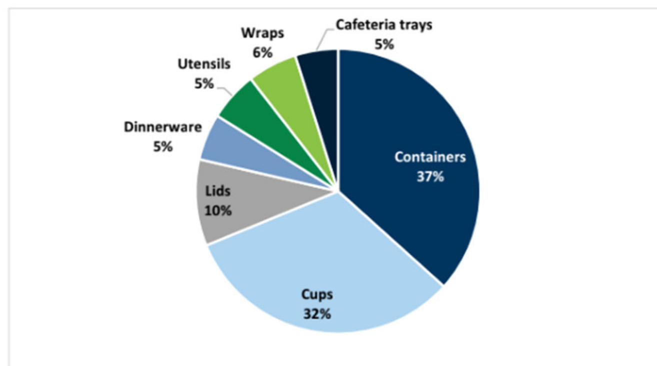
Restaurant Delivery Packaging Market, 2024E vs. 2019 ($bn)

The overall market is expected to grow at an 8% CAGR supported by 10% digital growth



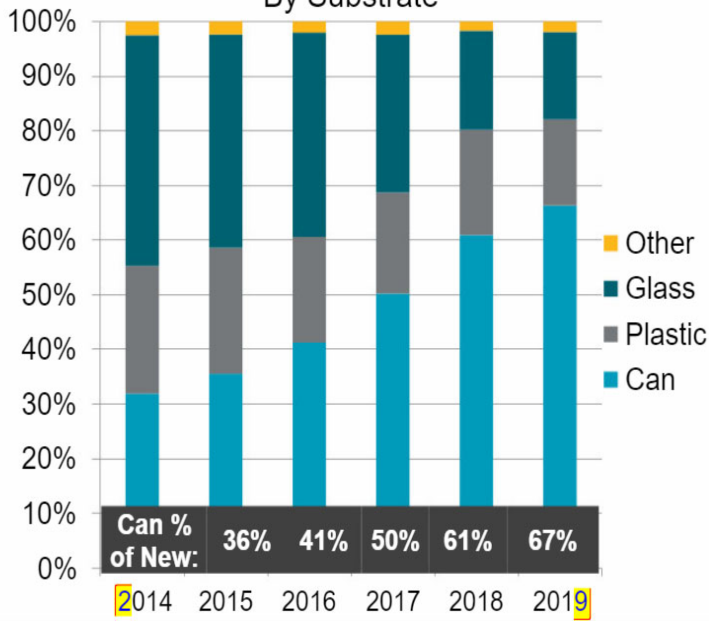
Foodservice Segment Revenue Mix

Containers (used for restaurant delivery) are the largest product in the segment

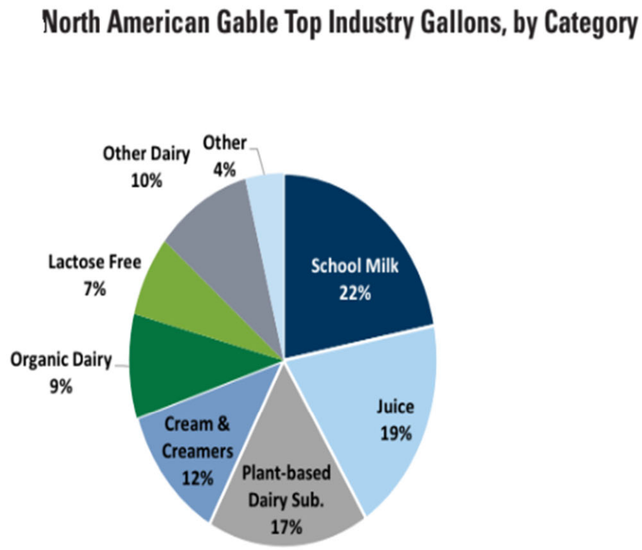


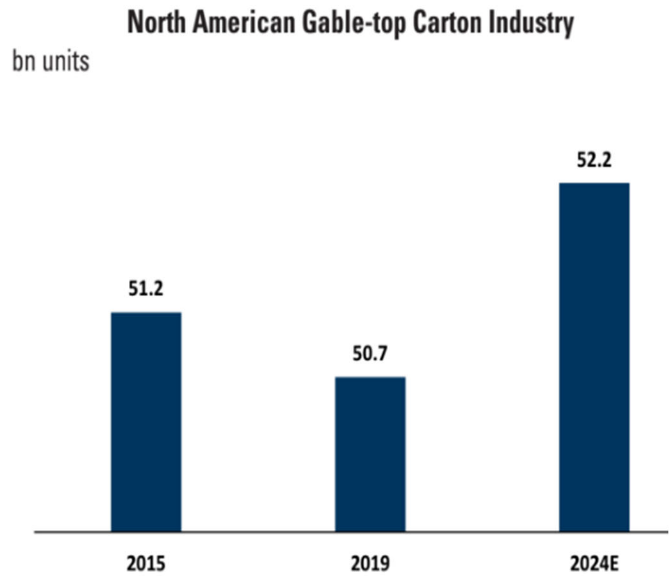
North America New Scanned SKUs

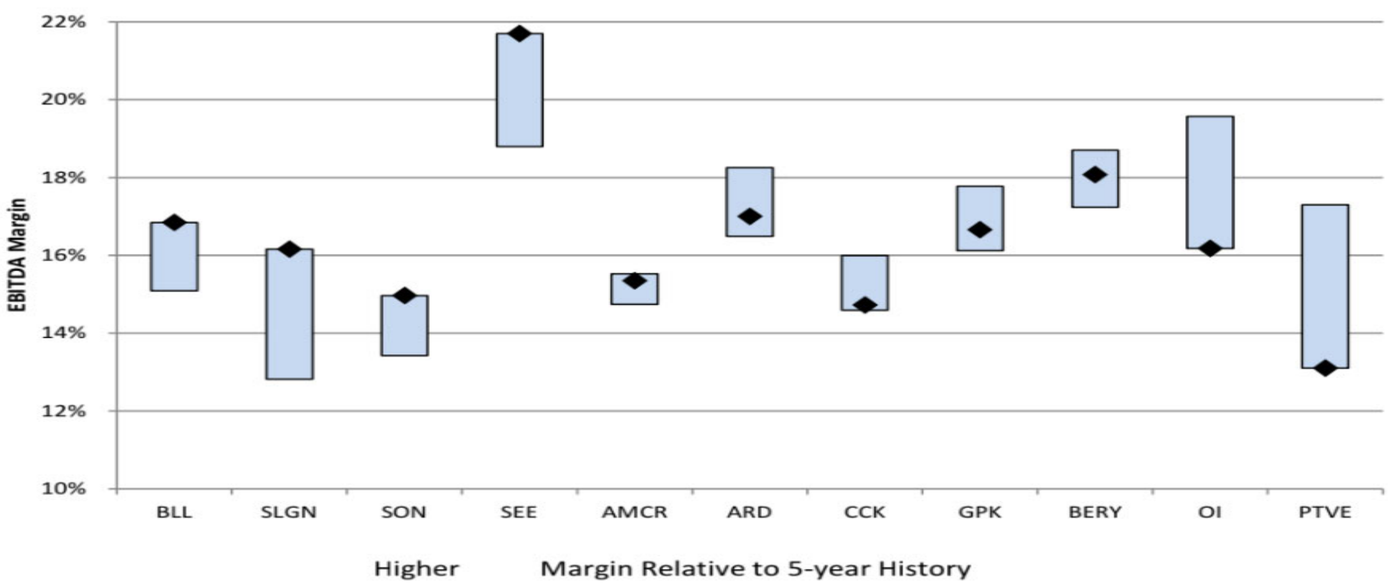
By Substrate



Industry IBC sales by end market (CAGR '19 – '24)[1]







Management Commentary:

Mondi (MNDI:LN) on 10/15 Trading Statement " If I look then at the performance per business unit. In Corrugated Packaging, we saw demand from e-commerce and consumer applications remaining strong. We also saw good recovery in industrial end users from the lows of the second quarter. We achieved good volume growth overall in Corrugated Solutions, measured both year-on-year and sequentially. Given the strong order position and normalized inventory levels, we are currently in discussions with customers around price increases for the various containerboard trades."

Amcor (AMCR) on sustainable packaging: "Momentum is building around innovations to deliver more sustainable packaging, and we have a strong balance sheet and annual free cash flow of over $1 billion, which provides the capacity to invest back in the business, to pursue growth opportunities and to maintain an attractive dividend. And we believe, without question, the sustainability will be the biggest organic growth opportunity in the business over time. It's part of our winning aspiration and our best opportunity to differentiate, and it's our best opportunity for competitive advantage, and ultimately, to create shareholder value. We've developed a reasonably well informed perspective over the years on the topic of sustainability, and we believe we're uniquely positioned to leverage our scale and resources to help address growing consumer concerns about both climate change and waste, and we believe the best answer to addressing those consumer needs and sustainability concerns is responsible packaging, by which we mean a system-based solution across 3 elements."

Ball (BLL) on Aluminum packaging: "Aluminum packaging is winning. We've engaged in a longer-term planning horizon and process. The global beverage can industry is expected to grow approximately 100 billion units by 2025 off of the 2019 base. Ball is well positioned in the largest markets in the world: North America, EMEA and South America. And our specialty portfolio of -- is capable of producing upwards of 40 different cans and bottle sizes, resulting in the deepest, broadest customer portfolio in the industry. In North America, over the next 5 years, we see greater than 4% to 6% growth driven by package mix shift to cans and positive consumption patterns driven by sustainability and new category introductions in beer, wine, water, hard seltzers and energy. Ball has certainly won in the spiked seltzer market, which is cannibalizing, to a certain extent, wine and spirits. And our excitement about the water space and why we are still bullish about the other categories the consumer hasn't seen yet hasn't been contemplated in the 4% to 6%, which is why the plus sign."

WestRock (WRK) on changing markets: "Demand for corrugated packaging, containerboard, food and beverage consumer packaging is very strong. During the fiscal fourth quarter, corrugated box demand increased, and we shifted containerboard tons from lower-margin export markets to serve our higher-value box and domestic consumers, moving 109,000 tons sequentially out of the export market. We're now selling every ton we can produce and inventories are tight. During the recent September quarter, our packaging shipments were at record levels for both of our segments. The momentum has continued into October. Our increase in daily box shipments in October was higher than industry shipments that were reported this morning."

Avery Dennison (AVY) on the RFID business: "Our next biggest business is Retail Branding and Information Solutions. That's roughly 1/4 of the total company. This business provides branded products and information solutions, largely focused on retail apparel, and here, we -- the biggest growth driver within the company is embedded largely within RBIS, and that is RFID, Radio Frequency Identification. We are the market leader in providing UHF RFID solutions. This is now a more than a $500 million business and the single-biggest growth driver within the company, delivering 15% to 20% growth over the long term. So a lot of exciting things going on there. And our key focus is continuing to leverage the advantages we have to continue to grow within the apparel market for RFID as well as we've been seeding investments over the last couple of years to identify significant growth opportunities outside of apparel with RFID as we build out our intelligent label platform."

Sealed Air (SEE) on eCommerce: "The surge in e-commerce continues to create demand for our products and services. Our solutions are designed to minimize waste, reduce carbon footprint, increase speed to pack, while at the same time, drive to 0 harm and address labor scarcity. We are taking our digital printing capabilities to the next level by enhancing our packaging materials, which is important for the at-home buying experience. We continue to shift our portfolio to address the ever-changing needs of the e-commerce channel, which will be a key element of our protective growth strategy. On the protective side, we're definitely seeing sustainability with our e-commerce boom, and how do we make our products recyclable, sustainable. The recycled Bubble Wraps already coming out into our product lines. Our mailers, not just the plastic mailers with the bubble but also paper. And our paper business is growing quite nicely, and we expect more coming into 2021."

OptionsHawk Executive Summary and Top Picks

Ball (BLL) is the largest name and the clear leader across most metrics as it is best positioned for the trend towards Aluminum. **Amcor (AMCR)** screens well across the next tier of market caps and like its sustainable approach and opportunity. **Avery Dennison (AVY)** has been a quality name and like the RFID opportunity but valuation needs to come back in closer to 12X EBITDA. **Aptar (APTR)** is a high-quality operator that carries a premium valuation, but its Pharma packaging business is attractive. **Sealed Air (SEE)** valuation is attractive, margins are expanding, and has a good amount of ecommerce exposure. **Pactiv (PTVE)** came public in 2020 and a name I really like moving forward as a pure play sustainable packing company and **Ranpak (PACK)** an even smaller discovery from 2020 as a play on ecommerce growth. **UFP Tech (UFPT)** a micro-cap play that has an expanding medical technology angle while aerospace/defense should recover and it is a margin leader.

Consumer Goods: *It was an eventful year for the consumer goods sector in 2020 with the pandemic shifting consumer behavior and accelerating multiple growth trends. It quickly separated the winners from the losers in the new environment. The Auto & Truck markets were hit hard but also indications of a trough and starting to see positive momentum into Q4 2020 while Electronic Vehicles (EV) continue to disrupt the massive market. Recreational Vehicles (RV) saw a major demand surge as an ideal way to travel safely. The Food & Beverage industry saw a strong surge in at-home demand while the restaurant industry saw demand plunge with closures. The work from home trend impacted home & office goods while lockdowns resulted in pantry hoarding across household goods and personal care items. In Apparel & Footwear we saw an acceleration of ecommerce and Direct-to-Consumer (DTC) impact business models. Consumer spending allocations shifted away from travel and experiences back to goods, though may be temporary from the boost given by stimulus checks and need to monitor consumer health via the employment market and consumer sentiment. The outdoor recreation industry saw a surge in demand as people took greater interest in getting outdoors in place of travel. One factor to watch in 2021 is many companies will start to face tough year-over-year comps which can impact sentiment. The Millennial peak spending year theme remains in place for consumption trends across this sector.*

Truck and Auto Related:

This group I compiled has a few industries wrapped under the same Truck & Auto theme, so we have Auto Dealerships, Auto Manufacturers, Auto Parts, Recreational Vehicles, and lastly the Heavy Truck makers.

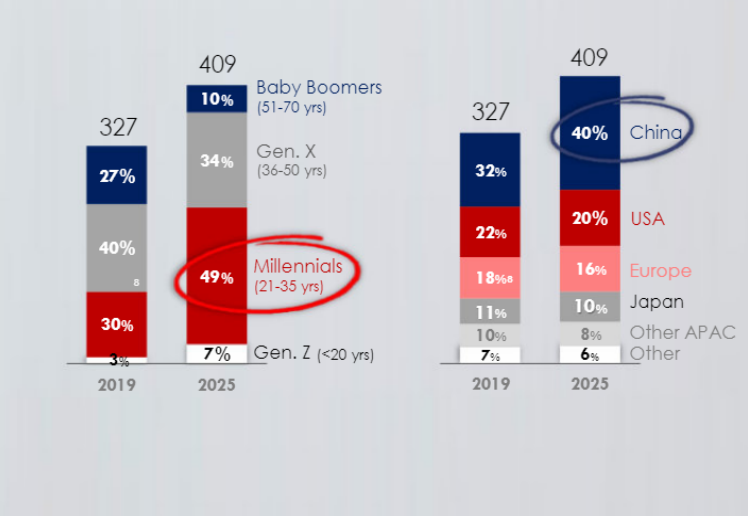
We can return to more traditional valuation metrics for this group like EV/EBITDA, P/E, and P/OCF while also taking into account debt coverage ratios, inventory turnover, and operational efficiency ratios in a highlight competitive industry with high capital expenditures such as gross margins, ROIC and ROE. Specific to the auto dealerships, same store sales trends is an important metric.

Industry data is also very important in timing investments in this group with the cyclical nature of auto production levels, so taking into account gasoline prices, consumer financial health, and overall state of the economy are a must. Government regulations, such as CAFÉ mandates will require automakers to invest in technology to improve fuel efficiency and reduce emissions, set to rise to 55mpg in 2025 from 38.6mpg in 2016. Safety features and connected car are also top themes in this industry with Automaker becoming pseudo-tech companies. Autonomous vehicles is another major theme that is set to change the automotive landscape. Clearly the industry suffered a major downturn with the pandemic though Electric Vehicles (EV) saw continued growth and remains the overwhelming theme with legacy auto providers losing market share and rightfully the stocks underperforming.

Automaker Components: F, FCAU, GM, HMC, NIO, RACE, TM, TSLA, TTM, LI, XPEV

The Automobiles industry includes companies that manufacture passenger vehicles, light trucks, and motorcycles. Industry players design, build, and sell automobiles that run on a range of traditional and alternative fuels. Auto makers sell vehicles to dealers for consumer retail sales and directly to fleet customers, including car rental and leasing companies, commercial fleet customers, and governments. While companies in the industry do not sell cars directly to retail consumers, they are involved in the marketing and advertising of their products. Companies also provide automotive financing services to and through dealerships. Automobile, light truck, and motorcycle manufacturers are known as the original equipment manufacturers (OEMs). They buy parts from many suppliers to assemble a final product for sale under their brand. Tier 1 suppliers are those that supply parts directly to OEMs, and therefore are most closely connected to the OEMs. Tier 2 suppliers are those that provide inputs for Tier 1 suppliers, Tier 3 suppliers usually provide inputs to Tier 2, and so on. The global automobiles manufacturing market is valued at about $2 trillion in revenues. Purchases of auto parts and raw materials are the largest cost component, at 78.1 percent of revenue for cars and 72.8 percent for SUVs and light trucks. Wages, the second largest expense, accounted for just over six percent of revenue. Due to growing demand from emerging markets and increasing fuel prices, the market is shifting towards smaller, lighter, more fuel-efficient vehicles. Therefore, consumer preference and environmental regulations are driving demand for alternative fuel and high-efficiency vehicles. Moreover, the amount of electronic content in vehicles is increasing. Automobile manufacturers invest in research and development of ‘smarter’ vehicles that are also safer to drive.

OVERALL TRUE-LUXURY CONSUMERS (M)

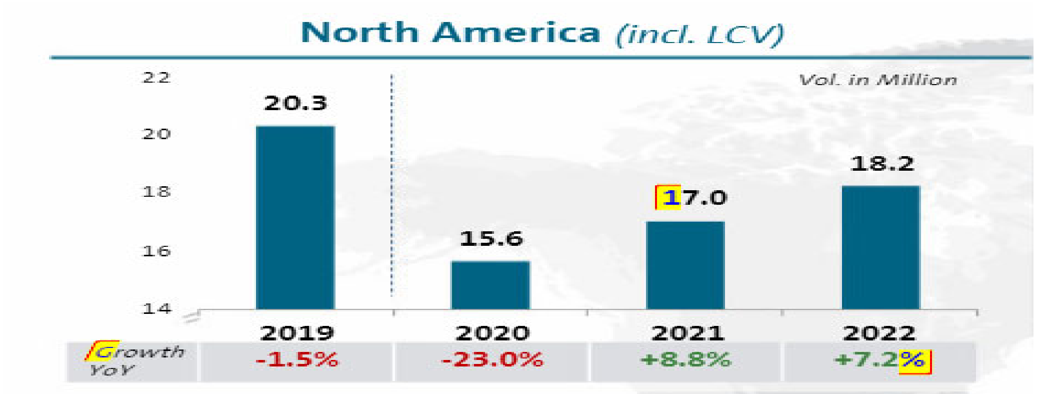


LUXURY VEHICLE MARKET | COVERED SEGMENTS

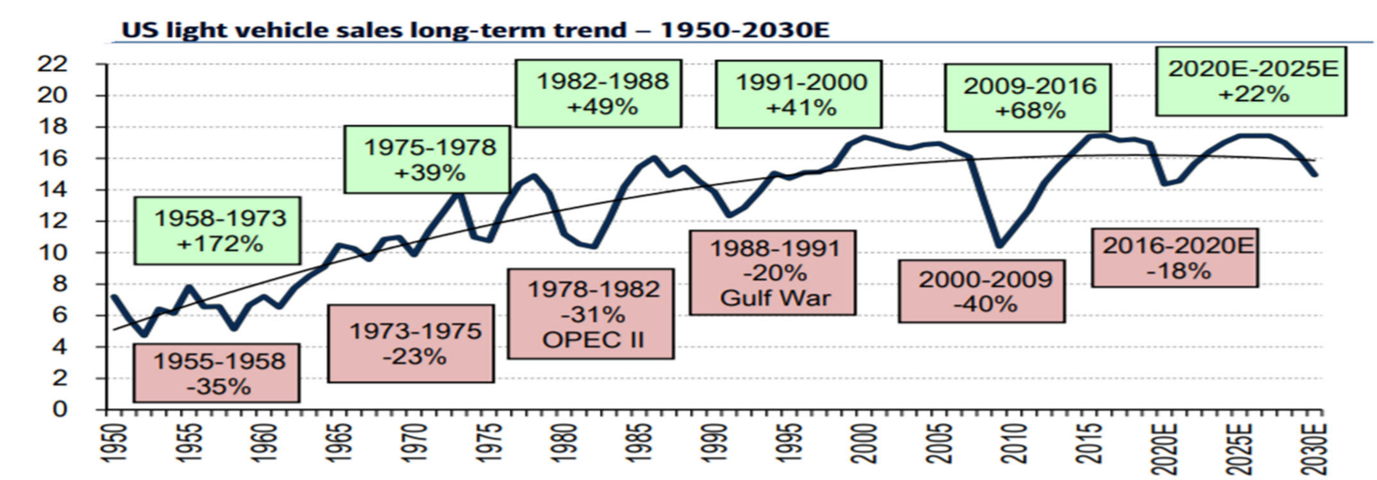
SEGMENT	VOLUME 2019 (Ku.)	VOLUME 2025 (Ku.)	CAGR '19-'25
D-UV	362	533	6.7%
E-UV	344	457	4.8%
SPORTS SEDAN	128	194	7.2%
LARGE SEDAN	150	137	(1.5%)
GT	85	75	(1.9%)
SPORTS CAR	15	16	1.7%
TOTAL	1,084	1,413	4.5%
% OF MARKET COVERED BY MASERATI	65%	90%	

Maserati model available

New segment for Maserati in 2021



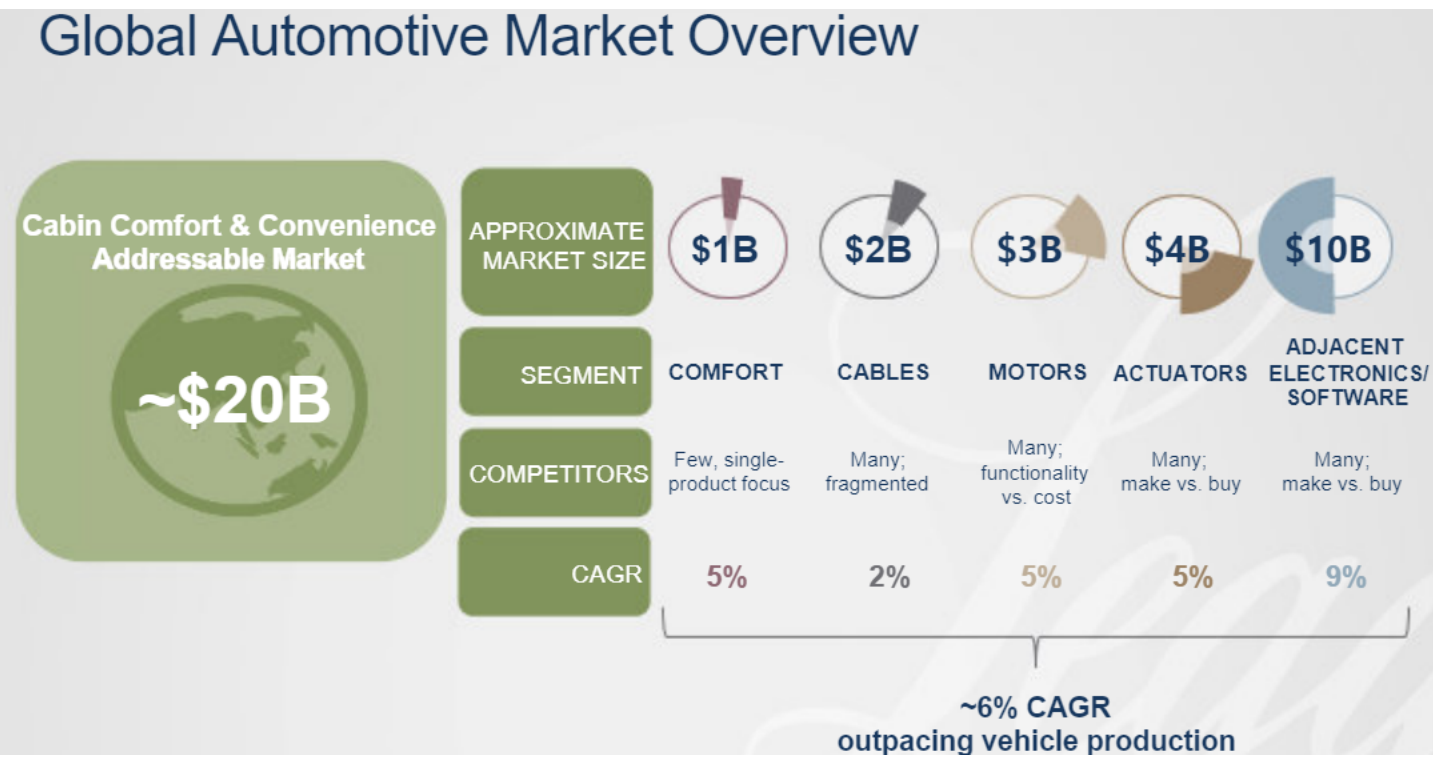
The automakers saw a sharp collapse in production during COVID but IHS forecasts that 3Q:20 global production only declined 5% YoY, with Europe down 10%, North America flat YoY, and China up 9%. The legacy automakers have long been seen as values but traditional metrics but overall a low growth, low margin industry without a lot of excitement for investors. The main area for growth is Electric Vehicles (EV) where stocks have performed well as it continues to gain market share. New US light vehicle sales fell 9% YoY in 3Q:20 for a SAAR of 15.4mm units, driven by ongoing economic and consumer pressure as a result of the COVID-19 pandemic. However, it should be noted that demand has been rebounding quite impressively since the trough of 8.6mm in April, reaching a more normal16mm+ SAAR in September. Average US industry transaction prices rose 3.6% YoY in 3Q:20, aided by the ongoing improvement in mix. However, incentive activity has accelerated materially in recent months, with average incentives up ~8.1% YoY in 3Q:20, reflecting OEMs efforts to offset ongoing pressure on demand from COVID-19 and support volume in the short-term.



Source: WardsAuto InfoBank, BofA Global Research estimates

Auto Parts Components: ADNT, ALV, APTV, AXL, BWA, CPS, DAN, FOXF, GNTX, JCI, LCII, LDL, LEA, MGA, MOD, SRI, TEN, THRM, XPEL, VC, VNE, WBC, CTB, DORM, GT, LKQ, ALSN, CVGI, MTOR, PLOW, SMP

The Auto Parts industry mostly supplies parts to companies in the Automobiles industry, also known as original equipment manufacturers (OEM). The Auto Parts industry includes companies that manufacture and assemble a wide variety of motor vehicle parts and accessories, including engine exhaust, alternative drivetrain and hybrid systems as well as catalytic converters, aluminum wheels (rims), tires, rearview mirrors, and onboard electrical and electronic equipment. The automobile manufacturing value chain business has a complex, highly fragmented supply chain that includes procuring raw materials (such as steel, aluminum, plastics, and glass), forming and producing parts, and assembling parts into finished products. The global auto parts manufacturing market is valued at approximately $1.1 trillion, with no more than 15 percent reported as coming from a specific auto parts product. Tire manufacturing is the largest single segment of the Auto Parts industry, with $165.6 billion in global revenues, followed by seating and trim manufacturing with $116.3 billion, and drivetrain components manufacturing with $112.1 billion. The number of vehicles in use, in addition to the number of newly manufactured vehicles, is the main driver of demand in the Auto Parts industry. Periods of economic downturn are characterized by longer vehicle lifespans, and therefore a greater demand for replacement parts. In times of economic expansion, however, more vehicles are being manufactured and sold, which results in a higher demand for auto parts from OEMs. In the U.S., auto parts suppliers generate only between four and seven percent of their revenue from aftermarket sales, which cover replacement parts, while the majority of parts are sold to vehicle manufacturers. However, sales to OEMs generate a much lower profit margin than sales of aftermarket parts. Globally, this picture is different, with only 49.1 percent of sales revenues coming from OEMs, 27.3 percent from aftermarket sales, and 23.6 percent from exports. The industry's capital intensity is very high and companies achieve competitive advantage by investing in capital equipment. Cost of purchases, including raw materials, semi-finished products, and completed parts, accounts for approximately 65 percent of the industry's revenue. Therefore, volatile prices of commodities such as steel have a strong impact on profit margins. Wages are the second highest portion of operating expenses for auto parts manufacturers and account for 10 percent of revenue.



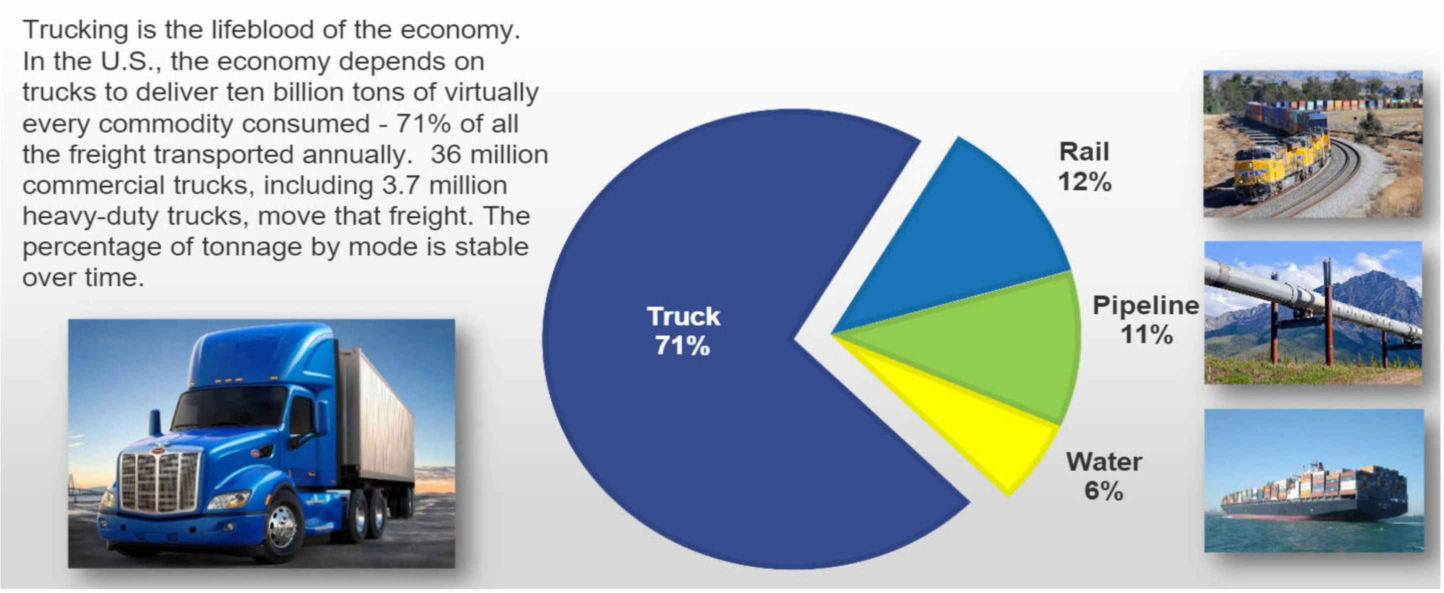
The automotive aftermarket is undergoing dramatic changes with evolving customer expectations, acceleration of technological innovation, and shifts in competitive power. Advanced driver-assistance systems, ridesharing, and electric vehicles are driving change across the industry. With more than 95 million vehicles sold annually around the world and an overall profit pool in excess of $1 trillion, the automotive industry represents a massive ecosystem that involves the raw materials, industrial, technology, and consumer sectors. The most intriguing aspect of the automotive industry for active managers, however, is the importance of being able to identify which parts of the value chain—original equipment manufacturers, integrators, suppliers, and raw materials producers—will be gaining and losing profitability over the next several decades, as well as the specific companies that are well positioned to capture that value. In terms of total miles driven, ridesharing could be a tailwind to the global fleet size. According to research by the University of California Davis Institute of Transportation Studies, ridesharing will likely contribute to an increase in the total number of miles driven in major cities. The auto suppliers that are enabling automation, electrification, and connectivity trends should be viewed beyond the transitory headwinds, as the industry faces mounting pressure to innovate and integrate new technologies. Over the last five years, consumer interest has shifted from traditional vehicle traits such as speed and torque toward an emphasis on technology, connectedness, and efficiency.

Component System	$ CPV	% of Total Content	Market Size ($bn)*	Outsourcing	Concentration	Growth
Engine	$2,675	18.4%	$253.3	Low	Low	High
Body & Structural	$2,530	17.4%	$239.5	Low	Low	Medium
Electronics & Electrical	$1,910	13.2%	$180.8	Medium	Medium	High
Transmission	$1,390	9.6%	$131.6	Low	Medium	High
Interior	$1,330	9.2%	$125.9	High	Medium	Low
Axles, Driveshafts & Components	$865	6.0%	$81.9	Medium	Low	Low
Climate Control & Engine Cooling	$720	5.0%	$68.2	High	Medium	Low
Suspension	$500	3.4%	$47.3	High	Medium	Medium
Braking	$435	3.0%	$41.2	High	High	Low
Steering	$375	2.6%	$35.5	High	High	Low
Fuel System	$360	2.5%	$34.1	High	Medium	Medium
Passenger Restraints	$355	2.4%	$33.6	High	High	Low
Audio & Telematics	$340	2.3%	$32.2	High	High	Medium
Exhaust	$300	2.1%	$28.4	High	High	Low
Wheels & Tires	$270	1.9%	$25.6	High	High	Low
Body Glass	$145	1.0%	$13.7	High	High	Low
Total	**$14,500**	**100.0%**	**$1,373**			

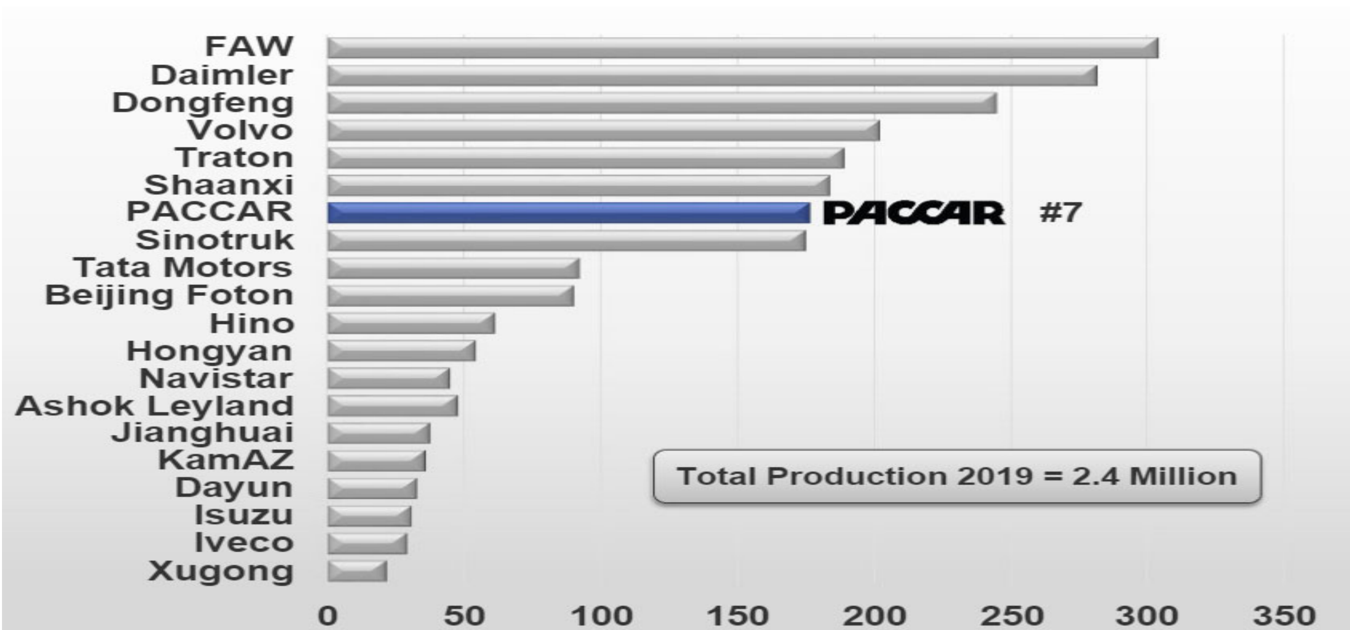
Component System	$ CPV	Top 5 Suppliers				
Engine	$2,675	BorgWarner	Continental	Denso	Mahle	Robert Bosch
Body & Structural	$2,530	Aisin Seiki	Flex-N-Gate	Gestamp Automocion	Hyundai Mobis	Magna
Electronics & Electrical	$1,910	Aptiv	Continental	Robert Bosch	Sumitomo Electric	Yazaki
Transmission	$1,390	Aisin Seiki	JATCO	Magna	Schaeffler	ZF Friedrichshafen
Interior	$1,330	Adient/YFAI	Faurecia	Hyundai Mobis	Lear	Toyota Boshoku
Axles, Driveshafts & Components	$865	American Axle	Dana	GKN	Magna	ZF Friedrichshafen
Climate Control & Engine Cooling	$720	Calsonic Kansei	Denso	Hanon Systems	Mahle	Valeo
Suspension	$500	Aisin Seiki	Benteler	Hyundai Mobis	Tenneco/Federal Mogul	ZF Friedrichshafen
Braking	$435	ADVICS/Aisin Seiki	Brembo	Continental	Robert Bosch	ZF Friedrichshafen
Steering	$375	JTEKT	Nexteer	NSK	Robert Bosch	ZF Friedrichshafen
Fuel System	$360	Denso	Kautex/Textron	Plastic Omnium	Robert Bosch	TI Fluid Systems
Passenger Restraints	$355	Autoliv	Hyundai Mobis	Joyson Safety Systems	Toyoda Gosei/Tokai Rika	ZF Friedrichshafen
Audio & Telematics	$340	Aptiv	Continental	Panasonic	Robert Bosch	Samsung
Exhaust	$300	Calsonic Kansei	Eberspacher	Faurecia	Futaba Industrial	Tenneco/Federal Mogul
Wheels & Tires	$270	Bridgestone	CITIC Dicastal	Continental	Goodyear	Michelin
Body Glass	$145	AGC	Fuyao Glass	Guardian	Nippon Sheet Glass	Saint-Gobain

Commercial Vehicle Components: HY, NAV, OSK, PCAR, FSS, REVG, SHYF, CMI, NKLA, WNC, WKHS

Companies in this industry manufacture truck and bus chassis and assemble trucks, buses and other special-purpose heavy-duty motor vehicles for highway use, such as firefighting trucks. The trucks manufactured by this industry are heavy trucks used by freight companies and do not include passenger vehicles. The North America class 8 segment held around 80% of the heavy-duty trucks market revenue share in 2019. High load carrying capacity and long-range traveling capability will boost class 8 trucks demand.

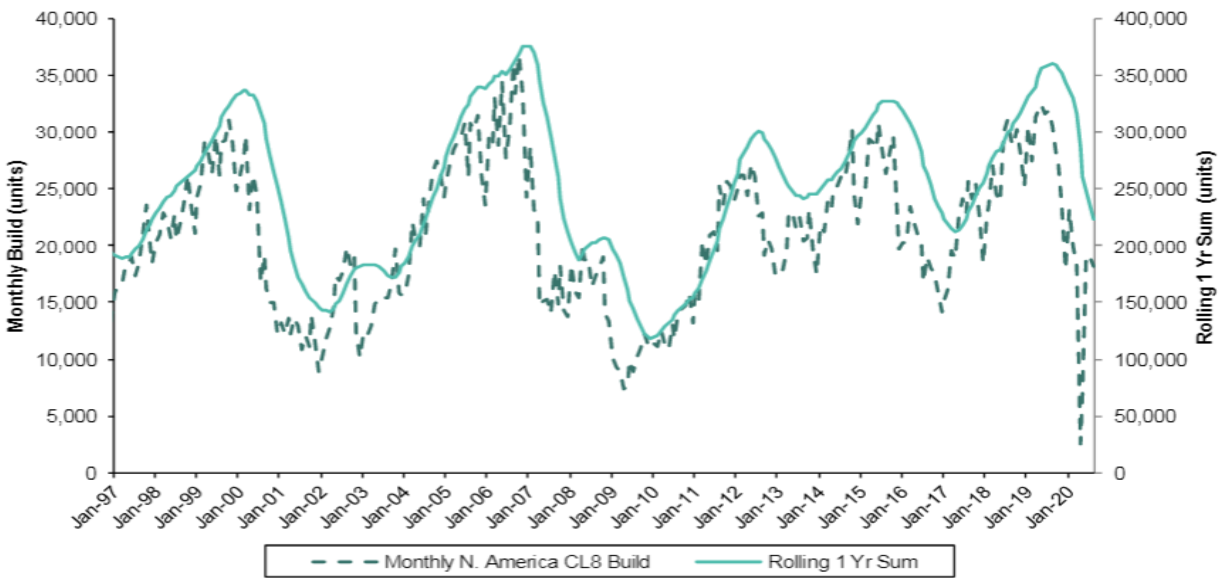


The heavy-duty truck market is expected to reach $430B by 2026 at a 4% CAGR. The Europe hybrid electric truck market valued at around $3B in 2019 and will observe growth rate of over 10% through 2026. The high market growth in the hybrid electric segment will be driven by stringent emission norms established by governments.



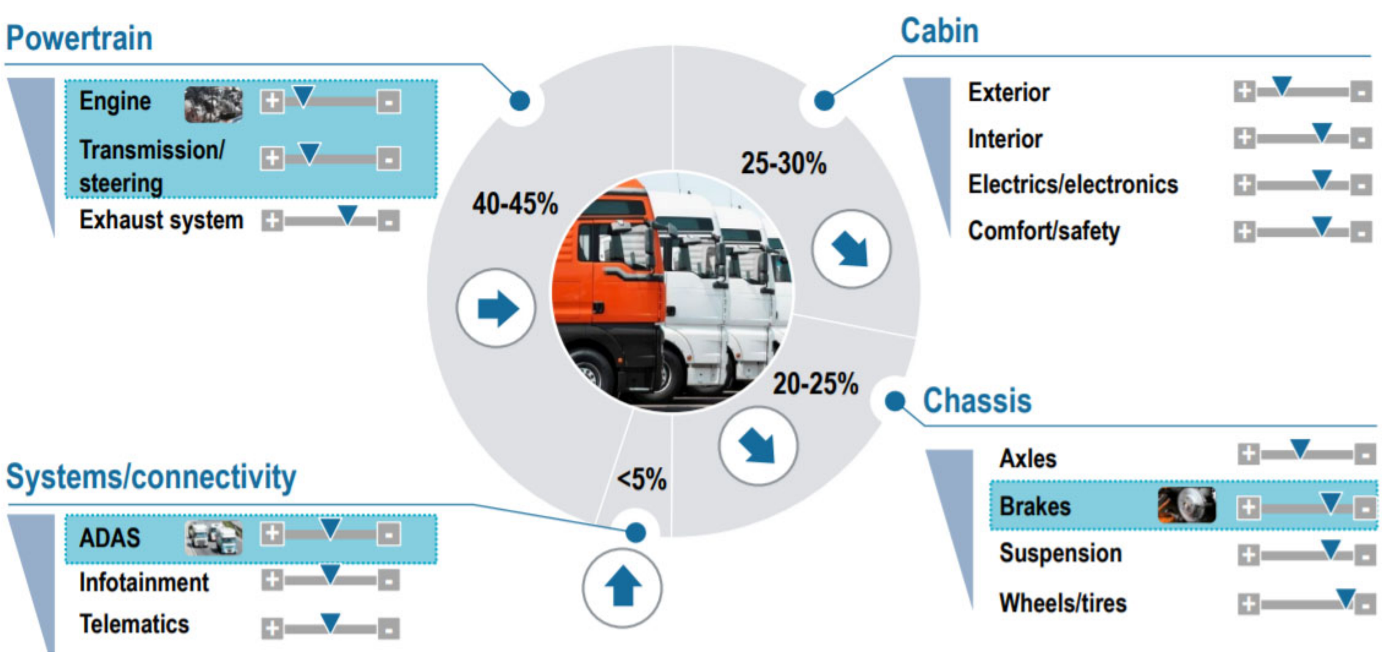
The North American Class 8 market is very cyclical and looks posed for a recovery in 2021 with estimates for a 17% rise in sales driven by a replacement cycle, recovery in Macro (IP/GDP), and supportive trucker profitability. The typical downturn lasts 15 months and should conclude at the end of 2020 after starting Fall 2019. Additionally, build rates lag China M1 money supply growth by 16 months and this time-tested relationship is pointing to a major inflection next year. Replacement cycle is a tailwind driven by strong correlation with new truck retail sales from15-17 years ago. Scrappage will be higher in 2021 and continue to rise through 2022. This will drive replacement demand. Despite the economic recession, surprisingly there has not been much of a downturn in freight over the past few months driven by the stimulus, shift to Consumer-Packaged Goods, and redirect of consumption from services to goods. The Street expects to see a higher order book because carriers tend to spend lots of free cash on trucks when profits are high.

EXHIBIT 32: **This downturn is poised to end soon**

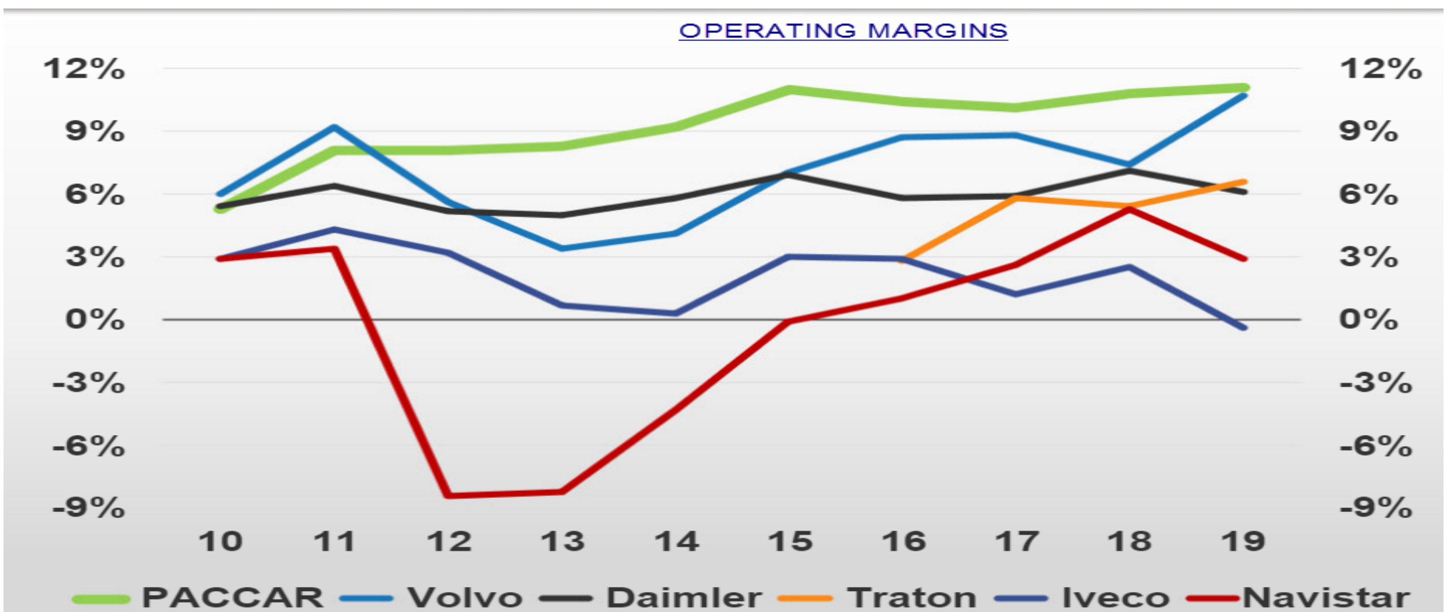


ACT recently upgraded its outlook for the commercial vehicle market noting "Low interest rates, millennial demographics and urban escapes have supercharged residential investment, and we're also seeing the need for a period of business inventory restocking that should benefit truck freight into mid-2021. By Q1 '21, the current manufacturing cycle will hit a nine-quarter downturn, suggesting a tightly coiled spring of pent-up demand, also good for freight and ultimately commercial vehicle demand." PCAR recently increased its forecast for truck markets in the US, Canada and Europe.

Four key trends across the commercial vehicle industry include newer logistics, electrification, autonomous and digitalization. A number of the larger players are foreign and offer good insights throughout earnings season such as Daimler AG, Volvo, Traton, and Dongfeng.

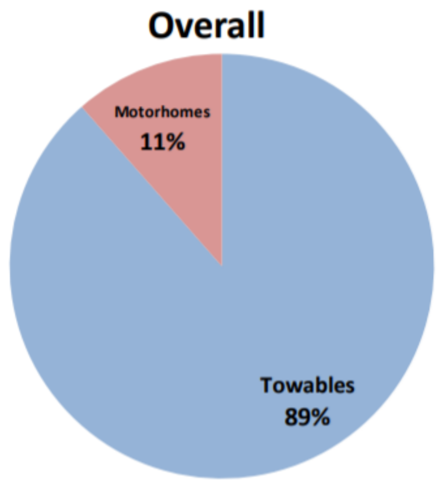


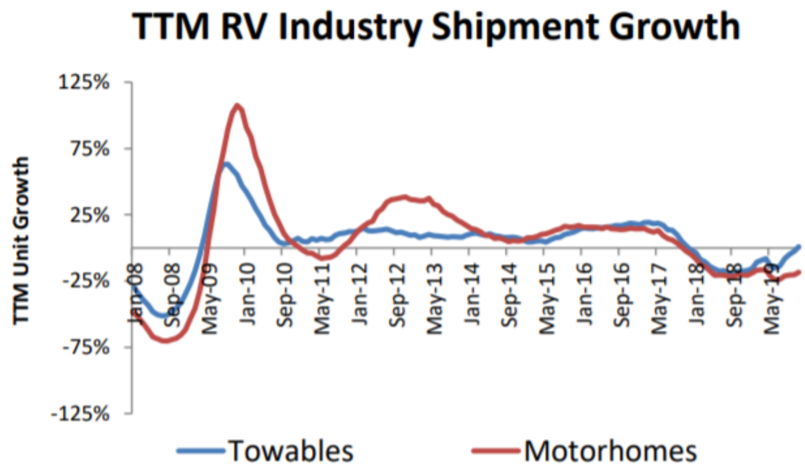
Industry trends and respective impact		Revenues		Profits	
Macroeconomic environment	Structural shifts	36.6		3.2	
Market development	Price pressure	-2.7	-5.2	-2.7	-3.9
	Industry consolidation	0		0.5	
	Emission regulation[2]	11.7		-1.6	
	EV cannibalization	-19.1		-0.9	
	Classic aftersales opportunities	4.9		0.8	
Operational efficiency	Product cost optimization	0	0	1.1	2.9
	Operational efficiency	0		1.8	
New opportunities	Alternative powertrains[3]	29.7	40.3	0.9	2.7
	Autonomous vehicles[3]	7.0		0.9	
	Connectivity and Solutions	3.6		0.9	



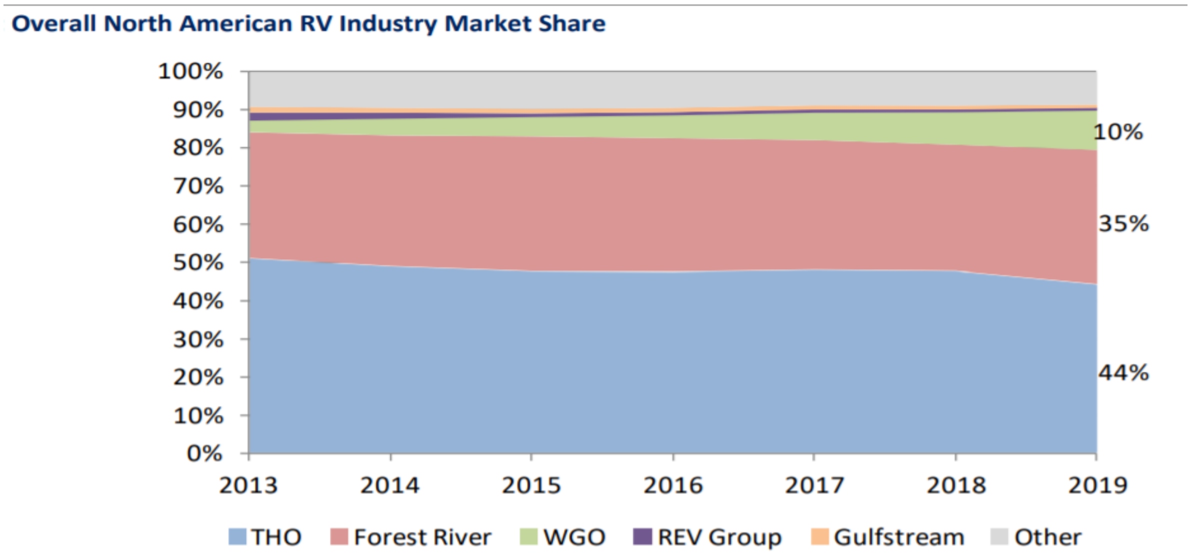
Recreational Vehicle Components: THO, WGO, CWH, NIU

An RV is a vehicle, which combines transportation and temporary living quarters for travel, recreation, and camping. The RV industry is composed of two primary segments: Towables and Motorhomes. Towables make up the vast majority of industry units (89% in 2019), while Motorhomes (11% of wholesale units in 2019) have seen a modestly higher growth rate over the past ten years (13% CAGR vs. 9% for Towables).

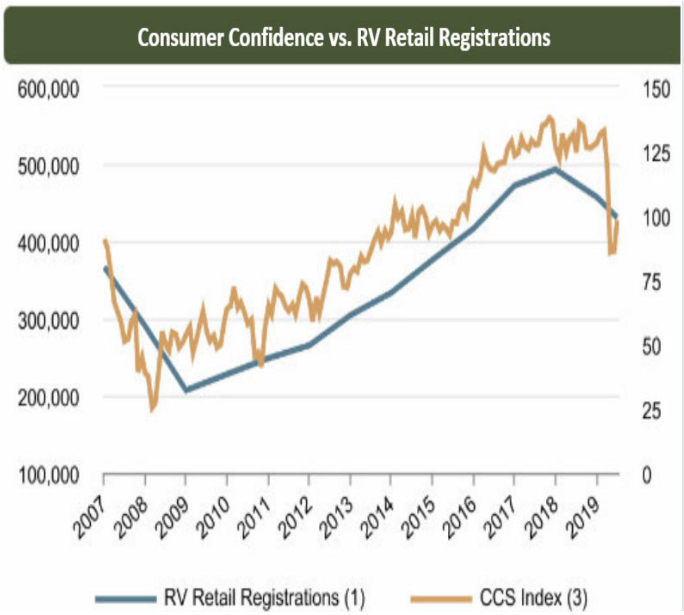


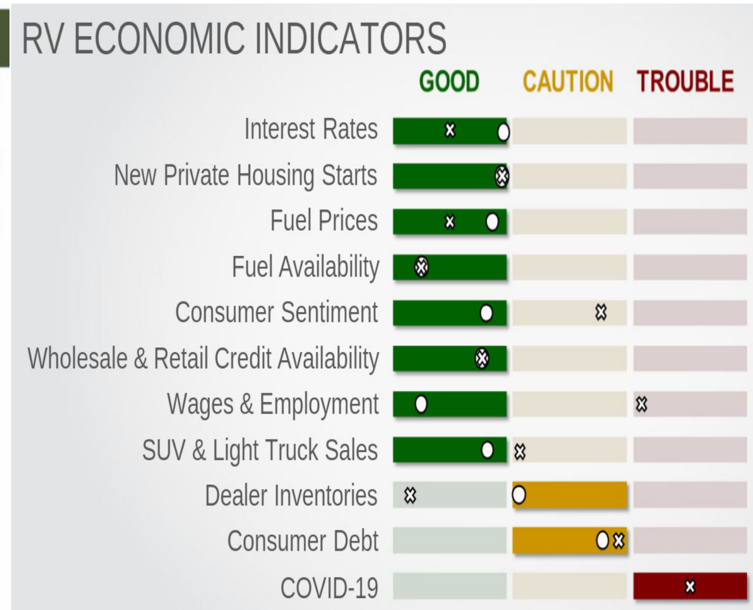


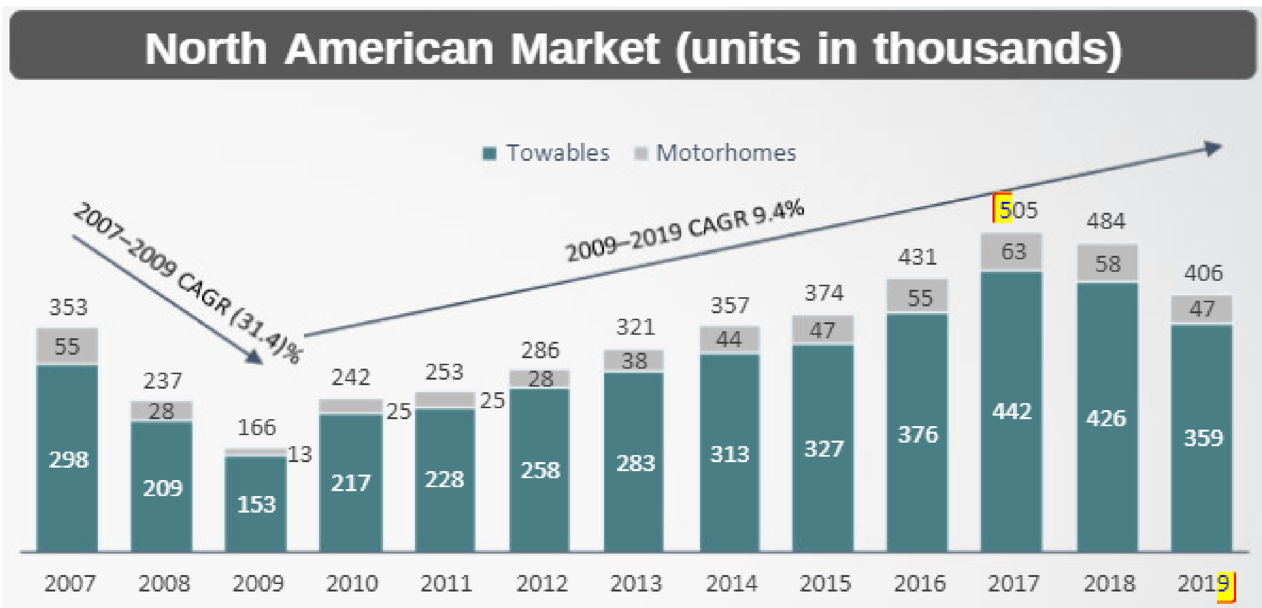
The average "RVer" is 48 years old with a median income of $62,000. 39% have children living at home. The purchase price of an RV can range from $15,000 for a small pop-up trailer to well over $500,000 for a Class A Motorhome. RV sales are highly seasonal, with many dealers placing orders at large shows which occur in both Spring and Summer, making 2Q and 3Q typically the strongest periods. The RV industry counts Consumer confidence as the biggest indicator of future success; confident consumers are willing to make a large, luxury purchase such as an RV. Consumer confidence, as measured by the University of Michigan's Index of Consumer Confidence. The RV industry has seen rapid consolidation in the past several years, largely by Thor, and today nearly 90% of market share is held by the top three industry players.

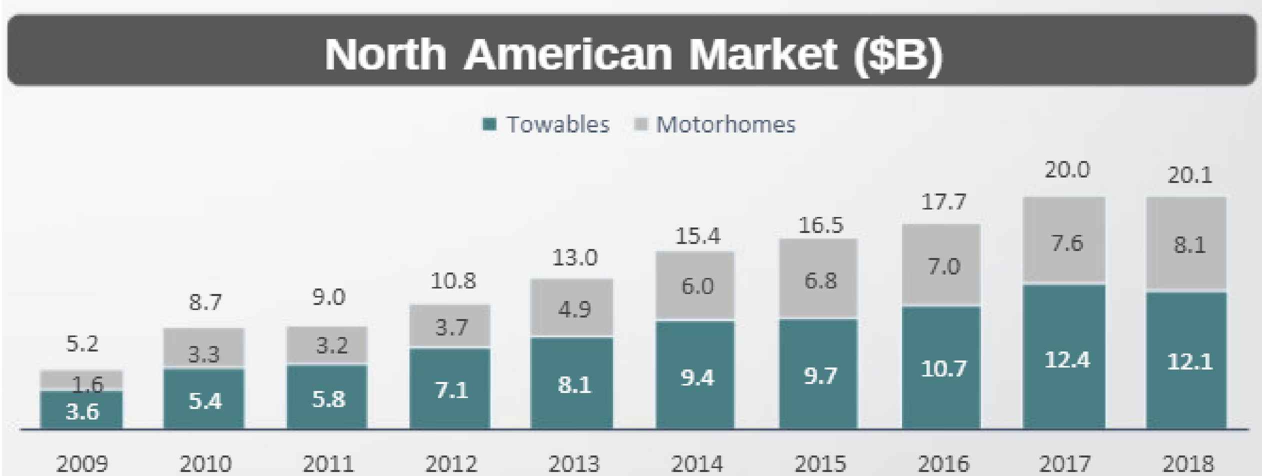


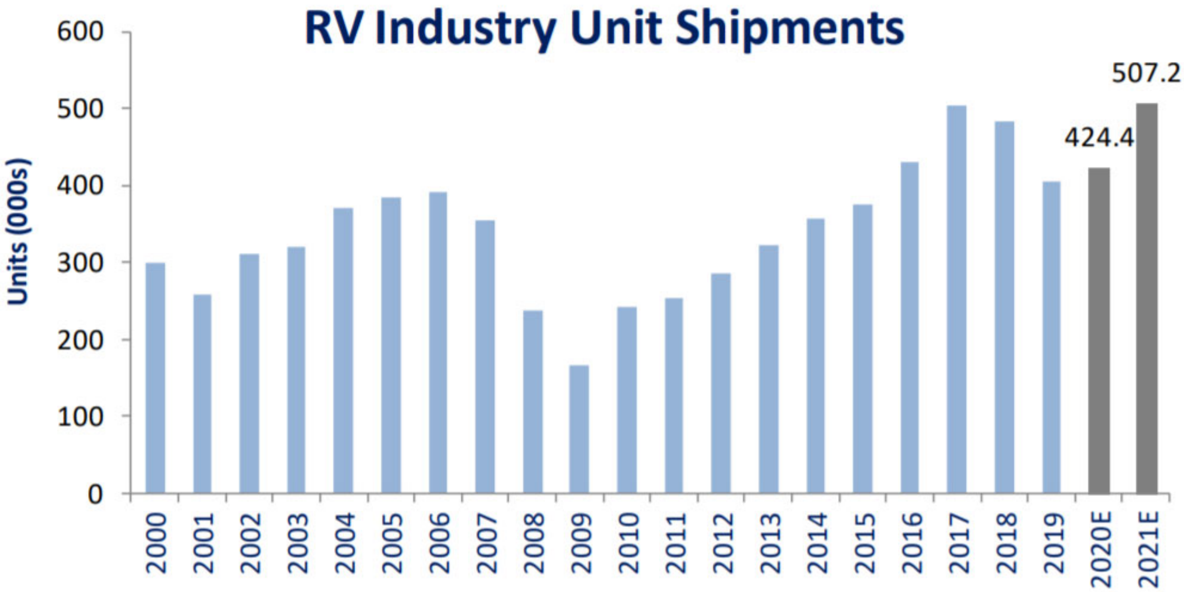
The RV industry saw a surge in demand in 2020 as the pandemic changed the way people travel. The Recreational Vehicle Industry Association sees North American RV sales rising 4.5% in 2020, to 424,400 units. For 2021 they see 19.5% unit growth to 507,200 which would be the best year for the industry in its history. The global recreational vehicle market size to reach $42B in 2020 and is projected to grow on account of the increasing demand for camping and outdoor recreational activities in the millennial population, especially in the US. The global recreational vehicle market by revenue is expected to grow at a CAGR of over 7% during the period 2019-2025. PATK, LCII are two names with strong exposure as suppliers to the RV industry. The "work from anywhere" theme could prove to be a key growth driver for years to come.


Consumer Confidence vs. RV Retail Registrations
600,000
500,000
400,000
300,000
200,000
100,000
150
125
100
75
50
25
0
2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
RV Retail Registrations (1)
CCS Index (3)


RV ECONOMIC INDICATORS
GOOD
CAUTION
TROUBLE
Interest Rates
New Private Housing Starts
Fuel Prices
Fuel Availability
Consumer Sentiment
Wholesale & Retail Credit Availability
Wages & Employment
SUV & Light Truck Sales
Dealer Inventories
Consumer Debt
COVID-19

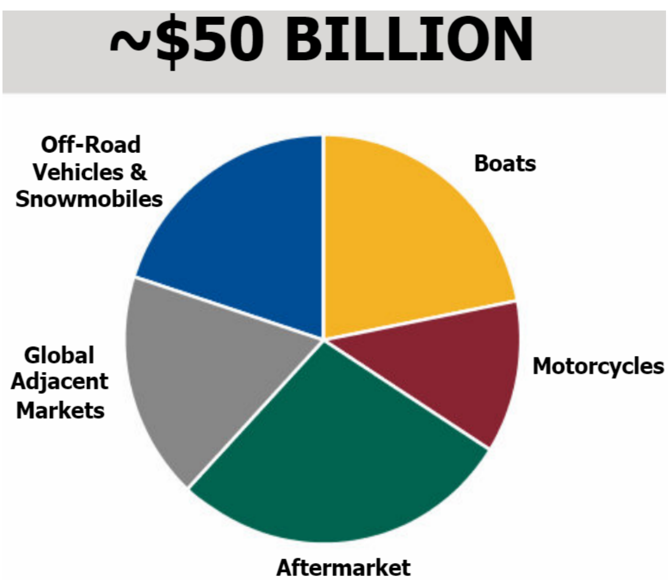

North American Market (units in thousands)
Towables
Motorhomes
2007–2009 CAGR (31.4)%
2009–2019 CAGR 9.4%
353 55 298
237 28 209
166 13 153
242 25 217
253 25 228
286 28 258
321 38 283
357 44 313
374 47 327
431 55 376
505 63 442
484 58 426
406 47 359
2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

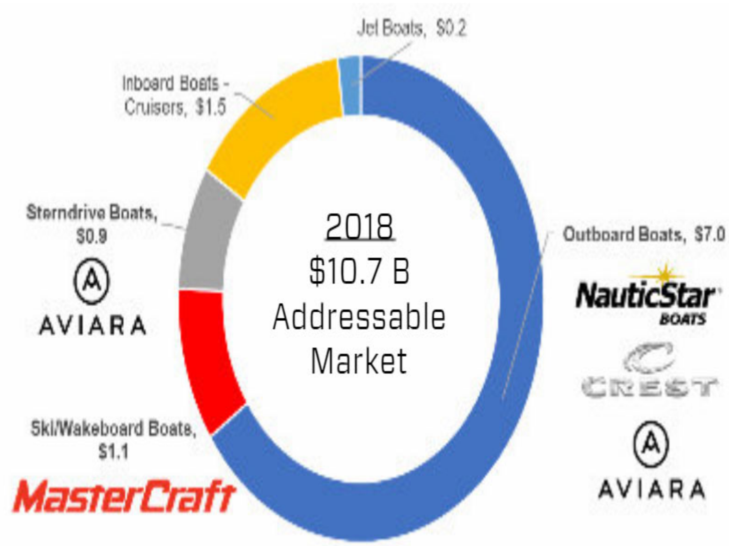

North American Market ($B)
Towables
Motorhomes
5.2 1.6 3.6
8.7 3.3 5.4
9.0 3.2 5.8
10.8 3.7 7.1
13.0 4.9 8.1
15.4 6.0 9.4
16.5 6.8 9.7
17.7 7.0 10.7
20.0 7.6 12.4
20.1 8.1 12.1
2009 2010 2011 2012 2013 2014 2015 2016 2017 2018



Power Sports: Boating, Motorcycle, Off-Road Components: MCFT, MBUU, BC, JOUT, DOOO, MPX, PII, HOG

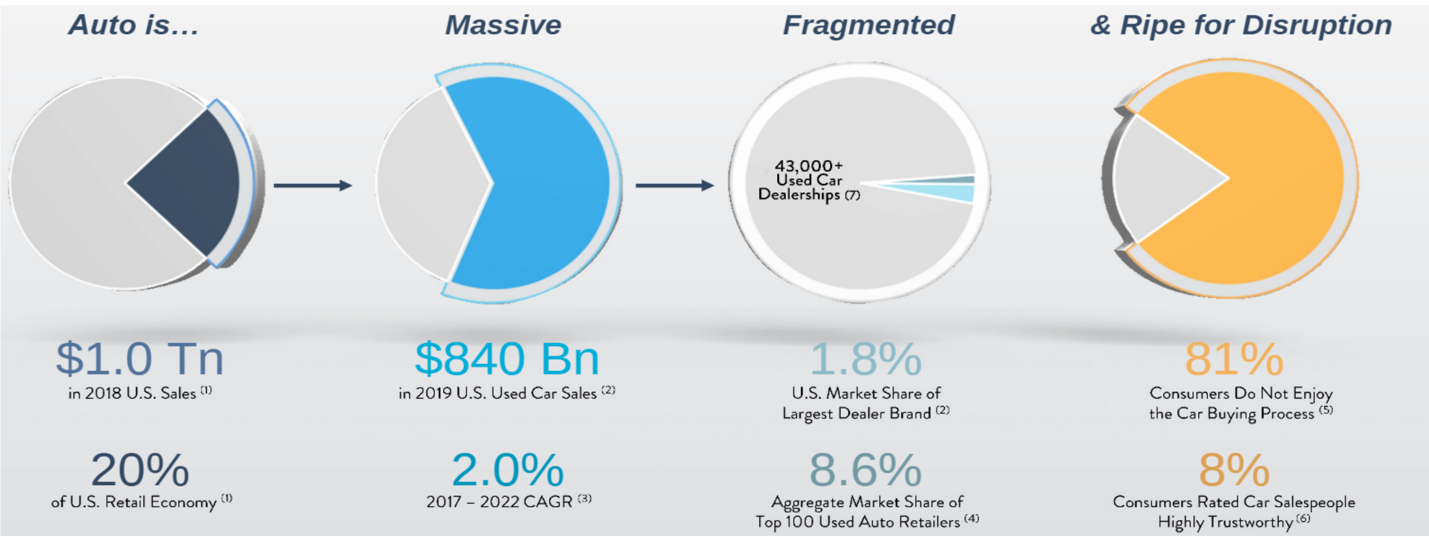
The overall Power Sports market is estimated to reach $50B by 2026 at a 6% CAGR. The US motorcycle market is seen rising to near $11B in 2025 at a 3.7% CAGR with Harley Davidson having ~ 47% market share. The global market is much larger seen rising to $157B by 2026 at a 3.9% CAGR from $116B in 2018. The demand for motorcycles is directly driven by the increasing middle-class population across the globe, which in turn is surging the demand for affordable means of transport, such as motorcycles and scooters. The off-road vehicle market was valued at $19.5B in 2017 and seen rising at a 5.5% CAGR through 2024 to around $23.5B. Rising discretionary spending in conjunction with the improving economic conditions is increasing the participation in outdoor activities, expanding the U.S. off-road vehicle (ORVs) market size. The recreational boating market reached $43B in 2019 and seen growing at a 5% CAGR through 2026 to around $63B. There are several international leaders in this space such as Honda, Suzuki, and Yamaha.



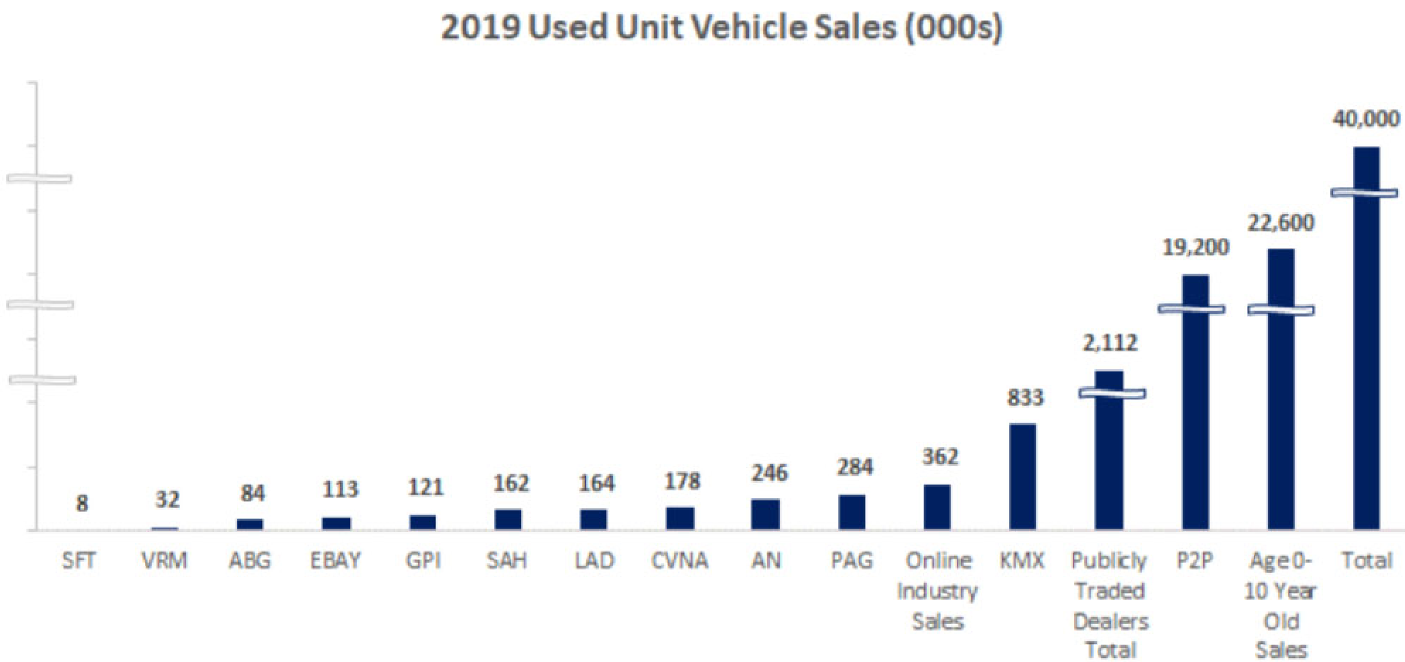


Dealer Components: ABG, AN, CARG, CARS, CPRT, CRMT, CVNA, GPI, IAA, KAR, KMX, LAD, PAG, RBA, RUSHA, SAH, SFT, ATHM, CANG, VRM

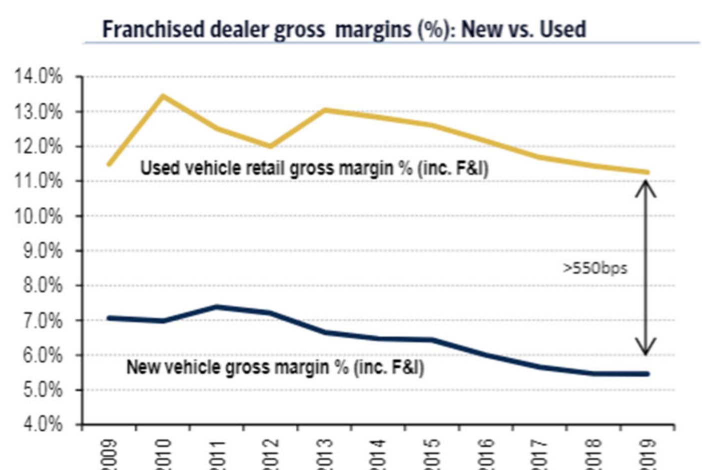
The franchised dealer industry is the largest retail business in the US, with over $1 trillion in annual revenue. The industry is also highly fragmented, with private ownership accounting for 90%+ of the market. However, as large dealers generate higher returns, industry consolidation has occurred over time, with the number of dealers down ~25% from the early 2000s to 2019. The used vehicle retail market in the US is about three times the size of the new vehicle market in unit terms, with an average of 40 million used vehicles sold per year over the last decade, compared to 15 million new vehicles sold per year. The used market is also relatively more stable and less cyclical than the new vehicle market, and even more fragmented, with the top 100 dealers accounting for <10% of total unit sales in 2019. These attractive characteristics help differentiate the used market from new, with average gross margin percentages that are about 2-3x that of new vehicles (average franchised dealer used vehicle gross margin of 11.3% vs. 5.5% for new).



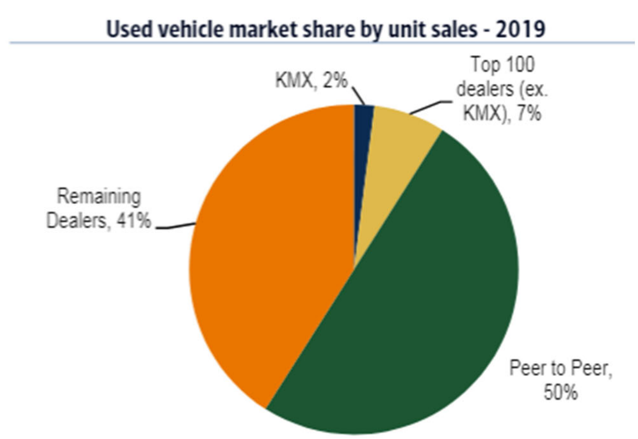
Source: WardsAuto Megadealer 100



The dealer business tends to be cyclical, since its fortunes are tied to auto industry production levels, gasoline prices, the financial health of the consumer, and the state of the domestic economy. Same Store Sales is an important metric for the group, that's because it measures growth at existing showrooms and stores, rather than from newly opened units. Comp trends also provide meaningful insight to future earnings, since most auto-related companies, particularly dealer groups, which operate on slim margins, maintain relatively high fixed-expense bases. Weakness in the new vehicle cycle has caused the companies to think creatively and diversify with collision centers, branded parts, partnerships and expand online. The group has a lot of moving parts with new vehicle sales, used vehicle sales, maintenance and parts. The group also is most properly valued in a unique way, utilizing a "Blue Sky" approach. Blue Sky is the intrinsic value of an automobile dealership, over and above the value of its tangible assets. It is sometimes equated to the goodwill of a car dealership. Blue sky inherently refers to the "intangible" assets of the dealership, which can include such things as location, assembled workforce, and the OEM agreement. The valuation of automobile dealerships can be more complex than other valuations due to their unique financial statements, varying cost structures and profitability of departments, different terminology, and hybrid valuation methods. It is a highly fragmented market with a long runway for value accretive M&A. In evaluating the health of companies, we will look at Debt/EBITDA and Inventory Ratios, while on valuation focus on P/E and EV/Revenues as an overly simplistic, but effective "apples to apples" view. M&A usually translates to operating synergies that strengthen all aspects of dealership operations, they are generally perceived as positive catalysts for dealers stocks, which implies further upside to dealer valuation.

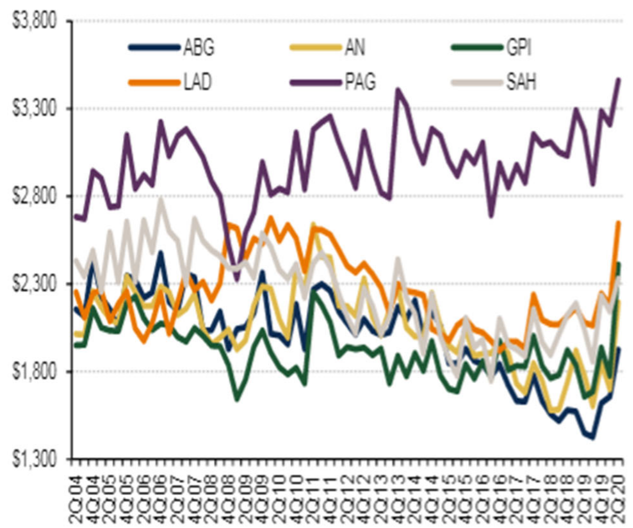


Source: NADA, BofA Global Research



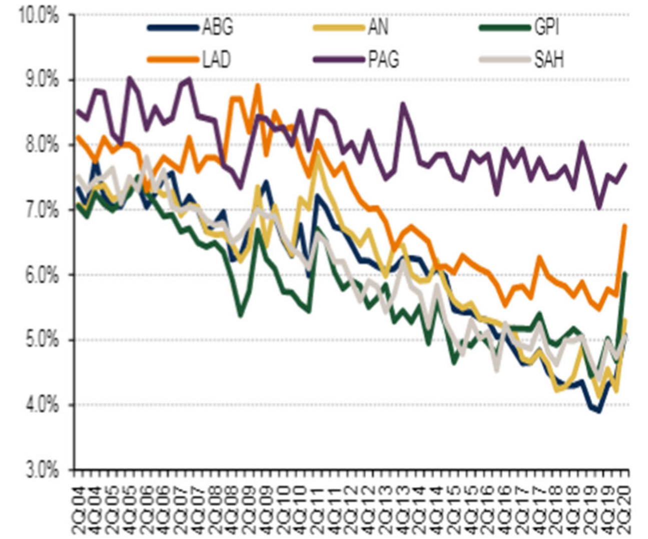
Source: Vroom, BofA Global Research

Public dealers' New vehicle gross profit per unit performance



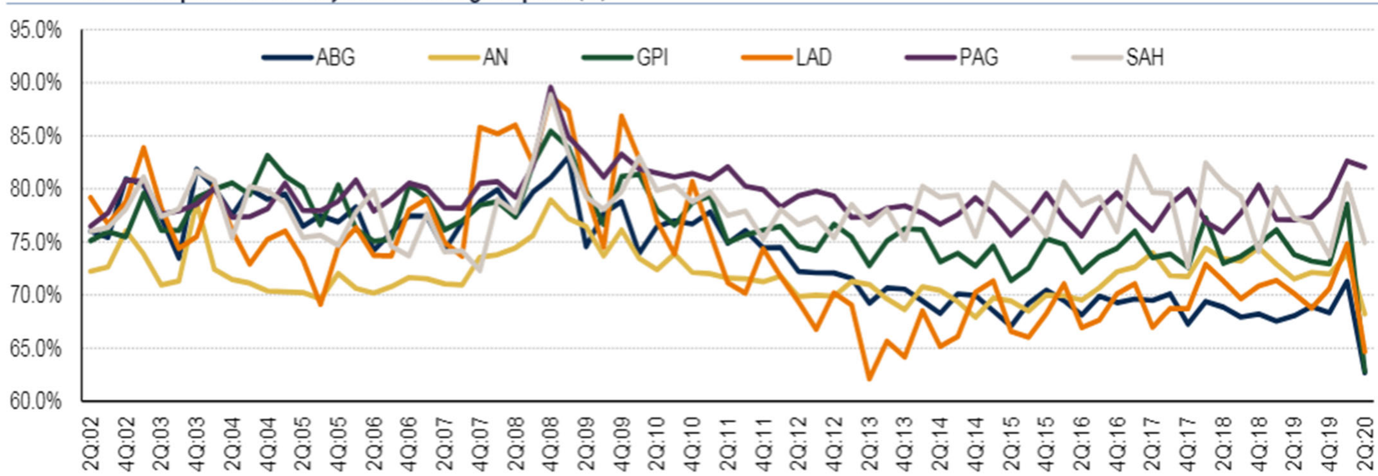
Source: Company filings, BofA Global Research

Public dealers' New vehicle gross margin performance



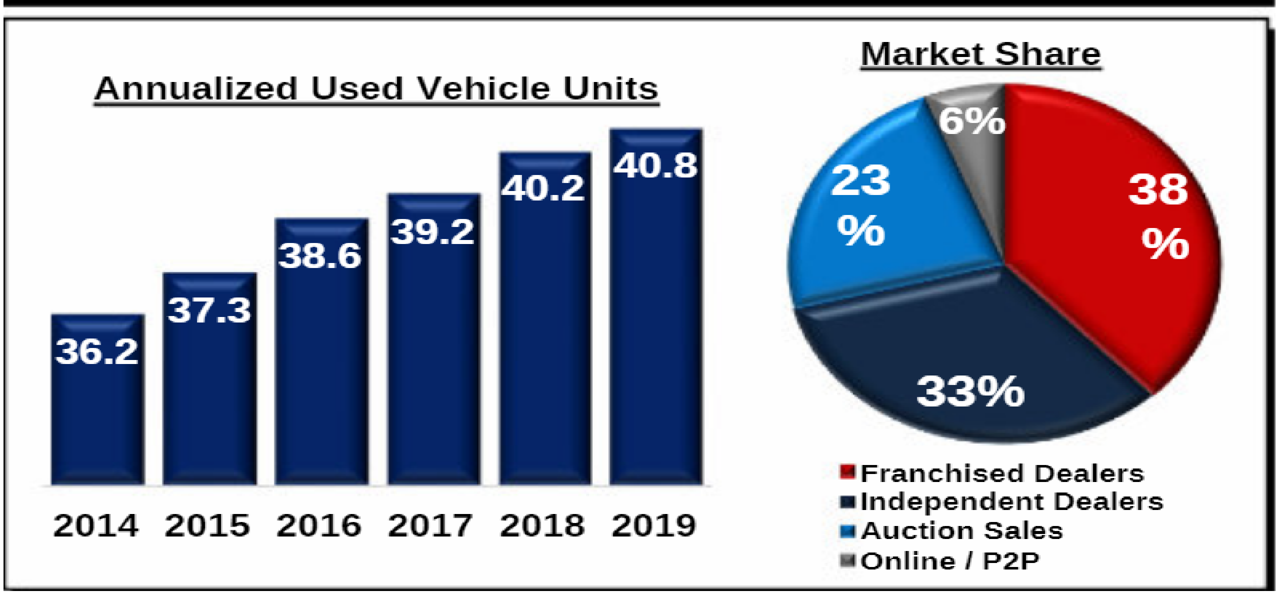
Source: Company filings, BofA Global Research

Historical public dealers' adjusted SG&A to gross profit (%)



Source: Company filings, BofA Global Research

Used Market Size (in millions) [1] & Market Share [2]



Fortunately for the dealers, selling and servicing cars is more consistently profitable than making cars/parts for cars. Dealers are able to respond to cyclical declines in new vehicle sales and broader economic downturns by cutting expenses, such as floorplan financing, advertising, and payroll, as well as leverage the more profitable used vehicle and parts & service verticals, which benefit from late-cycle dynamics. The used vehicle and Parts & Service segments have remained strong in recent years, due mostly to favorable fleet dynamics (peak off-lease volumes and growth in US fleet), and are now becoming even more critical for the dealers as a source of growth and ballast to earnings pressure from falling new vehicle sales/margins. As such, the dealers have placed an increased focus on these businesses, with some of them taking more extreme actions, including standalone used vehicle stores and online retail initiatives. The resounding near-term theme is that the dealer model remains remarkably resilient to fluctuations in the new vehicle sales cycle given its diversified profit mix of new and used vehicles, finance & insurance, parts & services, and other, new strategic initiatives, not to mention extremely flexible cost structure (SG&A >50% variable). In response to the pressure on sales from the COVID-19 pandemic, the dealers responded with a number of cost cutting initiatives, ultimately resulting in leaner, more efficient cost structures. The shift to more online sales could materially change the dynamics of auto retail, allowing dealers to expand their geographic reach on a relatively smaller asset (and labor) base, thereby improving productivity and throughput per store. Ultimately, with more consumers moving their buying habits online, the dealers' digital sales channel should be a key avenue of opportunity as the public dealers' relative scale and national footprint make it easier for them to market vehicles online. Forecasts call for online sales accounting for 20% of transactions in 2030 from just 1% in 2019.

Customer Value Proposition and Business Model Scorecard

	KMX	CVNA	VRM	SFT	AN USA	SAH EchoPark	LAD Driveway	CarLotz
National Inventory Depth	●	◑	◔	◔	◔	◔	◑	◔
Regional Inventory Depth	●	◑	◑	◕	◔	◔	◕	◑
Inventory Breadth	◕	◕	◑	●	◑	◑	◕	◑
Top-Tier Online Merchandising	◕	●	◕	◕	◑	◕	◕	◕
Online Finance Ease and Breadth	◕	●	◕	◕	◕	◕	◕	◕
Free Delivery	✓	✓	✓	✓	✓	X	✓	✓
Free Delivery Range	◑	●	◔	◑	◑	N/A	◑	◑
Delivery Speed	◕	◕	◑	◕	N/A	N/A	N/A	N/A
Test Drive at Store	✓	X	X	X	✓	✓	N/A	✓
Test Drive at Home	✓	X	X	✓	✓	X	✓	✓
Sell Your Car Online without Trade-In	✓	✓	✓	✓	✓	✓	✓	✓
Simple and Transparent Selling Process	●	●	◕	◕	◕	◕	◕	◕
Seamless Transition Online/Phone/Store	●	◕	◕	◕	◕	◕	◕	◕
Current Unit Economics	◕	◑	◑	◔	◑	◑	◑	◕
Potential Unit Economics at Scale	◕	●	◕	●	◕	◑	◕	◕
Low Capital Intensity	◑	◑	◕	◕	◑	◑	◑	●
Total Score (1-10 Scale)	8	7	6	6	5	6	5	6

Management Commentary:

Tesla (TSLA) on margin expansion: " On automotive gross margin, including regulatory credits, it increased materially from 18.7% to 23.7%, with some of our programs achieving greater than 25% gross margin. Keep in mind that inefficiencies related to factory shutdowns affected our margins in Q2. We continue to reduce our manufacturing and operational costs. We are also seeing benefits from the ongoing upward trend of locally built and delivered cars, which has increased from under 50% at the beginning of last year to over 70% most recently, which is a core component of our cost reduction strategy. We are also seeing financial benefits from improved vehicle reliability across the fleet."

General Motors (GM) on its EV future: "Since then, you've watched us do everything it takes to capitalize on the enormous EV market opportunity ahead. We are leveraging our iconic brands, technological innovations, design, engineering and manufacturing expertise and our scale in a way that is changing how customers and investors view our company. The all-electric future we are building at General Motors integrates all things we do best, so we can put everyone in an EV, generate profitable growth and create shareholder value. We are pivoting to a growth strategy and a zero emissions future from a position of strength. The drivers behind our profitable ICE business translate to EVs and will help us build on our momentum and grow profitably. Along with our dedicated EV organization, our integrated strategy is a competitive advantage for GM. Given our scale, we'll realize $2 billion in cost efficiencies alone in shared engineering, manufacturing, marketing and corporate cost. "

Aptiv (APTV) on high-voltage growth: "We'll have about $500 million in high-voltage revenue this year. That's growing at a 40% CAGR this year, and we expect that to continue through 2022. So we've got some fairly significant growth assumptions in there around high voltage. Certainly seeing positive opportunities, and again, the potential for this to continue. Content can average anywhere from 2 to 3x over an internal combustion engine. And one of the things for Aptiv that's important to know is we have very little decremental content as you move from internal combustion engine to a -- to either a hybrid or a full BEV, meaning we lose very little content. There's usually somewhere around $150 of -- on average, content around electrification or basically the electrical distribution system that connects to the internal combustion engine. That goes away, obviously, as you get to full BEV, but it's more than made up for -- with the additional content. High-voltage product line as a system is also a more margin-rich system, just given that it tends to have a significantly more connector content than a typical low voltage system. A low voltage system would be sort of 70% cabling, 30% connector, a high-voltage system is 50-50. So we wind up about -- with a stronger margin mix there."

LKQ Corp. (LKQ) on collision market: "Now in North America, from a long-term planning perspective, the key dynamic really revolved around ADAS technology and how it would impact our collision business in the long term. And our analysis confirms that, despite the growth in ADAS, the collision market tailwinds will continue to outweigh the collision market headwinds for years to come. Now on the tailwind side of the equation, we have a lot going for us. We have a moderately increasing car park, continued parts proliferation because of vehicle complexity, parts inflation as well as an increasing mix of high-value, higher-tech parts moving through the park. Taken together, parts inflation and parts proliferation will ensure that the parts cost per repairable claim will continue to climb over the next decade. There's also a number of other factors, things such as increases in distracted driving and the propensity of consumers that disable their ADAS technology on their vehicles, that are harder to quantify."

Brunswick (BC) on Boat inventories: "Our premium boat brands remain market leaders in their categories and our value brands offered attractive entry points to new and returning former boaters. The surge in retail demand resulted in historically low pipeline inventory levels with only 14 weeks of inventory on hand or 48% fewer boats in dealer inventory at the end of the third quarter 2020 versus the end of the third quarter 2019. As a result, most of our brands have all production slots sold through the 2021 model year, and our Sea Ray and Boston Whaler brands have production slots sold out into the 2022 model year. Freedom Boat Club continues to outperform our expectations as evidenced by its growth to 244 locations and almost 36,500 memberships company-wide, with over 3,000 new memberships added in the third quarter alone."

Polaris (PII) on Zero Motorcycles: "I have probably opined enough on the partnership with Zero Motorcycles, but knowing the product plans and the opportunity we have to both disrupt the industry and earn our next $1 billion in electric vehicle sales significantly more quickly and enjoyably than the first, it is worth highlighting again this morning."

CarMax (KMX) on its omnichannel rollout: "The powerful integration of our online and in person experiences give us the largest addressable market within the used car industry. Along with the ability to buy online, customers are also seeking experienced guidance along the way. We are uniquely capable of providing this help whenever and wherever the customers want with our centralized CECs, experienced floor sales consultants and personalized e-commerce capabilities.

Buying a used car is still a highly considered and complex purchase. Customers don't want to be forced to interact 100% in-store or 100% online. Our competitive advantage is giving customers the option to seamlessly do as much or as little online and in-person as they want. While omni is now rolled out nationwide, it is still early in its evolution, and we will continue to make enhancements to meet and exceed our customers' current and future needs."

Copart (CPRT) on accidence frequency business drier: "As for the other important drivers of our business, accident frequency, conventional wisdom has held that accident frequency is positively correlated with miles driven because congestion contributes to accident frequency. During the pandemic, we continue to see evidence that in some scenarios anyway, the opposite is true. One industry source has indicated substantial double-digit increases in speeding, phone usage and hard breaking. With our roads less crowded, speeding and distracted driving have both increased, contributing to increased accident frequency per miles driven. And then, of course, on total loss frequency and accident severity, which we have emphasized as the most important long-term driver of our business, the long-term trend of rising total loss frequency has very much continued during the pandemic. There are some indications that it may have accelerated during the pandemic, in part due to the high returns we are generating at auction."

Carvana (CVNA) on TAM: "And I think maybe, lastly, thinking about the TAM, this is an interesting market where it is usually, in most cases, a market defined by production and then consumption of that output. This market is -- there's 270-million-plus vehicles in the U.S. economy. And based on the average ownership cycle, which is about 6 to 7 years, people are transacting, that creates that 40 million used vehicles. So if people have a lower cost of ownership, faster time-to-build positive equity,and lower switching costs in terms of time, money and frustration, I think there's lots of signs that people would transact on a faster basis. And you have the opportunity to have x percent of customers but 1.2, 1.3, 1.5x transactions."

OptionsHawk Executive Summary and Top Picks

The automotive group has seen strong performances in 2020 after a sharp slowdown in 1H20 has seen the start of a strong recovery in 2H20. Clearly the major theme here is the push to Electric Vehicles (EV) where penetration remains in the early stages and has a 10+ year strong growth outlook. **Tesla (TSLA)** remains the clear leader and already hitting key inflection points on profitability making it my favored EV play to the Chinese names while also having ample growth opportunities in batteries and autonomous. It was a top pick for 2020 and much of the consensus still cannot comprehend the growth opportunity and its brand supremacy. **Ferrari (RACE)** has long been my top Auto play with its margin leadership and strong FCF, and it remains attractive across all metrics though at a premium valuation. **GM (GM)** is the value play with upside optionality in EV and likely to emerge as a serious winner and change the growth profile of the company, and therefore re-rate its multiple.

In automotive parts the key is to be exposed to the stronger trends in auto with vehicle content gains and prefer names with a tech-focused approach. **Aptiv (APTV)** remains a clear favorite and carries an elevated valuation for its tech focus in safety and positioning in EV. In the next tier off market caps **Borg Warner (BWA)** stands out with strong FCF, high ROIC, sustained growth through a tough cycle, and less margin contraction. **Gentex (GNTX)** is an attractive margin leader entering growth inflection positioned for digital content opportunities with its key opportunities and seeing increased penetration rates and carries a premium multiple. There are several small cap growth plays with **Fox Factory (FOXF)** and **XPEL (XPEL)** two long time favorites that continue to execute well. **Allison (ALSN)** is a well-run leader in automatic transmissions with industry leading margins, ROIC and FCF. **LCI Industries (LCII)** a high-quality niche play as a supplier to the RV industry, so likely faces tough comps in 2021. **Cooper Tires (CTB)** a pure value name at 5X EBITDA with healthy financials. **Gentherm (THRM)** a strong FCF/ROIC/Margin combination with leadership in climate-control seating also screen attractive to peers.

In commercial vehicles **Cummins (CMI)** is the best-in-class name though exposure across other industrial verticals. Two small caps, **Federal Signal (FSS)** and **Shyft (SHYF)** also stand out as winners in this group, the former a leader in last-mile delivery and walk-in vans is a good play on ecommerce strength.

In Recreational Vehicles and Power Sports, for the latter **Brunswick (BC)** the preferred name trading cheap with high margins to peers, an impressive ROIC near 20% and solid balance sheet. **BRP (DOOO)** is a more speculative but high growth small cap and **Malibu Boats (MBUU)** my top small cap. In RV's I favor **Winnebago (WGO)** as the top operator. RVIA estimates total North American shipments in 2021 will likely be 507,200 units, a 19.5% increase over the likely estimated unit shipments for 2020. This figure would represent the best annual total on measurable record for the RV industry, eclipsing the 504,600 units shipped in 2017. Towable RV shipments are anticipated to reach 452,500 units in

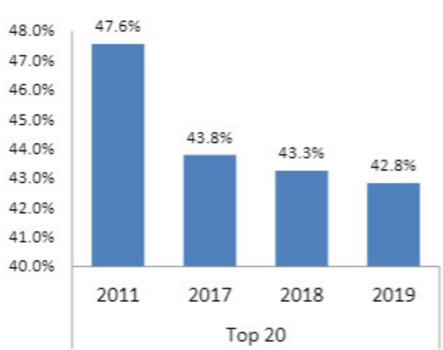
2021, a 17.9% increase over anticipated 2020 shipments. Motorhome shipments are projected to finish at 54,700 units in 2021, a 35.1% increase over anticipated 2020 shipments.

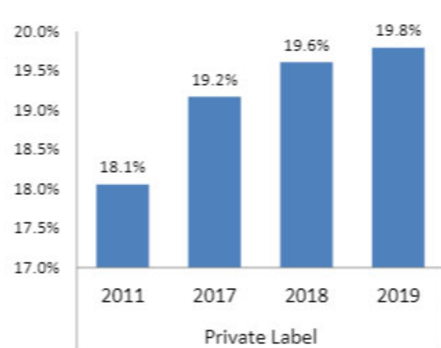
The dealer group remains extremely attractive from a business fundamentals perspective and is entering a new era of profitability while also embarking on strong growth initiatives organically and via M&A. **Carvana (CVNA)** is a clear growth leader in a disruptive trend in a massive industry and despite sky-high valuation it should continue to thrive. **Copart (CPRT)** is a fantastic high margin, high ROIC business that carries a premium multiple but remains favored with impressive margin expansion. **Autohome (ATHM)** does not receive enough attention for its impressive position in the Chinese market. **Richie Brothers (RBA)** has grown into a $7B market cap and remains one of my favorite names in the market with its digital strength and large opportunity in used equipment. **Lithia (LAD)** remains the preferred own in the more traditional fragmented dealership business and also has optionality with its Driveway launch. **America's Car-Mart (CRMT)** is the small cap favorite here at attractive valuation.

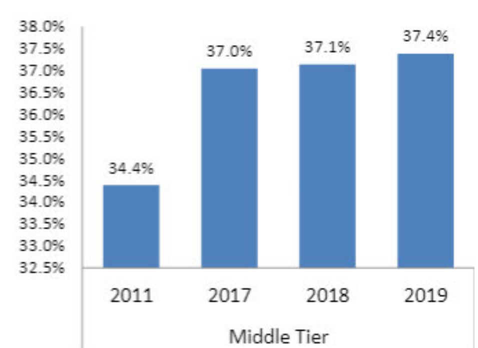
Food, Beverage, & Cigarettes

Staples 'real' retail sales value growth in USD (2018-23E)

Source: Jefferies, Euromonitor



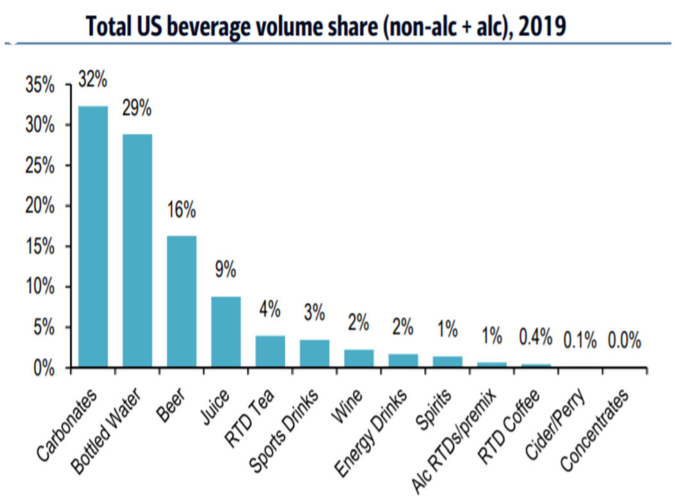




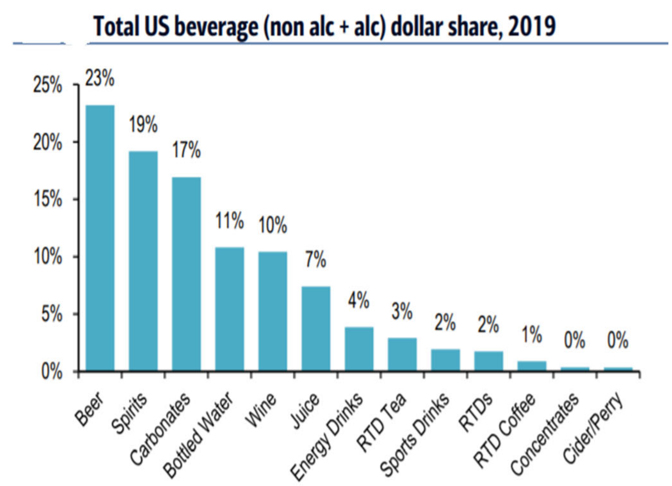
Beverage Components: Alcoholic: BFB, BUD, CCU, DEO, SAM, STZ, TAP. Non-Alcoholic: CCEP, FIZZ, FMX, KDP, KO, MNST, PEP, PRMW, CELH

We initially break this group down into the Brewer/Spirits names and the non-alcoholic beverage names. Recently there has been some crossover with alcoholic beverage names moving into non-alcoholic and vice-versa.

The Non-Alcoholic Beverages industry produces and bottles a range of beverages, including carbonated soft drinks, teas, juices, bottled water, and coffee. Large companies in this industry operate globally and generate a significant amount of their revenue outside the U.S. In the U.S, ready-to-drink tea and juice production generates more than $21B in annual revenue, followed by soft drinks, with $20.4B; at-home coffee production, with $11.1B; and bottled water, with more than $8.5B. The primary buyers of various juice and soft drink beverages are grocery stores, convenience stores and gas stations, and vending machine operators. The global soft drink segment is largely concentrated; the top U.S.-headquartered companies, the Coca-Cola Company, Pepsi Co., and Dr Pepper Snapple Group, maintain around 48, 20, and 4 percent of the industry market share, respectively. The purchase of raw materials represents the single largest expense for non-alcoholic beverage companies. For example, soft drink manufacturers spend 62.6 percent of their revenue on purchasing raw materials like sugar, high fructose corn syrup, flavorings, and packaging. In terms of packaging, rigid place (especially PET) are the top choice in beverage packing for sports drinks (100%), bottled water (93%), RTD tea (64%), and juice (54%), while metal packaging is the top choice for carbonates/sparkling (65%) and Energy (99%). Glass is the top pick for RTD coffee (58%). In hot drinks, flexible packaging is top for hot coffee (44%), and paperboard for hot tea (89%) and other hot drinks (11%).



Source: Euromonitor, all channels



Source: Euromonitor, all channels

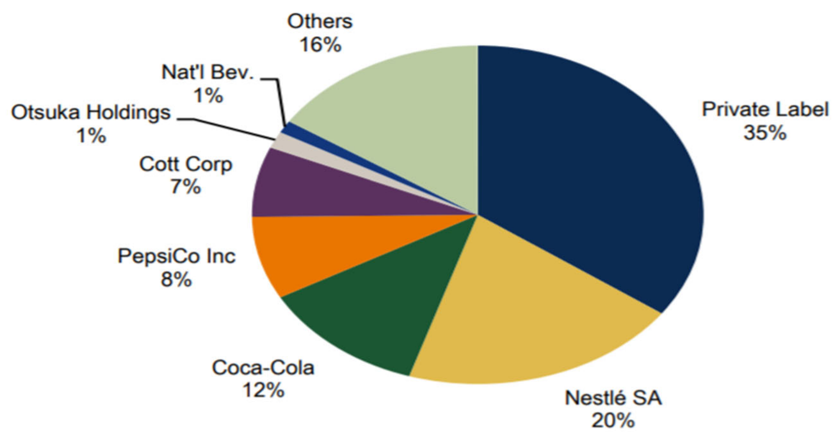
Total volume	2015	2016	2017	2018	2019	CAGR	Total $	2015	2016	2017	2018	2019	CAGR
Alcoholic Drinks	1.1%	0.1%	-0.2%	-0.2%	0.8%	0.3%	Alcoholic Drinks	3.0%	3.1%	2.4%	3.1%	3.8%	3.1%
Beer	0.8%	-0.5%	-0.7%	-1.2%	-0.7%	-0.5%	Beer	2.4%	1.2%	0.9%	0.6%	1.0%	1.2%
Cider	9.4%	-7.7%	-5.4%	8.7%	-5.5%	-0.4%	Cider	9.4%	-2.7%	-2.5%	10.2%	-4.4%	1.8%
RTD alc (incl seltzers)	-0.8%	5.3%	2.6%	15.7%	34.1%	10.7%	RTD alc (incl seltzers)	-0.1%	4.0%	1.1%	11.3%	24.7%	7.8%
Spirits	2.2%	2.7%	2.6%	2.0%	2.7%	2.5%	Spirits	3.4%	5.3%	5.2%	6.5%	6.9%	5.4%
Wine	1.9%	2.4%	1.1%	0.7%	0.7%	1.4%	Wine	3.8%	4.3%	1.9%	1.9%	2.2%	2.8%
LRBs	2.2%	2.0%	1.0%	1.2%	1.2%	1.5%	LRBs	3.9%	2.5%	1.7%	2.5%	2.9%	2.7%
Bottled water	8.0%	6.4%	4.9%	3.7%	3.6%	5.3%	Bottled water	8.5%	6.0%	3.5%	4.3%	3.9%	5.2%
Carbonates	-1.4%	-0.7%	-0.6%	-0.8%	-0.8%	-0.9%	Carbonates	1.1%	0.8%	1.4%	1.8%	2.0%	1.4%
Concentrates							Concentrates						
Juice	-2.8%	-1.8%	-2.8%	-1.5%	-2.3%	-2.2%	Juice	0.2%	-0.1%	-1.3%	-1.3%	0.2%	-0.5%
RTD coffee	15.4%	13.3%	8.4%	7.8%	8.7%	10.7%	RTD coffee	19.2%	12.1%	11.5%	8.9%	10.0%	12.3%
RTD tea	6.4%	4.7%	2.4%	1.5%	0.9%	3.2%	RTD tea	9.0%	6.7%	4.7%	3.3%	2.7%	5.3%
Energy drinks	7.6%	2.3%	3.7%	7.3%	7.8%	5.7%	Energy drinks	8.0%	2.2%	3.4%	6.7%	7.8%	5.6%
Sports drinks	6.0%	3.7%	-5.1%	1.8%	3.8%	1.9%	Sports drinks	7.5%	4.9%	-3.5%	3.6%	5.8%	3.6%

Source: Euromonitor

Financial analysis of the Non-Alcoholic Beverages industry focuses on volumes of product sold, operating margins, and projected growth in volume.

In 2019, retail dollars reached $454.5B, +3.4%. US LRBs (liquid refreshment beverages or non-alcoholic beverages) volume expanded +1.1%, with stronger growth for take home (+1.3%) than foodservice (+0.8%). In value terms, RTD coffee (+10.0%), Energy Drinks (+7.8%), and Sports Drinks (+5.0%) posted the strongest YoY value gains. Carbonated drinks were +2.0% underscoring the continued stabilization in that segment.

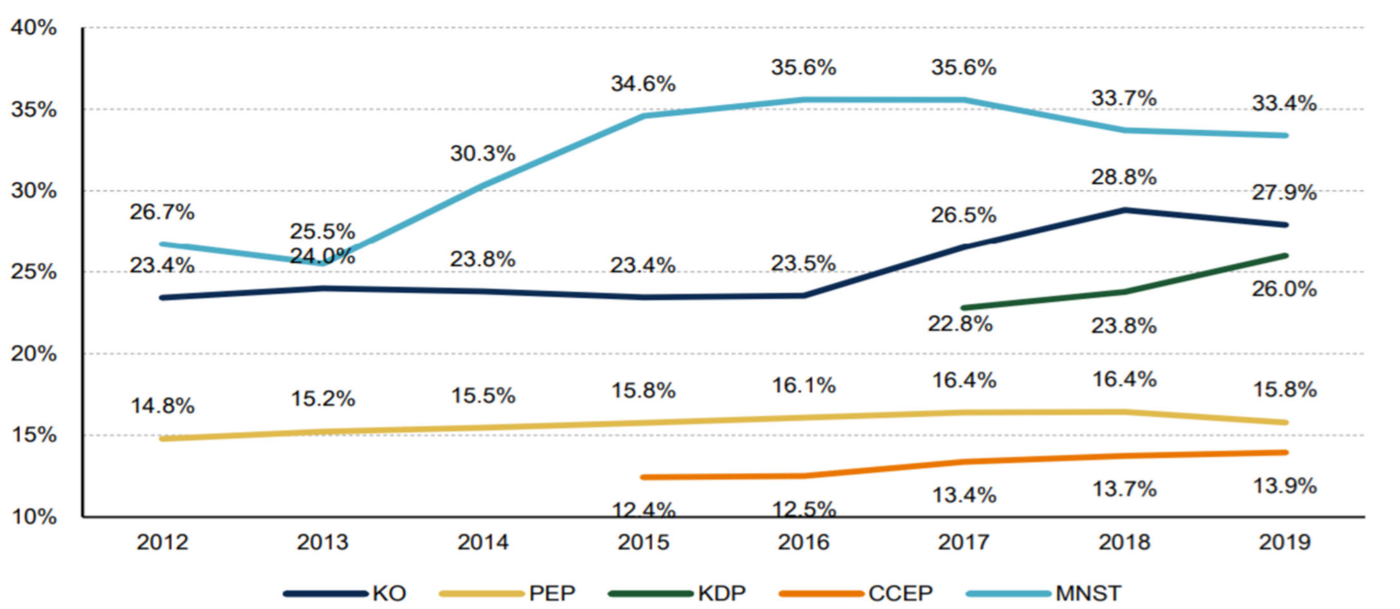
Top bottled water manufacturers (volume share) in combined take-home and foodservice (2019)



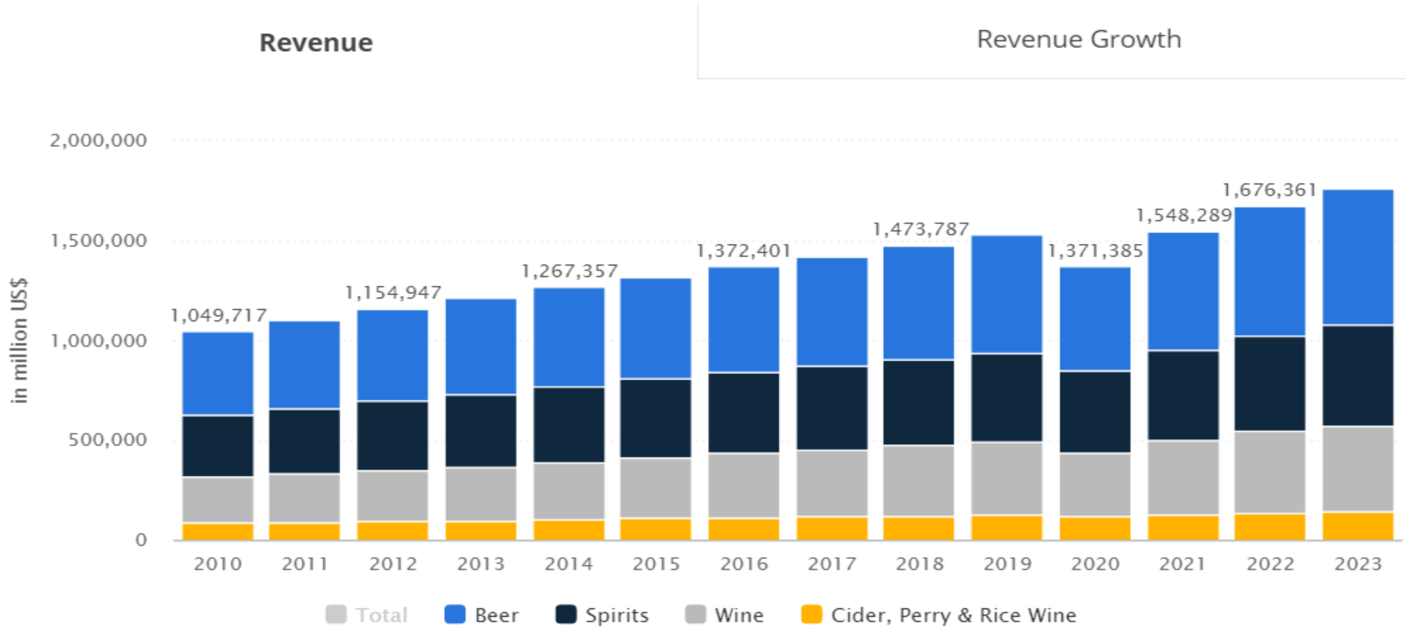
Source: Euromonitor

Ongoing trends include consumers trending towards healthier choices with low-sugar and low-calorie offerings while caffeine demand continues to rise. Soft drink makers have also been diversifying portfolios into higher growth segments such as alternative water and energy drinks. As with the recent of the consumer goods industry, private labels are also taking market share across beverage segments. M&A has seen some tuck-in deals, most notably with Pepsi buying Rockstar Energy for $3.85B.

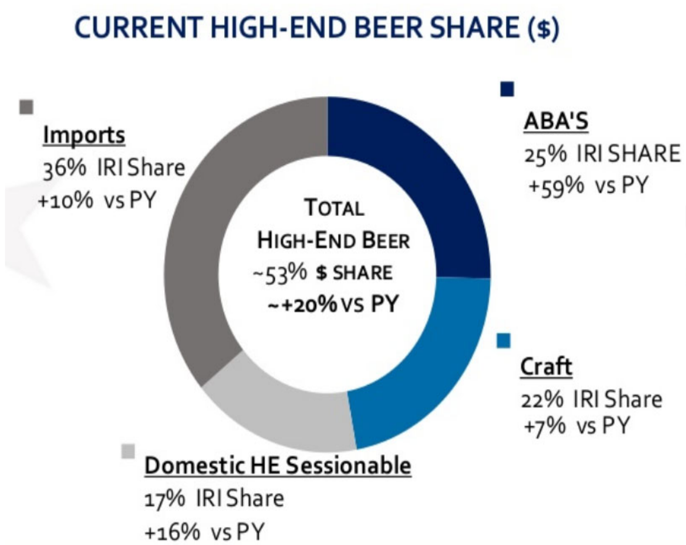
Underlying op. margin trends %

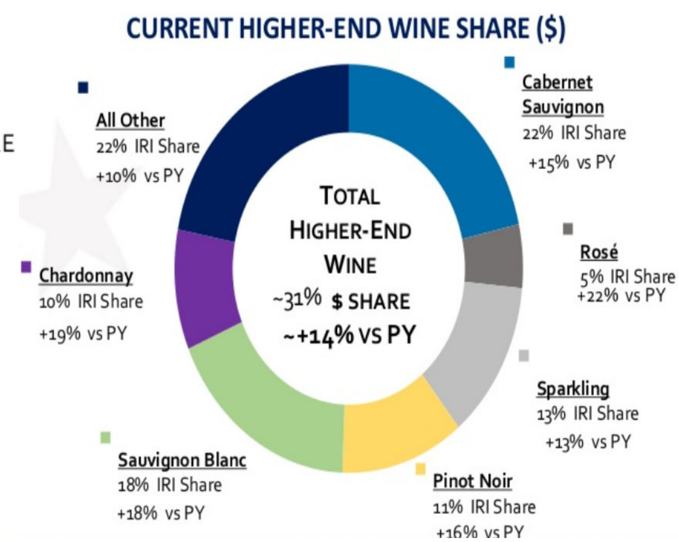


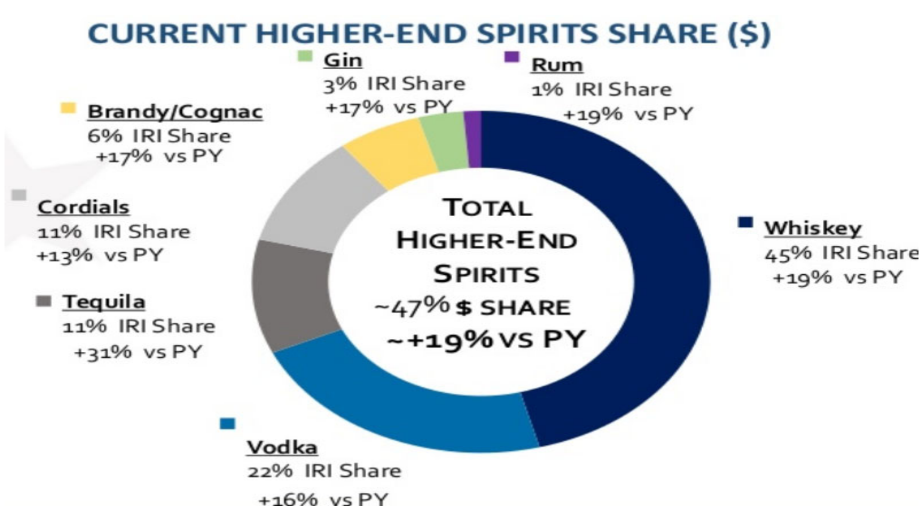
The global alcoholic-beverages market is expected to grow from $515.2 billion in 2019 to $528.5 billion in 2020 at a compound annual growth rate (CAGR) of 2.6%. The Alcoholic Drinks market has witnessed a secular decline in volume sales in developed markets while demand in emerging markets is still growing and Asia a big driver of the growth.



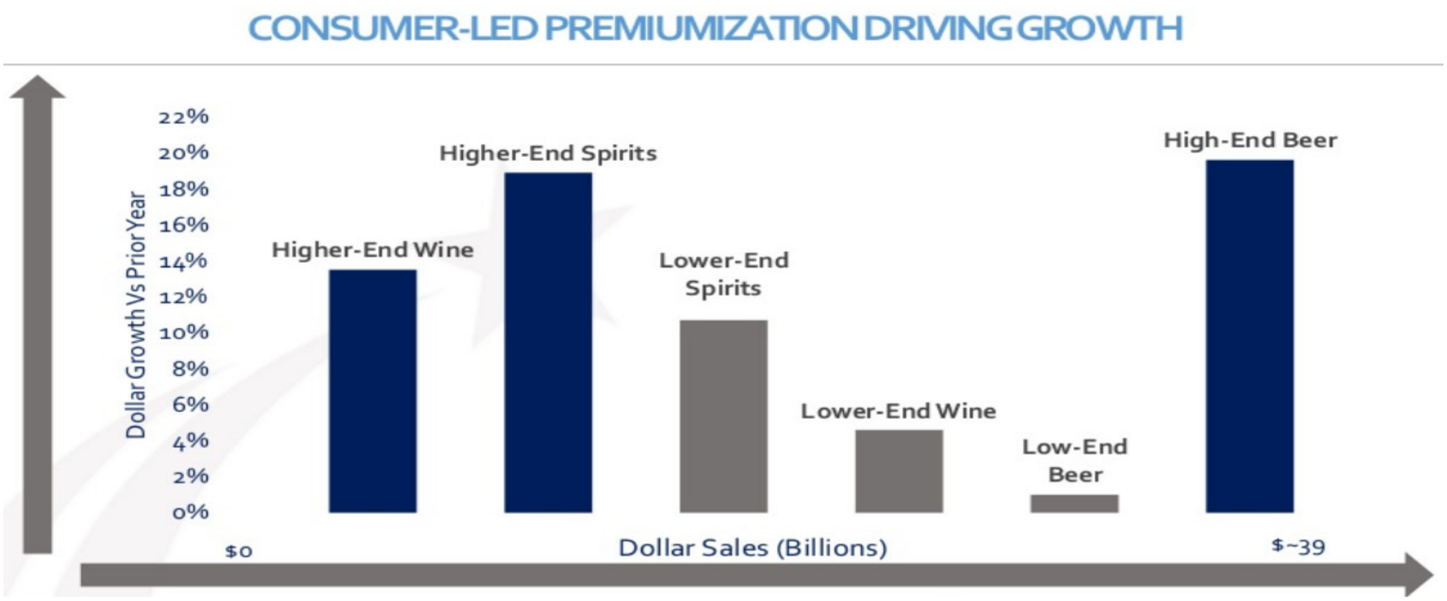
Alcohol is responsible for 16.5% of total beverage volume. The alcoholic beverage market is over 80% attributed to malt beverages with wine and spirits products splitting the remaining 20%. Distilled spirits make up around 7% of the sales of alcoholic beverages. The largest sub-category of spirits is vodka with 34% of cases sold, followed by whiskey with 24% and miscellaneous specialty spirits at 12%. Wines make up around 11% of the alcoholic beverage market.







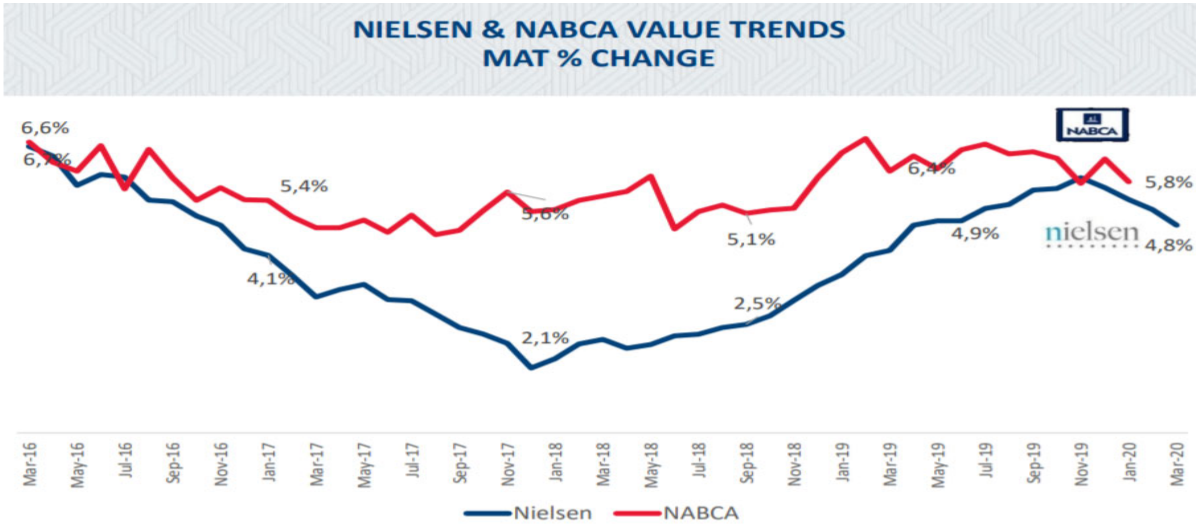
The growing demand for premium alcoholic beverages is one of the primary drivers for this market. Efforts by alcoholic beverage manufacturers for strengthening distribution channels and extension of purchase channels, such as online stores, and convenience stores, is also contributing substantially to the growth of the global alcoholic beverages market. Hard Seltzer has been the hot product in 2020 that has been a major growth contributor. Hard seltzer retail sales between 2018 and 2019 tripled in size and were equivalent to 4.2% of total beer retail sales in 2019. In addition, throughout the past three years White Claw continued to dominate the hard seltzer category as it reached 58% of total hard seltzer retail sales in 2019. With 80% of the hard seltzer market share held by Mark Anthony and Boston Beer (SAM), the big three US beer companies (ABI, TAP and STZ) need to move fast into this segment of the beer category to shore up market share. Over the last 15 years, brands in higher price tiers have consistently grown volume faster than those in lower price tiers. Consumers are buying a broader range of premium products, including no- and lower-alcohol drinks, that reflect their diet and lifestyle choices and their interest in natural ingredients and craft production. Consumers who drink alcohol are increasingly choosing spirits over beer and wine. This is a long-term trend. In markets where spirits is a less mature category, mainstream spirits brands can offer quality and affordability. In more mature markets, premium core and Reserve brands offer choice and new experiences. When it comes to beverage alcohol, consumers are 'drinking better, not more' – increasingly choosing brands and categories that stand out for superior quality, authenticity and taste. This premiumization trend is supported by product innovation and fueled by higher levels of prosperity and disposable income, coupled with a greater desire to explore new experiences, ingredients and serves for social occasions. Sales channels are another important aspect as out-of-home channels were hit hard from lockdowns and unlikely to see a full recovery in that channel for a few years while a growth opportunity exists in online sales and delivery. Online shopping for alcohol is still low compared to other retail categories, but it is a fast-growing channel. Consumers are increasingly using the internet to discover and learn about brands and products, where previously they might have done so in venues and while out socializing.



There are several large foreign plays to monitor in this group such as Diageo, Heineken, Pernod Ricard, Carlsberg, Remy Cointreau and Royal Unibrew.

	Shr of mkt	Aug vols	YTD vols	TTM vols
Diageo	14.9%	0.8%	5.2%	3.9%
Sazerac company	10.9%	-0.6%	5.6%	6.5%
Beam Suntory	10.1%	-3.4%	1.9%	1.2%
Heaven Hill	9.1%	-4.9%	2.4%	2.0%
Pernod Ricard USA	5.9%	5.3%	5.9%	4.0%
Bacardi USA	5.8%	7.9%	8.3%	5.8%
Fifth Generation Inc	4.8%	4.8%	15.7%	16.7%
Brown Forman	4.5%	-1.2%	5.4%	5.4%
Sazerac North America	4.4%	-6.0%	-1.1%	1.0%
Proximo Spirits	4.1%	14.9%	25.7%	20.8%
Constellation Brands	2.3%	-7.8%	4.7%	4.9%
CATEGORY		**1.8%**	**6.9%**	**5.9%**

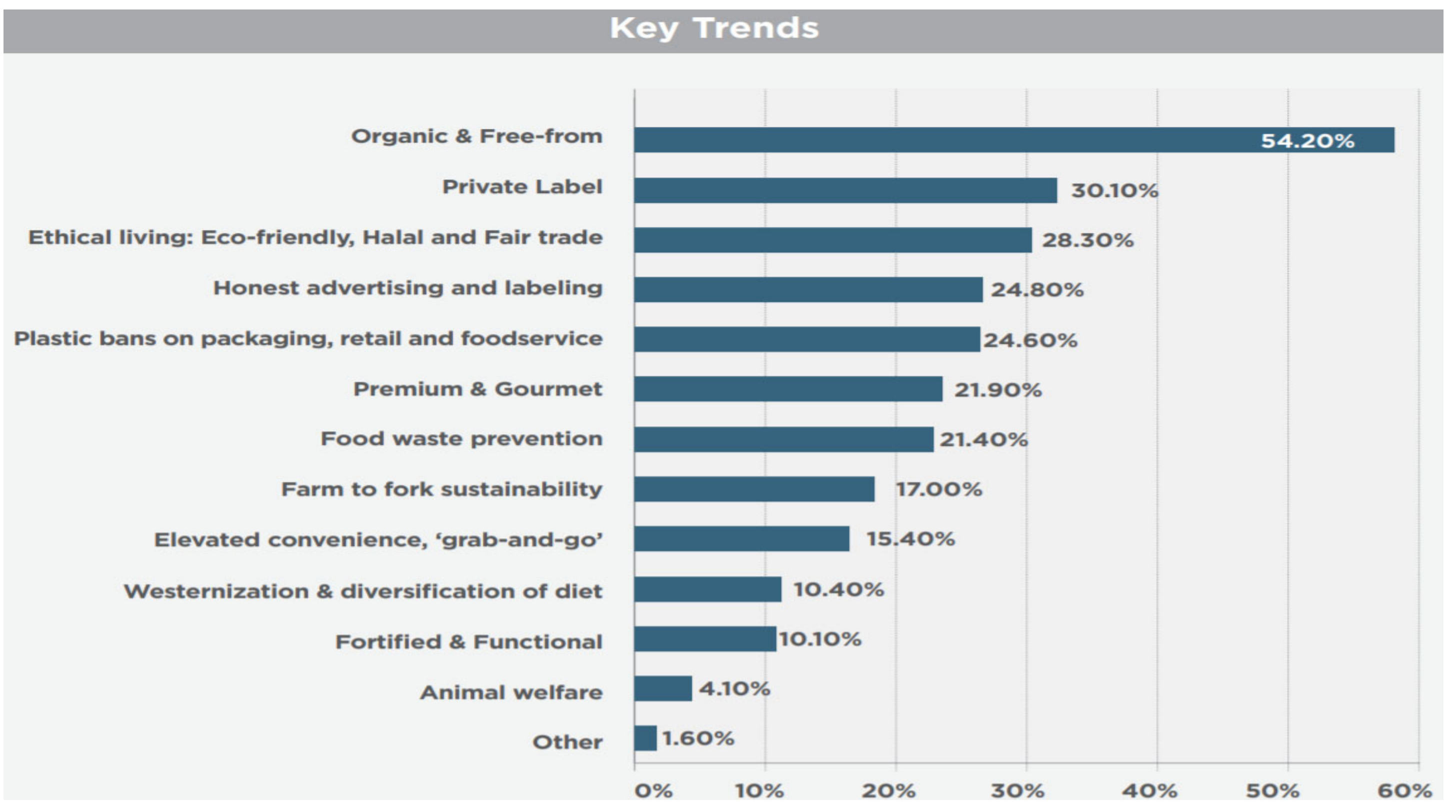
Source: NABCA (reported volumes)

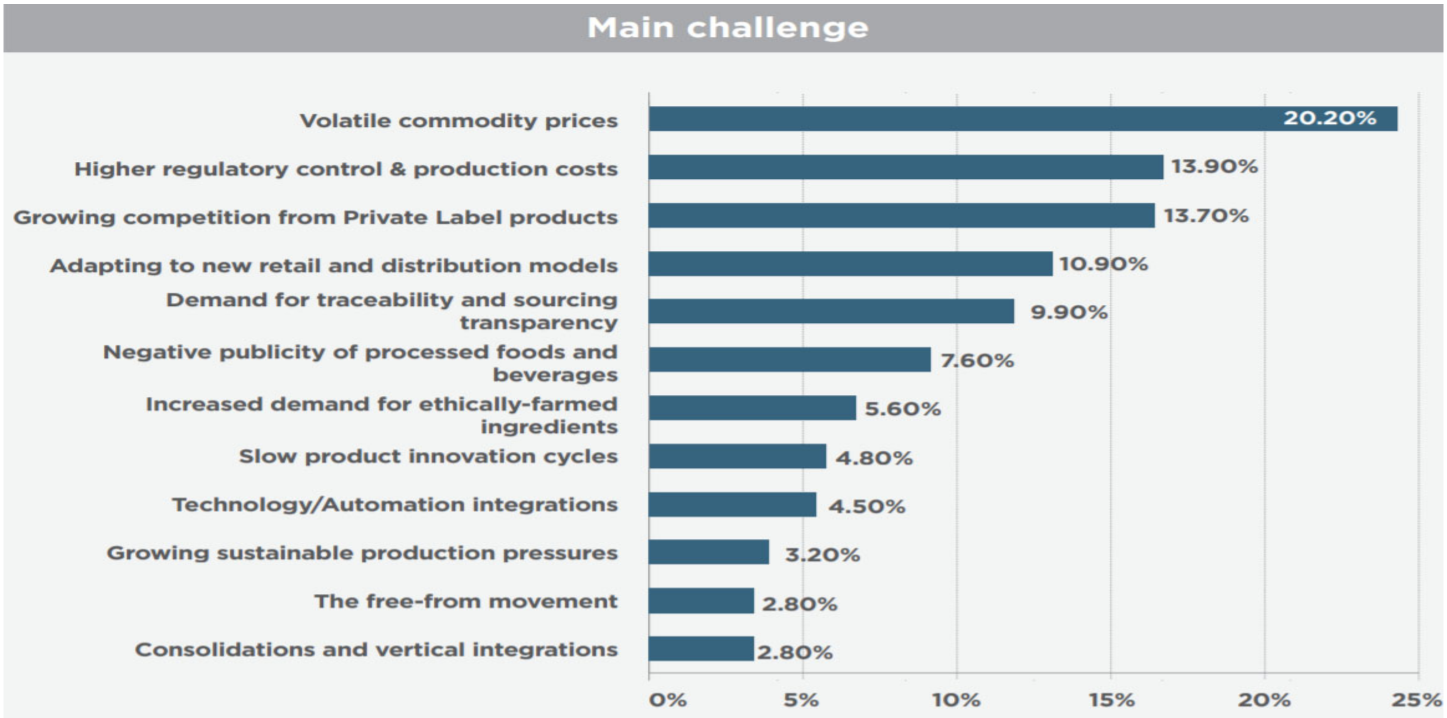


Food Components: BGS, FRPT, BYND, TTCF, CAG, CPB, GIS, HAIN, HRL, INGR, K, KHC, LANC, LW, MKC, NOMD, POST, SJM, SMPL, THS, UNFI, FLO, HSY, MDLZ, TR, TWNK, FARM, BRBR, JJSF, UTZ, STKL, SENEA, LSF

Overall retail value of food and beverage sales across the world in 2018 reached $2.43 trillion, up from $2.27 trillion in 2013. Based on an expected forecast CAGR of 2.1%, the industry is projected to reach $2.73 trillion in 2023. Confectionery, Snacks & Ready-to-eat is among the largest categories within Packaged Food, reaching a global market size of $548.8 billion in 2018, with a CAGR of 1.5% for the 2013 to 2018 period. It is expected to reach $601.3 billion by 2023, with a CAGR of 2.4% over 2018 to 2023. Biscuits is a $99B market, Chocolate $107B, Candy $63B and Gum $21B.

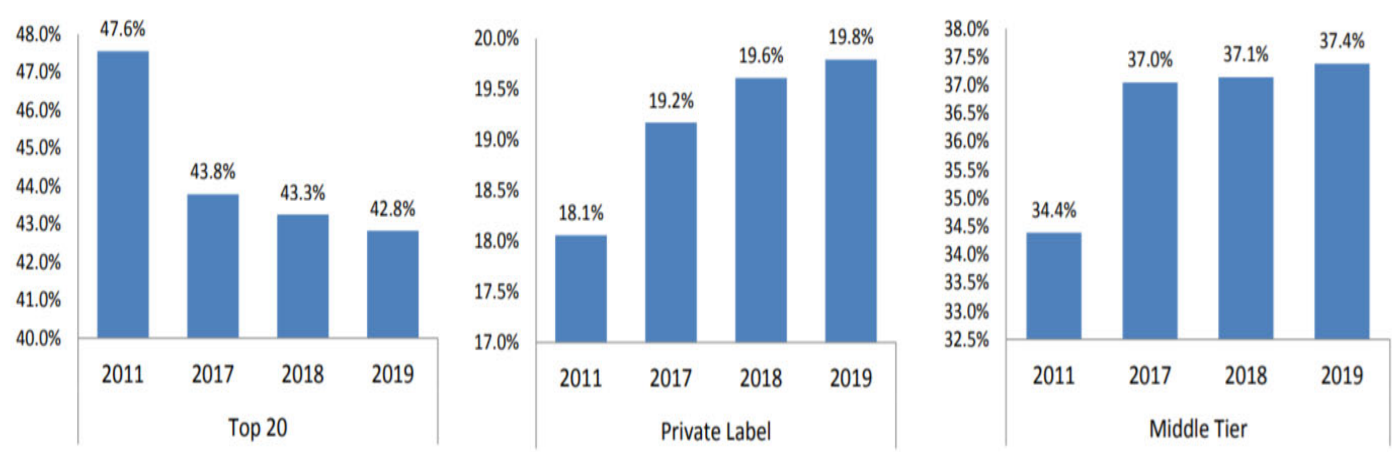
The food industry can be broken down into Snacks, Confectionary & Ready to Eat, Grains & Cereals, Premium/Gourmet, Ingredients, Meat & Poultry, Dairy, Seafood, and Fats/Oils though many of the larger companies have exposure to multiple categories. While brick & mortar grocery retailers continue to be the primary channel for packaged food sales, there has been an immersion of e-commerce players penetrating the F&B market. Online retailing is set to be the most dynamic channel globally leading up to 2023, driven by millennial and Gen Z consumers, who are making fewer grocery trips in favor of online shopping platforms.



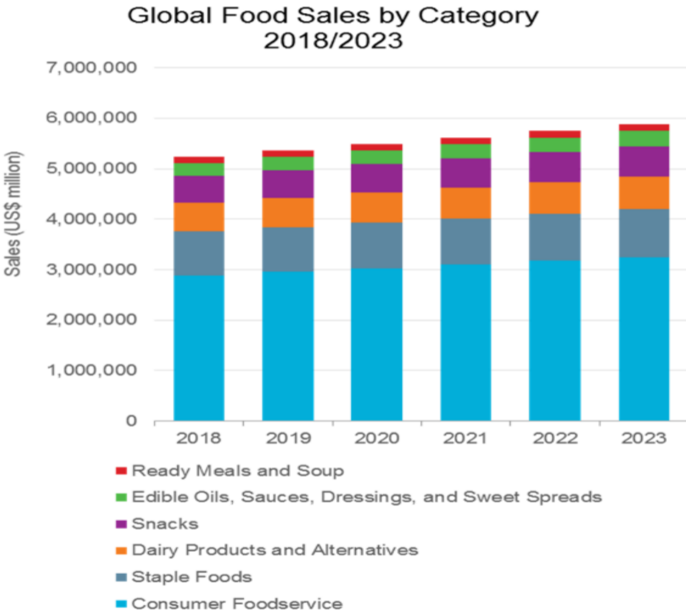


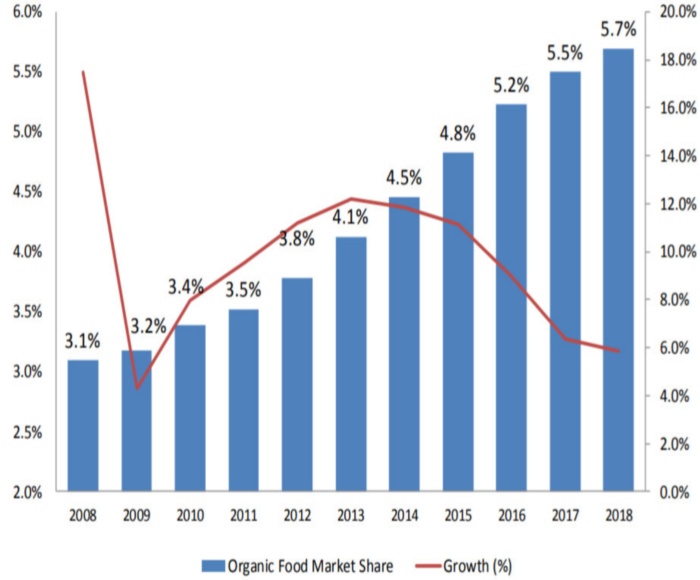
Food companies have reacted to the dynamic operating environment by investing in e-commerce and digital marketing, reshaping the mix of their portfolios, and adjusting their supply chain footprints. Consumer distrust of big food brands, declining barriers to entry, and the loss of negotiating power to big retailer customers make this a very tepid growth sector (maybe 1-2%). The top 20 food and beverage companies have lost share very year since 2011, mostly to contemporary start-up brands such as KIND, Chobani, SkinnyPop, and Beyond Burger. Consumer preferences have shifted toward organic and "real food" options with simpler ingredients. A large percentage of "Real Food" advocates are Millennials who intrinsically distrust mainstream legacy brands with mysterious ingredients. Rather than investing in high growth, high risk projects to defend their turf, the food companies spent about two years (2015-2017) employing aggressive cost-cutting methods to try to create shareholder value. Starting in late 2017, big food companies began to recognize that they had cut back too far and needed to initiate reinvestment plans to reverse the cost-cutting, restore their reputation as category leaders, and regain negotiating power.

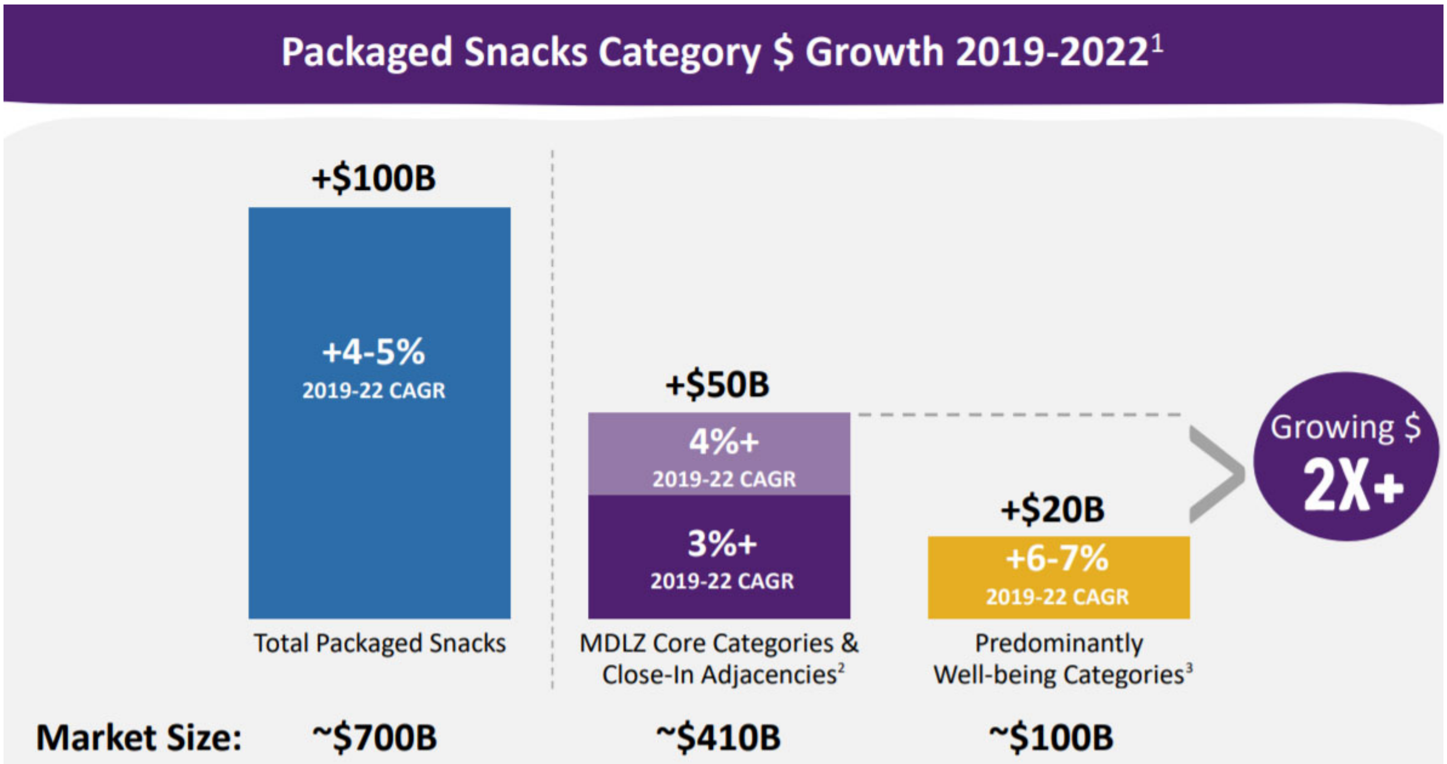
There is a strong correlation in the consumer staples sector between forward P/E multiples and organic revenue growth rates.



Source: Nielsen xAOC plus C. Data as of 11/2019. We maintain the same 20 companies since 2011 for the purpose of this analysis and combine Conagra and Pinnacle.

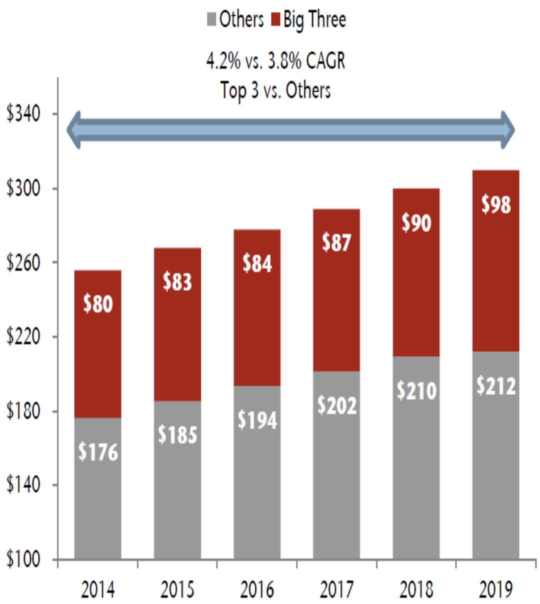


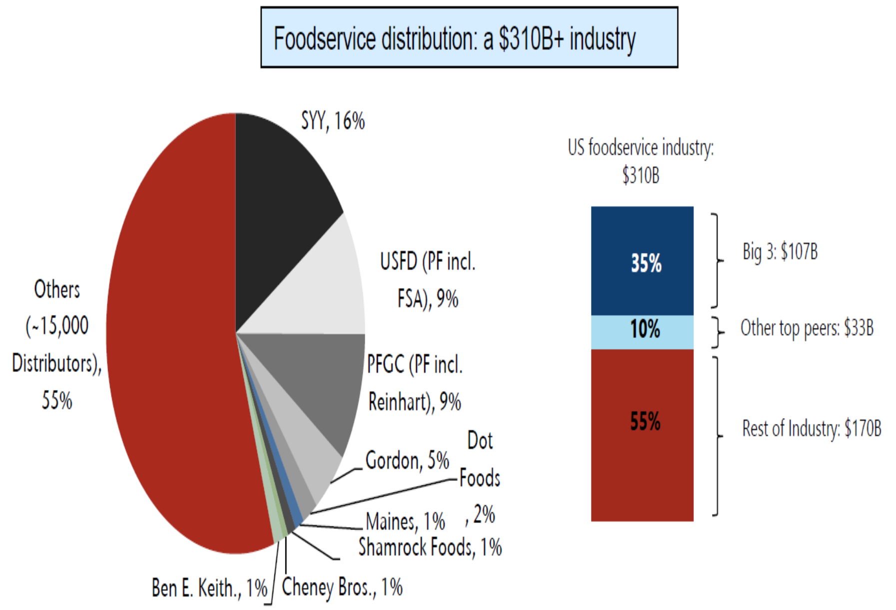




Food Services/Distributors: SYY, ARMK, USFD, PFGC, CORE, CHEF, SPTN

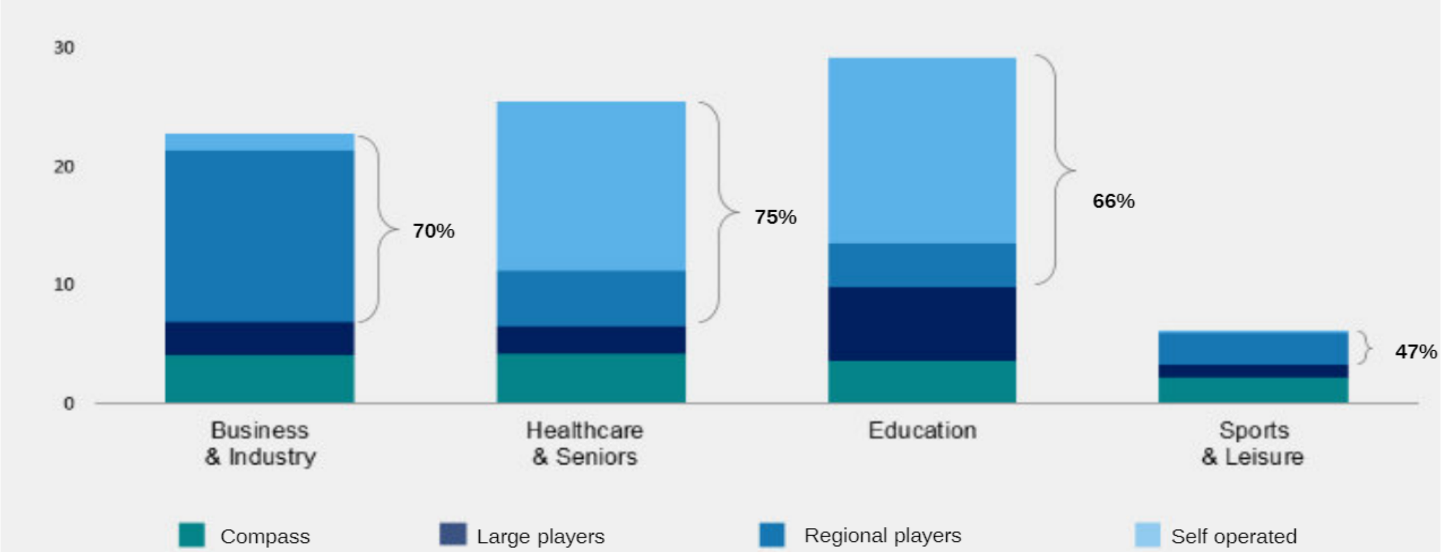
The US foodservice distribution channel is a roughly $310B market according to Technomic. Over the last decade US foodservice distribution has grown at a roughly 3.3% CAGR benefitting from favorable macro tailwinds as well as cultural and demographic shifts that have changed the way Americans consume food. As a result of increasing urbanization, a rise in single-person households and more dual-income families, lifestyles have become busier, requiring more convenient foods and precipitating a greater reliance on the foodservice channel. A food service distributor is a company that provides food and non-food products to restaurants, cafeterias, industrial caterers, hospitals and nursing homes. It is a fragmented market with the top three players accounting for 1/3 of the market. Sodexo (SW:FP) is a large international player as is Compass (CPG:LN).





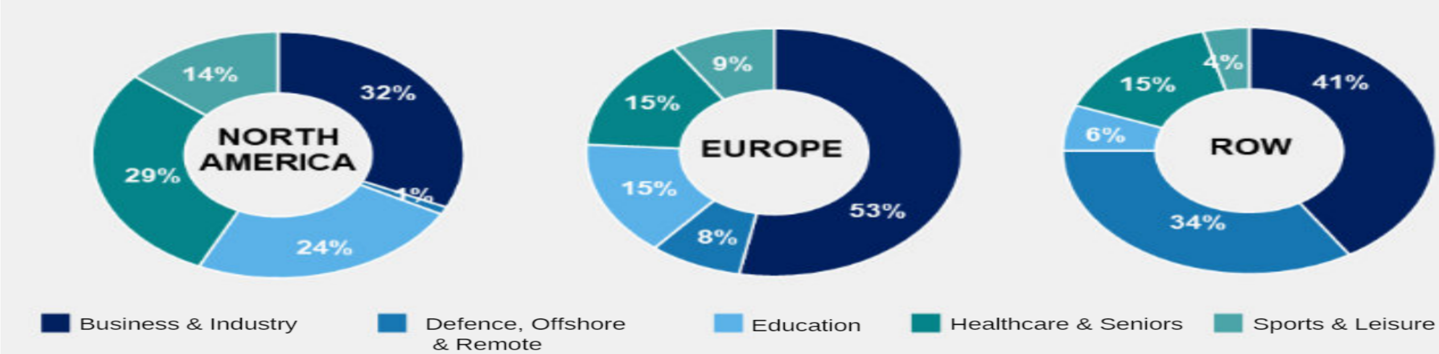
NORTH AMERICA – SECTOR GROWTH OPPORTUNITY

Market size (USDbn)

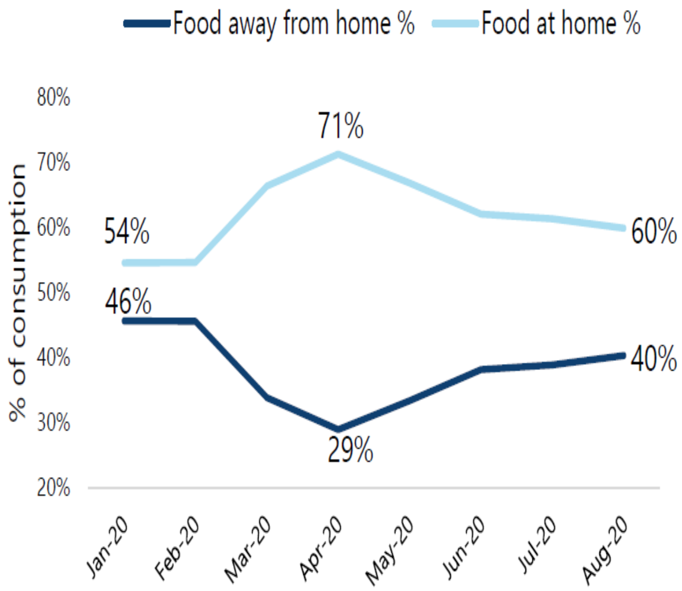


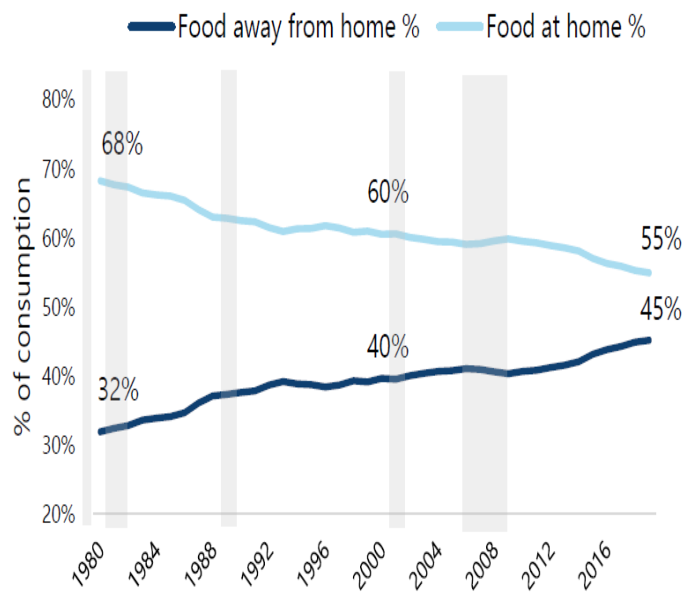
The industry likely has a long recovery path with sports and education likely to return to the previous peak but working from home may be a permanent headwind to Business & Industry markets. Caterers have limited influence over volume but some over price, cost and market share. Economic models have been more flexible than expected: contracts have been renegotiated with the majority of clients; cost savings are emerging; new operating models trialed; and our unit economics model highlights the contribution from price/menu composition.

REGIONAL REVENUE BY SECTOR



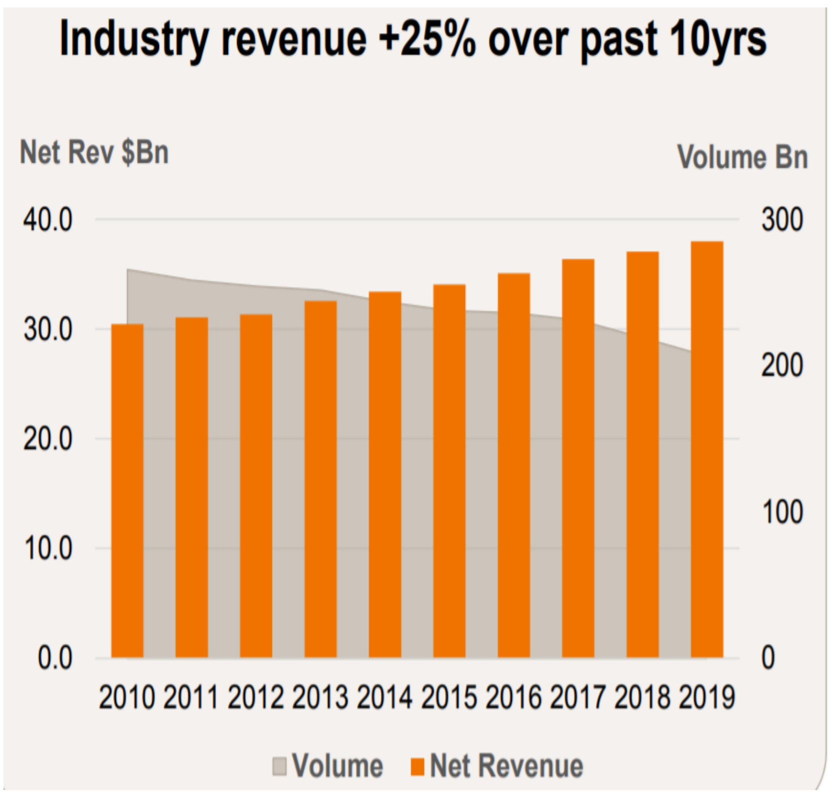
With industry leading tech & capabilities, experienced sales teams & solid balance sheet/liquidity profiles, the public food distributors are in a good position to win new business from smaller regional distributors & suppliers that are starting to face challenges with inventory availability/reliability. In addition to organic share gains, scaled distributors are in a good position to capitalize on M&A, which should ramp into '21 & 22.

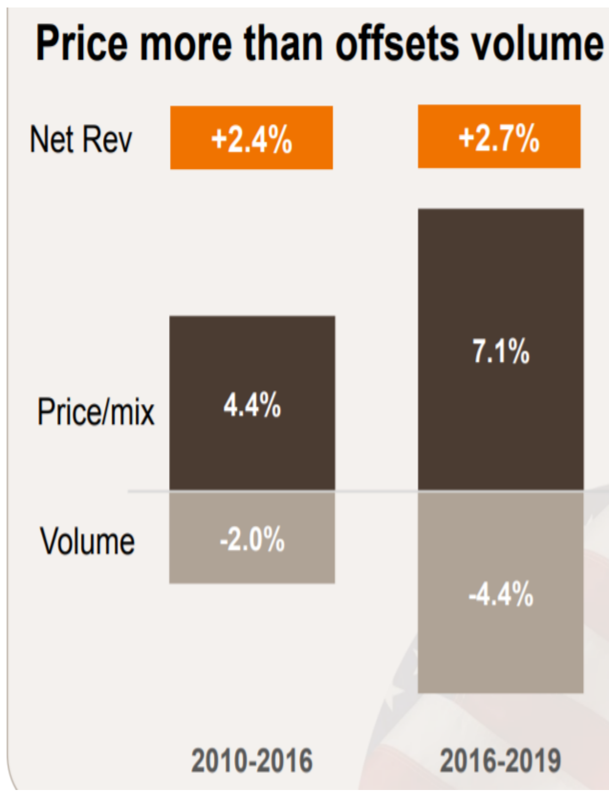




Tobacco/Cannabis: PM, MO, BTI, VGR, TPB, UVV, ACB, CGC, HEXO, TLRY, CRON

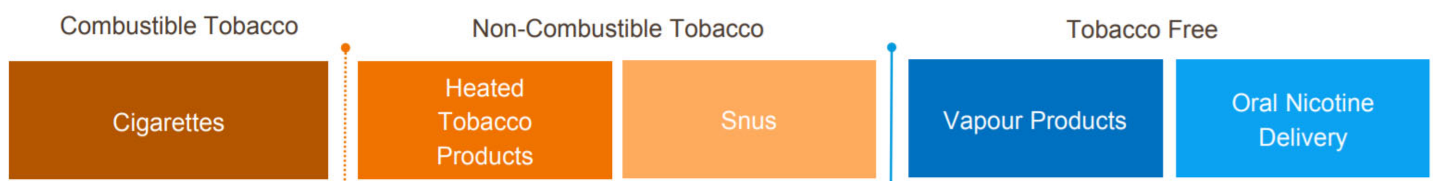
The most recent estimates for the legal global tobacco market indicate that sales are worth approximately $814B. More than $700B of this comes from the sale of conventional cigarettes, with over 5,300 billion cigarettes consumed per year by over 19% of the world's population. A contributing factor to the decline of legal tobacco volumes is the continued rise in the consumption of illicit products. The THP and vapor markets are relatively nascent. Imperial Brands and Japan Tobacco are two large foreign plays along with British Tobacco.

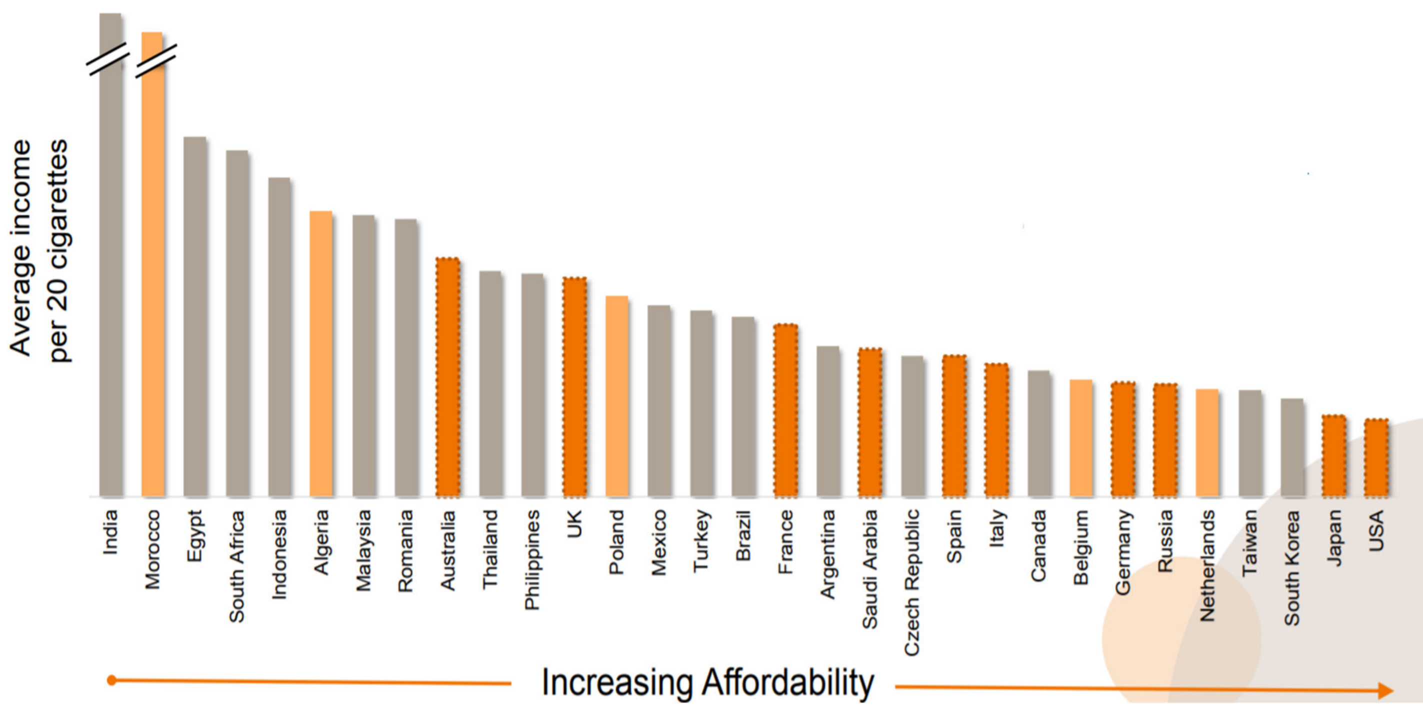




USA Industry	2017	2018	2019	Drivers
Market Size	-4.0%	-4.7%	-5.6%	Increased size decline driven by growth of Next Generation Products (vape, oral)
Secular		-2.6%		Historic decline in smoking prevalence
NGPs	-0.2%	-0.4%	-1.3%	Evolving regulation will shape future impact
Macro	+0.1%	-0.7%	-0.2%	Macroeconomic factors e.g. economic growth, political climate
Price/SET*	-1.2%	-1.0%	-1.5%	Pricing & tax impact between 1% to 1.5%

While combustible cigarettes remain the largest global tobacco category, their volumes have seen a gradual fall over many years driven by increased regulation and changing societal attitudes. Total tobacco consumption, including illicit, declined 2% from 2018 to 2019; this decline rate is forecasted to remain between 2%-3% over the next three years, while the retail value of tobacco sales is expected to increase by between 2%-4% each year, driven principally by pricing.





Management Commentary:

Pepsi (PEP) on its innovation levers: "So to your question on the future, I think we're going to continue to double down on what I think has driven the success, which is very good innovation, right? So if you think about all our Zero innovation, it's doing very well. Gatorade Zero, massive innovation; Mountain Dew Zero is doing very well and starting to bring new consumers into the franchise, younger consumers that we had not been very successful with, so we feel good about that. Pepsi Zero growing very nicely. Then obviously bubly continues to do very well. The energy portfolio gives us much more scale in the convenience channel, which was a -- some sort of a weakness for us. And so we're improving in that channel. If you see the market share in convenience stores in the summer, great progress. So we're happy with how we're doing in that respect. So we'll continue with the playbook. It's working for us. Now we have 1 more set of tools in our arsenal with this energy portfolio. We're happy with the way Gatorade is working. We're seeing a lot of more people exercising. It's a good trend. We like it, that people are exercising at home. People are embracing daily routines of exercising. That helps the sports drink category and obviously Gatorade as a leader in that category."

Monster (MNST) on sales trends: "Now e-commerce, club store, mass merchandiser and grocery related business continued to increase in the quarter, while our food service on-premise business, which is a small channel for the company, remained challenged. According to the Nielsen report for the 13 weeks through October 24, 2020, all outlets combined, namely convenience, grocery, drug, mass merchandisers, sales in dollars in the energy drink category, including energy shots, increased by 10.6% versus the same period a year ago. According to Stackline, which tracks energy drink sales by Amazon, in the United States, for the 4-week period ending October 17, 2020, sales in dollars in the energy category by Amazon, including energy shots, increased 157.5% over the same period the previous year."

Constellation (STZ) on Corona Hard Seltzer: "We continue to be thrilled with the performance of Corona Hard Seltzer. Despite launching this new brand in the midst of a pandemic, which presented us with -- prevented us from engaging in a number of the activities conducive to introducing a new brand, Corona Hard Seltzer has become one of the most successful new product launches in our company's history. Corona Hard Seltzer is the second fastest moving hard seltzer for those seltzer brands with significant distribution and velocity and remains strong as we continue to pick up distribution. Our expectations for the hard seltzer category growth are extremely high, and our intention is to become a top 3 player in the hard seltzer market as we believe there's a natural and compelling connect between what the Corona Brand stands for and what consumers want in a seltzer, refreshing great taste hint the flavor and ours at 0 carbs, 0 sugars and only 90 calories."

Mondelez (MDLZ) on digital efforts: "We see multiple instances of significant e-commerce share gains this year such as U.S. biscuit and U.K. chocolate. Importantly, we believe e-commerce is driving incrementality as we look to meet and generate additional demand. This is also additive to our bottom line, with profitability comparable to our offline business. Building on our existing trends, we are making substantial investments to take this business to the next level. This includes our increased investments in more digital working media, data-driven engagement and improved online shopping site, ensuring we have the right path and the right price with the packs and bundles and testing new platforms to explore incremental opportunities in eB2B and direct to consumers."

Kellogg (K) on using analytics and its brand strength: "Our enhanced data and analytics give us the ability to target the right consumer and occasion with the right messaging for that consumer and occasion, and we're seeing the results. So we're executing well in North America cereal. Our North America frozen foods categories didn't decelerate as much as cereal and snacks during quarter 3, and as a result, we continue to deliver high single-digit organic net sales growth. And that is despite capacity constraints and declines in away-from-home channels as well as the phasing out of certain noncore product lines. Our core businesses are performing very well. In U.S. retail channels, our Eggo brand grew consumption by almost 13% in the quarter, with strong growth in waffles, French toast and pancakes and continuing to gain share. Our Morningstar Farms brand grew consumption by nearly 18%, trailing the frozen veg/vegan category's exceptional growth as we ran up against our capacity."

ARAMARK (ARMK) on Uniforms business: "Uniforms has emerged as a particularly high-demand business with meaningful opportunities ahead. Rentals experienced improving trends in addition to increased client interest in adjacency services, including PP&E. The team remains committed to implement value-enhancing strategies that include increasing our sales resources. We added 150 new members to the sales force just over the past year, with plans to add an additional 100 in fiscal '21; expanding adjacency services, particularly in safety and sanitization; and fully integrating our efficient ABS route accounting system. Over the course of the quarter, we converted additional markets and expect the remaining operations to largely be on this platform by later this year, creating efficiencies through optimized pricing strategies, enhanced data analytics and improved service capabilities."

Sysco (SYY) on business wins: "Importantly, we added $300 million in net new business in the first quarter, which totals more than $1.3 billion of new national business since the start of the pandemic. In addition to these wins at the national level, we are winning new customers at the local level at an accelerated rate compared to prior year due to an increased focus on prospecting new customers across our sales force. At Sysco, we have the sales force strength and supply chain capacity to continue winning new business at both the national and local level. These customer wins will enable Sysco to recover faster than the overall market as economic conditions improve. This is evidenced by our current share gains in the overall marketplace. Most importantly, we are leveraging the crisis to transform our company."

OptionsHawk Executive Summary and Top Picks

In the Beverage category the focus needs to be on growth markets such as Energy, Water, and Hard Seltzer as well as premium alcoholic brands. **Monster (MNST)** remains a top operator and pureplay on the strong Energy market and among the other big three non-alcoholic beverage names **Keurig Dr. Pepper (KDP)** screens well versus peers trading at a cheaper multiple, showing stronger margin expansion, and strong FCF. **Celsius (CELH)** was a great small cap discovery in early 2020 though shares have moved to an extended level, still a growth story to track. On the Alcoholic side of things **Constellation (STZ)** is the high margin play with strong FCF while **Boston Beer (SAM)** the hard seltzer leader with a strong history of ROIC and carries a premium multiple.

In Food the same approach is required with Snacks a stronger segment and **Mondelez (MDLZ)** a long-time best-in-class operator outperforming across its categories and gaining market share. Many of the names will have to lap tough comps in 2021 after the stay at home demand surge in 2020 so it is best to avoid being distracted by 2020 numbers and look more to the historically strong operators. **McCormick (MKC)** is another favorite with its spice & seasonings niche and recently did a deal expanding its leadership in the hot sauce category. **JM Smucker (SJM)** stands out across the mid-cap names trading at a cheap multiple to peers while screening well across other key metrics and having attractive pet and coffee businesses as well as impressive ecommerce growth. **Freshpet (FRPT)** is in a class of its own in terms of growth and likely a M&A candidate but already reflected in valuation and a low margin business, so tough to like it at this level. **Nomad (NOMD)** is a favorite high margin name just under a $5B market cap. There are several attractive small caps in this category with newcomer **Utz (UTZ)** and **Simply Good Foods (SMPL)** showing strong growth and attractive financials.

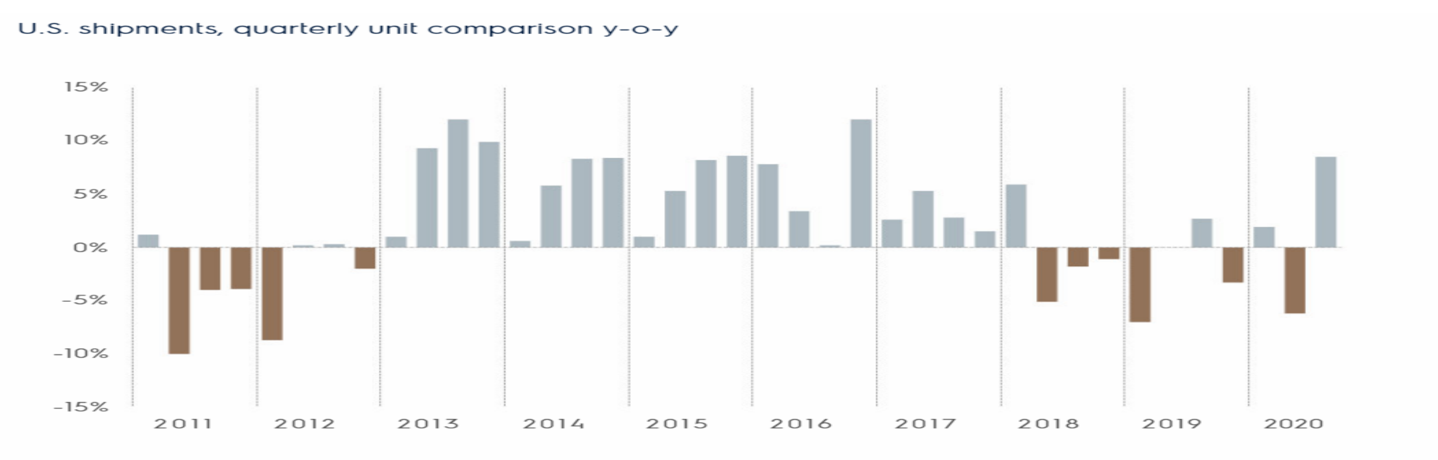
The Food Distribution category is a small group but contains some strong businesses in a highly fragmented market set to rebound from a sharp disruption from the pandemic, though it is a low growth and low margin industry. **US Foods (USFD)** screens most attractive on valuation relative to peers with similar other metrics, though **Performance Food (PFGC)** has long been the favored growth name.

In Tobacco I struggle to find much attractiveness in the industry and small cap **Turning Point (TPB)** likely the most interesting story with smokeless tobacco growth. In Cannabis I continue to avoid the speculative names and see **SMG/IIPR** as better ways to have exposure to the growth trend.

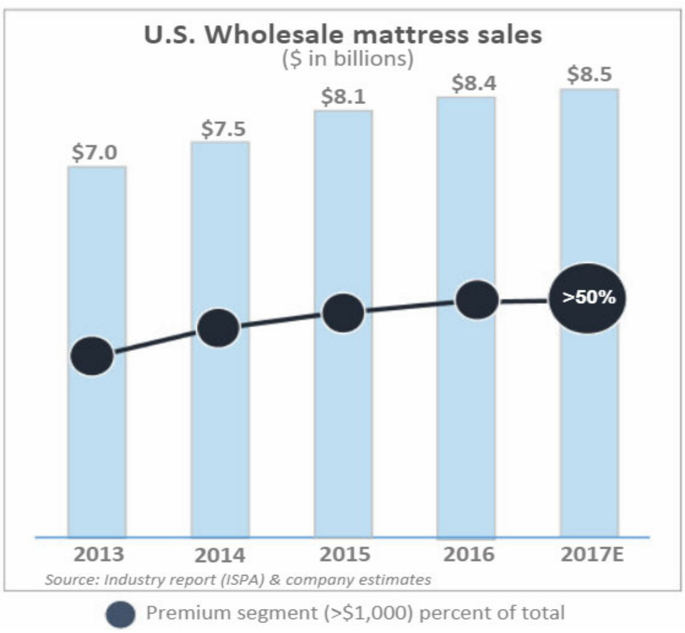
Home/Office Related Goods Components: HELE, IRBT, NPK, NWL, TUP, WHR, YETI, LEG, LZB, SNBR, TPX, HNI, KBAL, KNL, MLHR, SCS, ACCO, EBF, XRX, LOVE, HBB, PRPL

This is a bit of a hodgepodge group with the main division being between home goods and office goods. We have the kitchenware and appliances names like TUP, YETI, HELE, WHR, IRBT, HBB, NPK, NWL; then we have the mattress/furniture names TPX, SNBR, PRPL, LOVE, LZB; lastly the office furniture/supply plays LEG, KBAL, KNL, MLHR, HNI, SCS, XRX, EBF, ACCO.

The kitchen appliances market size was valued at $237.3B in 2019 and is expected to reach $377.7B by 2027, registering a CAGR of 6.0% from 2020 to 2027. Stove, refrigerator, and dishwasher are some of the major devices used in the kitchen. These appliances also comprise blenders, food processors, and coffee makers, usually designed for countertops. Other than product type these are often divided into commercial and household for use application. A few large foreign players include Electrolux, Bosch-Siemens, LG Electronics and Haier.



The global bedroom furniture market size was valued at $220B in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 4.5% from 2020 to 2027. The global mattress market size was valued at $27.5B billion in 2018 and is expected to expand with a CAGR of 6.7% from 2019 to 2025. One of the key trends in the mattress market is the increasing inclination of people toward customized mattresses.



DIRECT TO CONSUMER

(13% of retail)

Sleep Number: 7% share
(>$1000, Premium, highly differentiated)

Bed-in-a-box brands: 5-6% share
(< $1000, over 100 companies, commoditized)

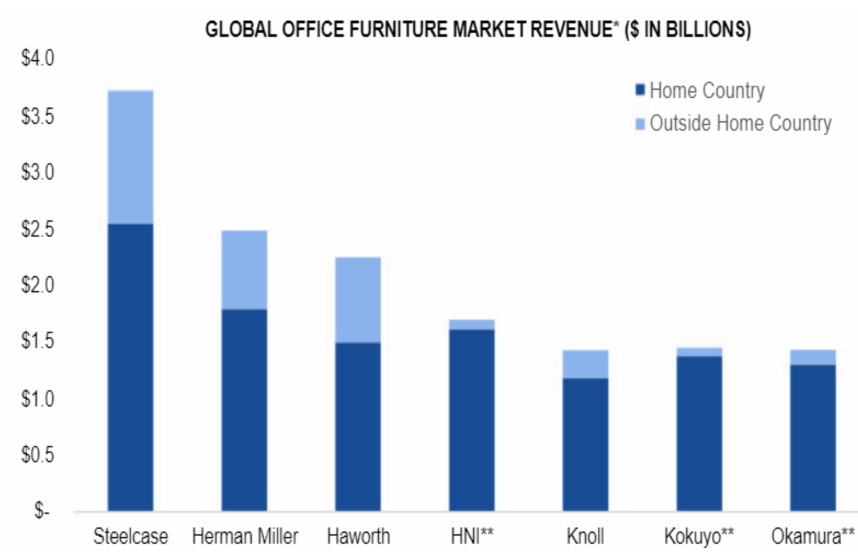
TRADITIONAL

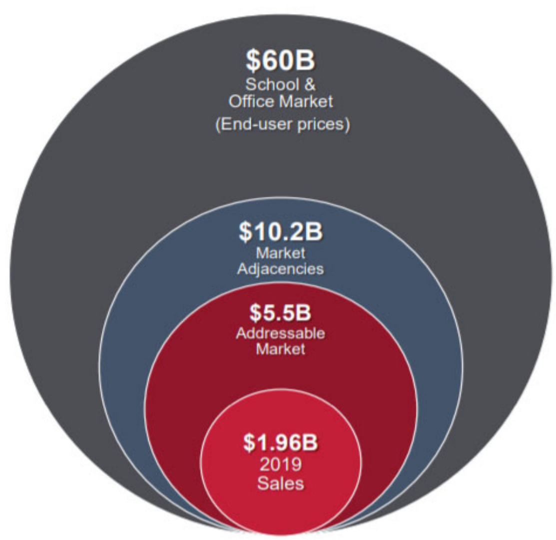
(87% of retail, excluding direct to consumer brands)

Manufacturers' Share	
Serta/Simmons	38%
Tempur/Sealy	31%
Others	21%

Retailers' Share	
Mattress Firm	20%
Others (excl. SNBR)	67%

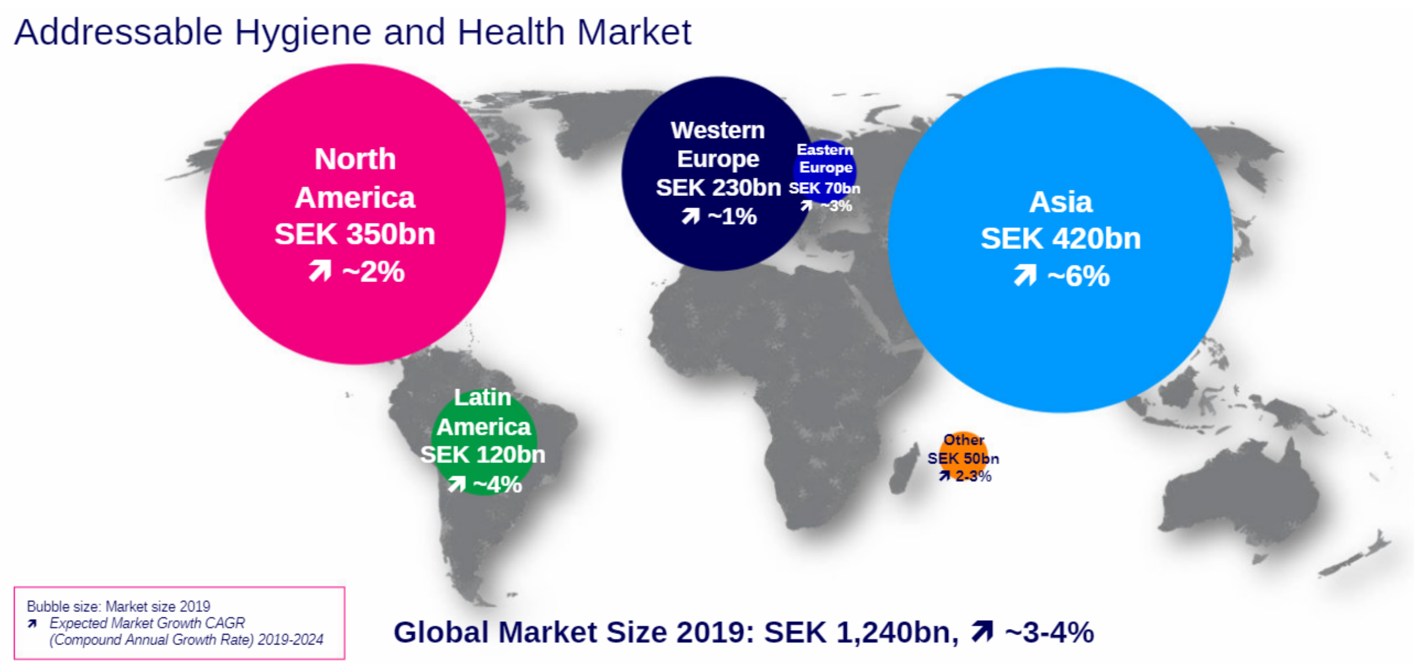
In 2019, the office furniture industry exceeds the value of $58B. With a CAGR of 5.7% during 2020-2025, the global office furniture market is projected to reach $81B by 2025. In 2019, office furniture accounted for around 15.9% of global furniture market. The global office furniture market is segmented into product type by seating, workstation, tables, storage units and accessories. The top ten office furniture manufacturers account for around one-third of global office furniture business. The industry faces some pressure from a work-from-home push but seeing increased demand for modular/flexible furniture, antiviral surfaces, and collaboration rooms.

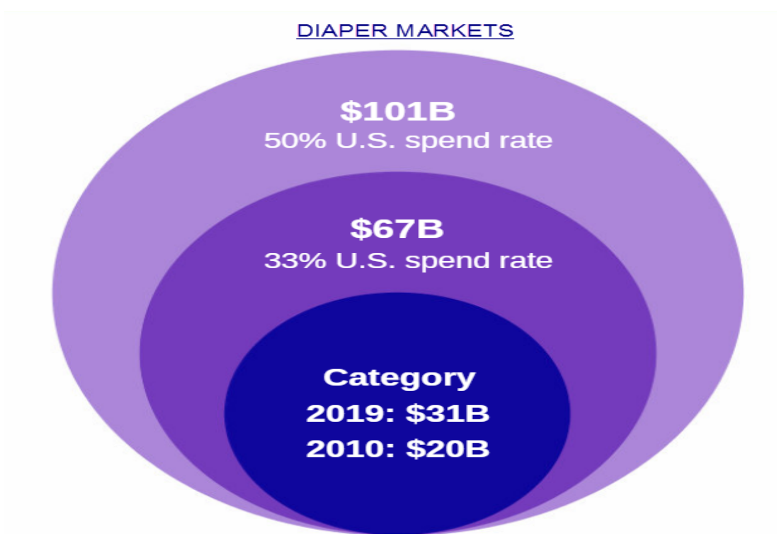




HPC (Household & Personal Care) Components: COTY, EL, ELF, HLF, IPAR, NUS, REV, CHD, CL, CLX, EPC, KMB, MED, NTCO, PBH, PG, PRGO, SPB, UL, UN, USNA, WW, SBH

The global HPC industry generated $1.1 trillion in sales in 2018 and grew at a relatively robust +5.2% y/y. The four key sectors within HPC all grew, with Beauty & Personal Care (45% of industry sales) +5.6%, reflecting consumption tailwinds and premiumization in its largest category, skincare (+7.5%). Consumer Health (24% of HPC) grew 5.0%, Tissue & Hygiene (16%) +4.3%, and Home Care (14%) +5.1%. The HPC sector has nearly doubled over the past 15 years, growing at a 4.7% CAGR since 2004. Margins in the HPC space vary meaningfully depending on a number of factors, including exposure to commodities, international markets, business mix, market share dominance, and level of spending efficiency, amongst other dynamics. Most of the markets are very fragmented leaving room for market share gains with advertising being a main point of emphasis to drive market share gains.





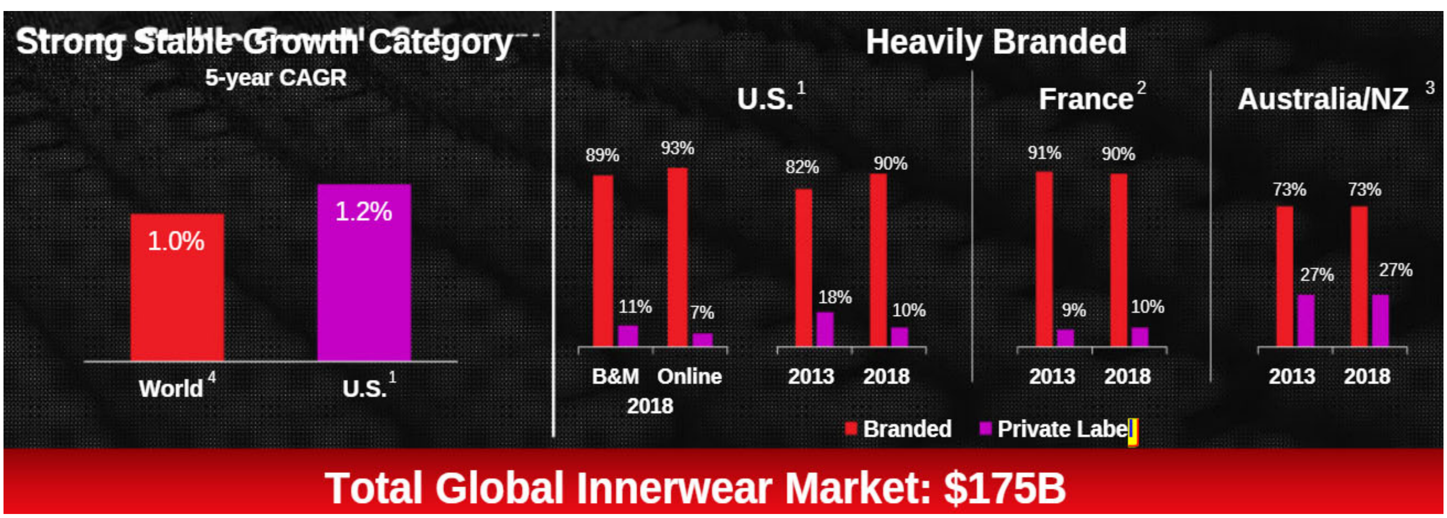
The top growth trends in consumer personal care are Male Grooming, Food for Skin Products, Natural/Organic Products, and Hand-Crafted Products. As Millennials assume greater wallet share, their preferences increasingly dictate innovation, driving a shift across many categories toward convenience or natural alternatives (e.g., eco-friendly diapers, paraben/phthalate-free personal care, single-dose laundry pods, cleaning wipes vs sprays). Moreover, technology advancements allow lower barriers to entry and broader reach, enabling direct-to-consumer brands to gain share (i.e., in razors, pet food) and heightening the need to deliver on-trend, convenient and frequent innovation. The primary driving force to the global personal care market is rising disposable income. Private label (PL) penetration varies markedly across sectors and geographies. For example, private label is most prevalent in the Tissue & Hygiene sector (14% share globally for PL) and least so in Beauty & Personal Care (3% global share). While only 9% of HPC sales, e-commerce is growing rapidly, +16% y/y in 2018, with all regions growing at double-digit rates. The HPC companies are also having to adapt to the digital age, a leader like **PG** has seen digital as a % of media spending rise to 42% this year from 8% in 2007. Among the fastest-growing categories are skin care +7.5% y/y (with facial care +7.6% y/y and body care +6.2% y/y) and baby products +6.4% y/y

L'Oreal, Henkel, Reckitt Benckiser, Beiersdorf and Essity are a few foreign large players in this category.

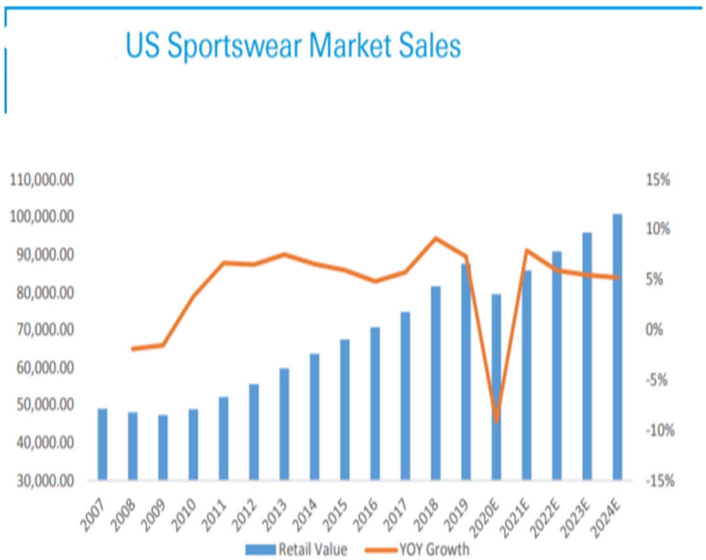
Apparel & Footwear Components: CLAR, COLM, CROX, DECK, GIL, KTB, LULU, NKE, SHOO, SKX, UAA, VFC, CRI, GIII, HBI, LEVI, OXM, CPRI, GOOS, TPR, PVH, RL, WWW

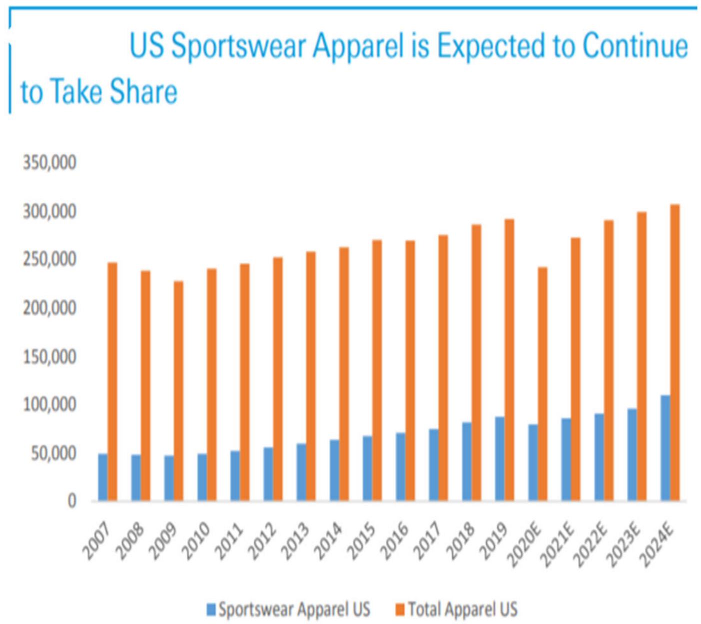
The Apparel Industry consists of companies that design and sell clothing, footwear and accessories. The industry has been transforming the last few years combatting weakening store traffic at physical locations and launching Direct-to-Consumer (DTC) which has been enhancing margins. Excess retail capacity, e-commerce, promotional activity, and shifts in advertising budgets have all played a role in recent years. Disruption at department stores has made US sales growth for apparel brands more challenging and volatile. Brands that are best positioned are those that are in high-demand by consumers with strong sell-out trends, and have company specific drivers, such as new category or distribution opportunities.

The global textile market size was valued at $960B billion in 2019 and is estimated to exhibit a CAGR of 4.3% from 2020 to 2027 owing to the increased demand for apparels, especially in developing countries such as China, India, Mexico, and Bangladesh. The global footwear market size was valued at $365.5B in 2020 and is estimated to reach $530.3B by 2027 with a CAGR of 5.5% from 2020 to 2027. Rising per capita income, favorable demographics and a shift in preference to branded products is projected to drive the demand for the market. The global activewear industry is expected to reach nearly $547B by 2024, seen growing at an 11% CAGR 2020-2024.



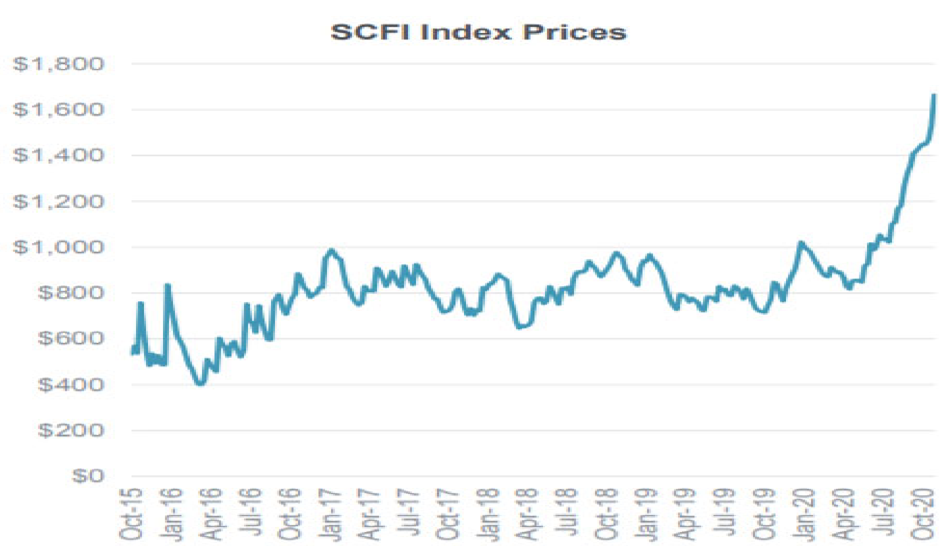
Consumer trends are continuously changing including a smaller emphasis on personal consumption expenditures with a shift to experiences. Younger consumers continue to reshape the retail landscape. Gen Z and young Millennials consider quality the primary factor when buying apparel; older consumers still focus on value. Stores remain an important channel, but online penetration continues to rise. According to aggregated BAC debit and credit card data, the percentage of clothing sales purchased online continues to grow, most recently at 28.5%, up from 27% last year and 24.9% two years ago. BAML with an interesting survey recently noting "Our survey work indicates that despite years of negative store traffic trends, consumers still prefer to shop for apparel in stores as 44% of respondents said they do most of their shopping in stores compared to 23% saying they make purchases online. If you include the respondents that said they search online but also purchase in stores (20%), the percentage increases to 64%."





Evaluation of this group uses basic metrics like P/E and P/S, and also have to pay close attention to margins and inventories. The group can mostly be divided into Athletic Apparel, Luxury/Handbags, Footwear & Accessories and Work Apparel. The global apparel industry is segmented by type of apparel mainly into women's wear, men's wear and kid's wear. Women's wear has long been the largest segment of the apparel market by type for decades, contributing over 55.7% of the global apparel market revenue every year. The men's wear market is expected to be the fastest-growing segment going forward at a CAGR of 16.4% over the next five years. A few key foreign names include Kering, LVMH, H&M, Fast Retailing, Christian Dior, Inditex, Hermes, Puma, Anta, ASICS, Moncler, Burberry, Boss, and Adidas.

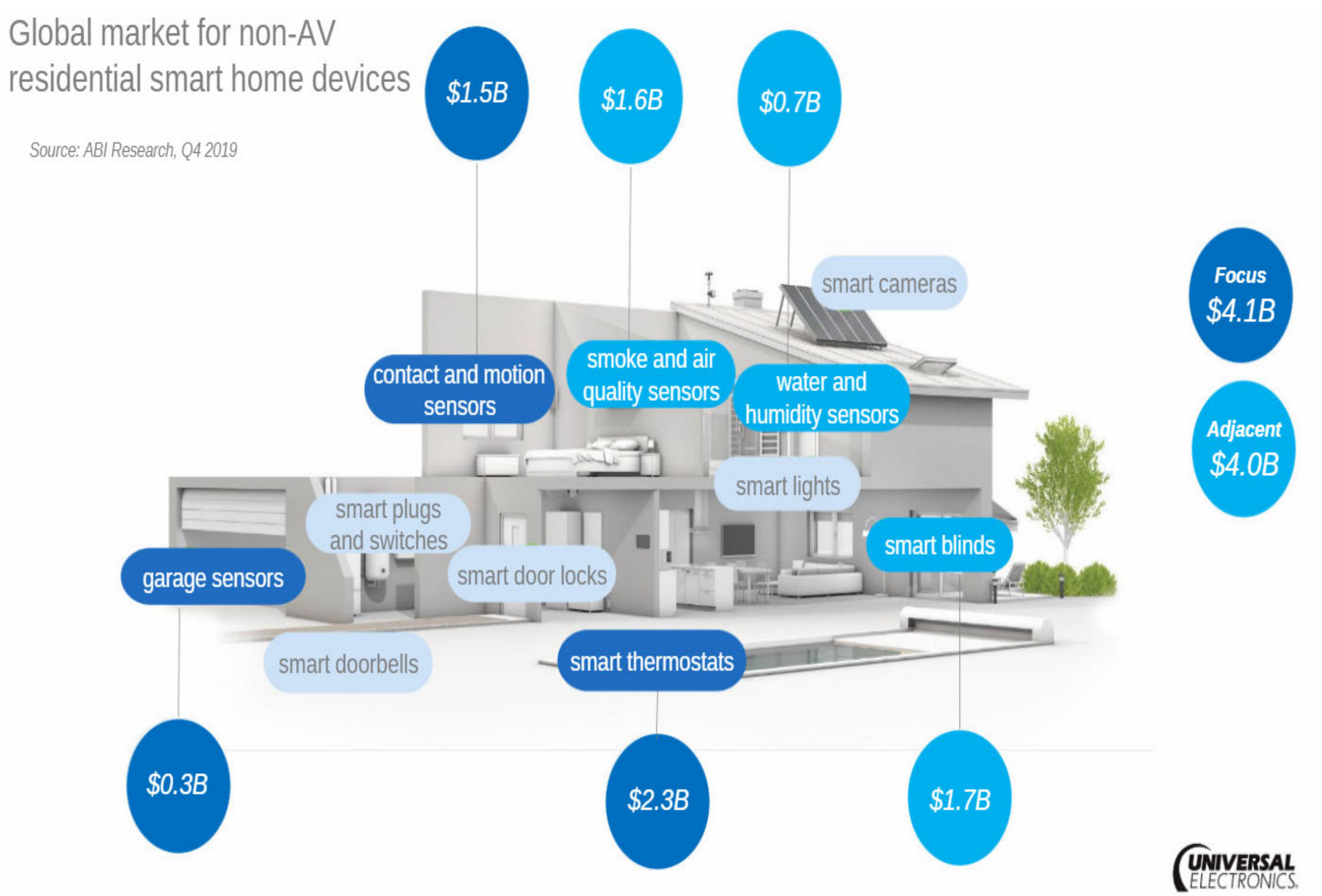
A risk to this group is the surge in freight costs, the Shanghai Containerized Freight Index (SCFI), a proxy for ocean freight rates for product coming from China, has accelerated to an all-time high price:

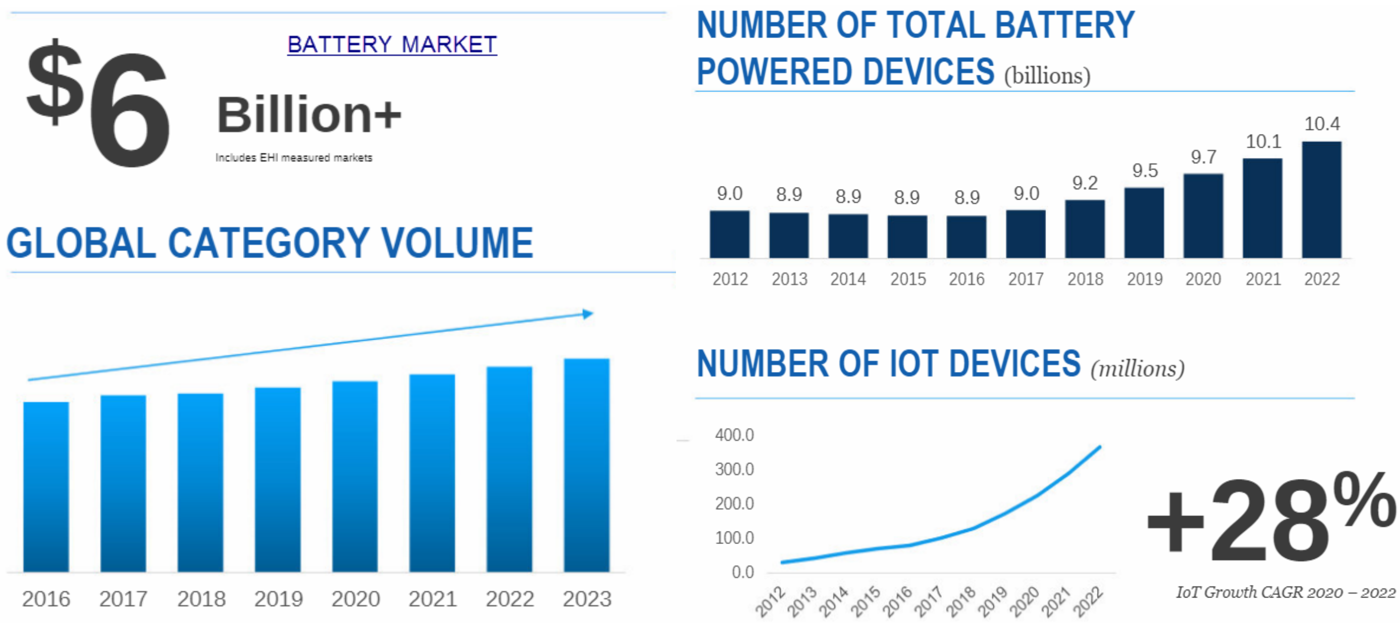


Consumer Electronic Components: ENR, AAPL, SONO, UEIC, CAJ, SNE, GPRO, HMI, GRMN

This is another mix and match group I may eventually redistribute to other groups but a focus on consumer electronics. There is not much industry analysis to be done here with a diverse group that covers Phones, Batteries, Wearables, Audio Equipment, Gaming Systems, Cameras, Printers, and Smart-Home Products. Consumer electronics cover all the electronic devices most often used for entertainment communications and office work. Smartphones, personal computers, tablets, laptops, notebooks, radios, digital cameras, televisions, MP3 players, audio equipment, calculators, camcorders and personal care devices and gaming consoles are some of the major consumer electronics devices. The consumer electronics market is generally divided into TV, Radio & Multimedia, TV Peripheral, Drones, Phones and Computing. There are several large foreign players like Samsung, LG Electronics, Nikon, Philips, and Panasonic.

The consumer electronics market size was valued at $1 trillion in 2019 and is estimated to grow at a CAGR of over 7% between 2020 and 2026.The global wearable technology market size was valued at $32.6B in 2019 and is projected to expand at a compound annual growth rate (CAGR) of 15.9% from 2020 to 2027. The smartphone market was valued at $715B in 2019 and is expected to reach $1352B by 2025, at a CAGR of 11.2% over the forecast period 2020 – 2025. The global market for Consumer Batteries is projected to reach $50B billion by 2025, driven by the growing indispensability of batteries in the digital era of laptops, smartphones, tablets, smart electronic wearables and digital cameras. The home audio equipment market is expected to be valued at $22.5B in 2020 and a forward CAGR of 5%. The global gaming console market is expected to reach $52B in 2027 from $34.2B in 2019, a 5.3% CAGR. The global digital photography market is expected to reach $49B by 2031 from $41.9B in 2016, a CAGR of 3.1%. The global printing is forecast to reach $821B by 2022, driven by growth in packaging and labels, rather than graphic applications, and digital rather than analogue printing. The global inkjet printer market valued at $34.25B in 2019 and expected to grow at a 5.3% CAGR 2020 to 2027. Smart-Home product revenues are seen reaching $25.5B in 2020 with a forward CAGR forecast at 15.8% as household penetration of 32% is expected to reach 57% by 2025.

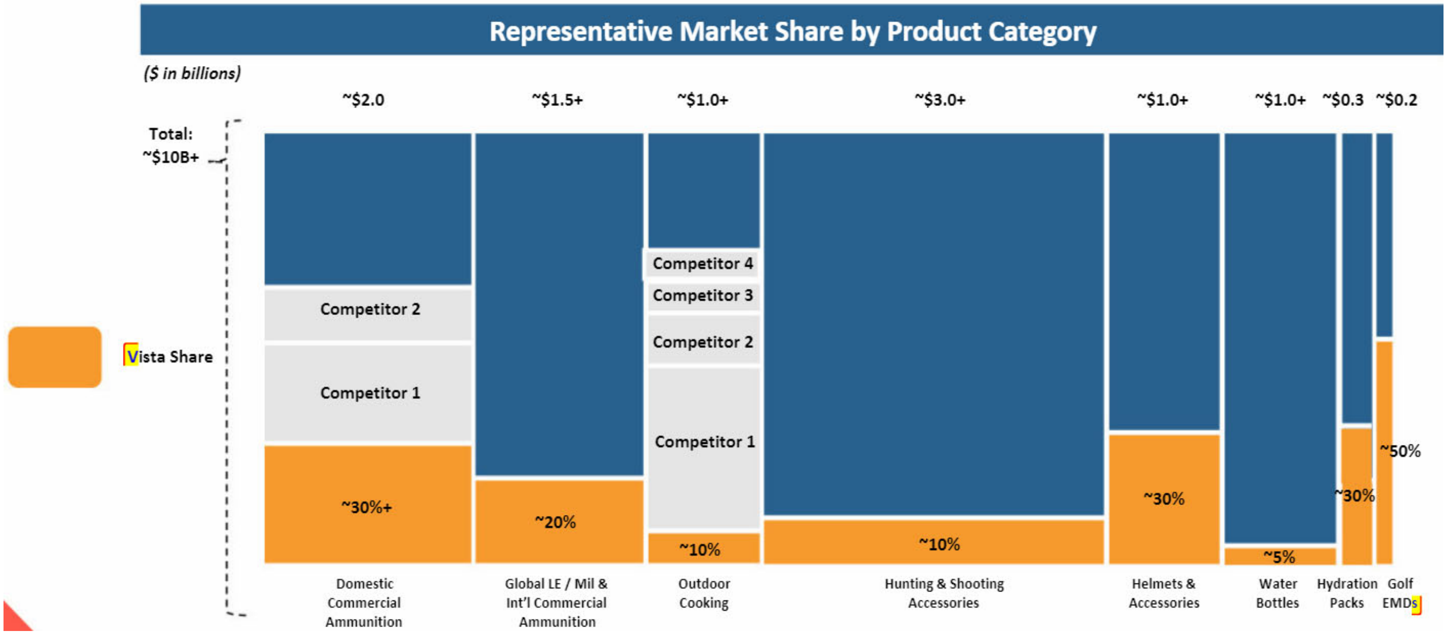


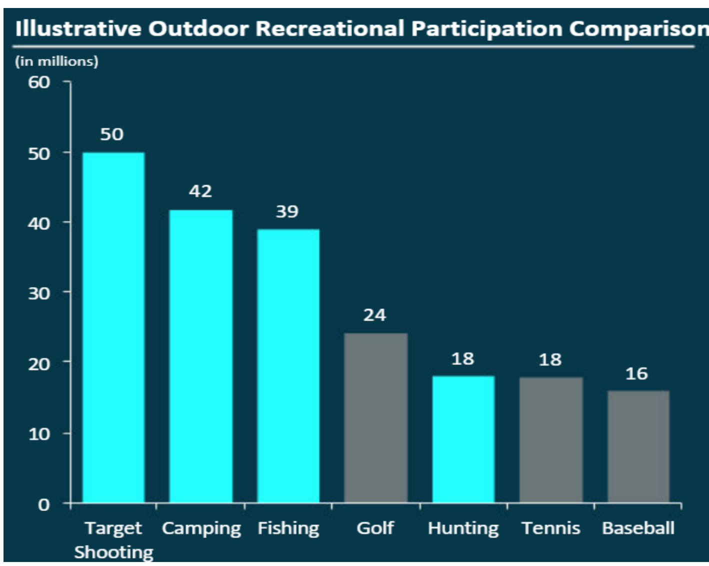


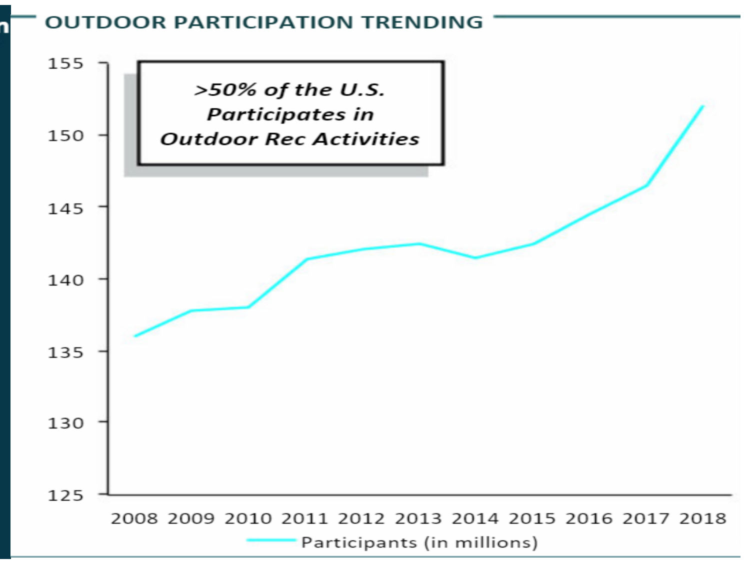
Sporting Goods & Toy Components: AOUT, VSTO, RGR, SWBI, AAXN, ELY, GOLF, POOL, FNKO, MAT, HAS, PTON, NLS, ESCA

The final grouping consists mostly of consumer products focused on sporting/exercise & outdoor activities as well as the toymakers. The fitness equipment market was valued at $12B in 2019 and seen growing at a 4% CAGR through 2026. The global sporting goods market is seen rising at a 4% CAGR through 2025 to a size of $89B. The global toy market is estimates at $22.1B in 2019 and forecasted to grow at a 1.4% CAGR through 2025. The Ammunition industry is an estimated $20B market growing to $30B by 2027 while Firearms (Sporting Guns) a $1.8B market seen reaching $2.1B in 2027 at a 2.5% CAGR. The Pools & Outdoor Living market size is estimated at $12B.

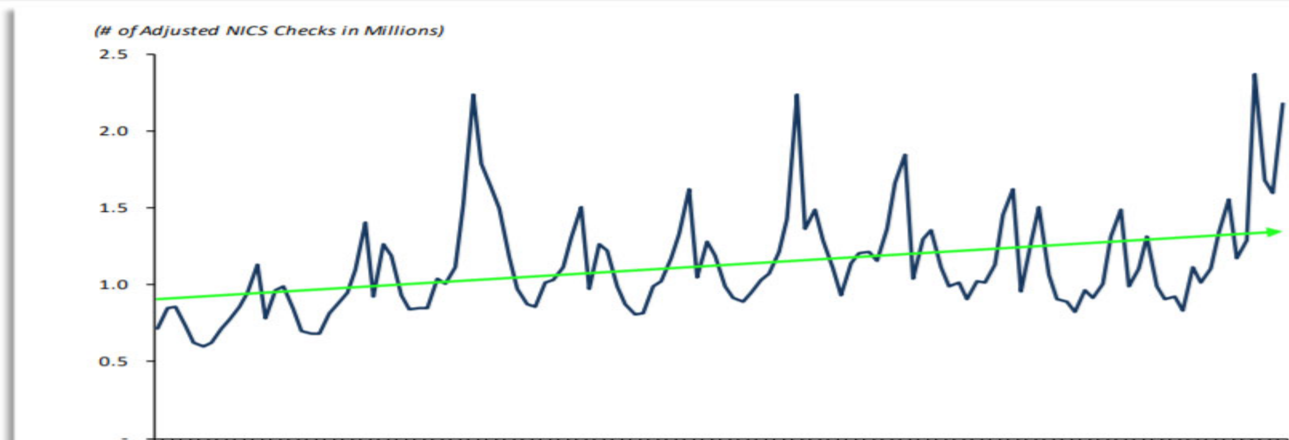
OUTDOOR INDUSTRY



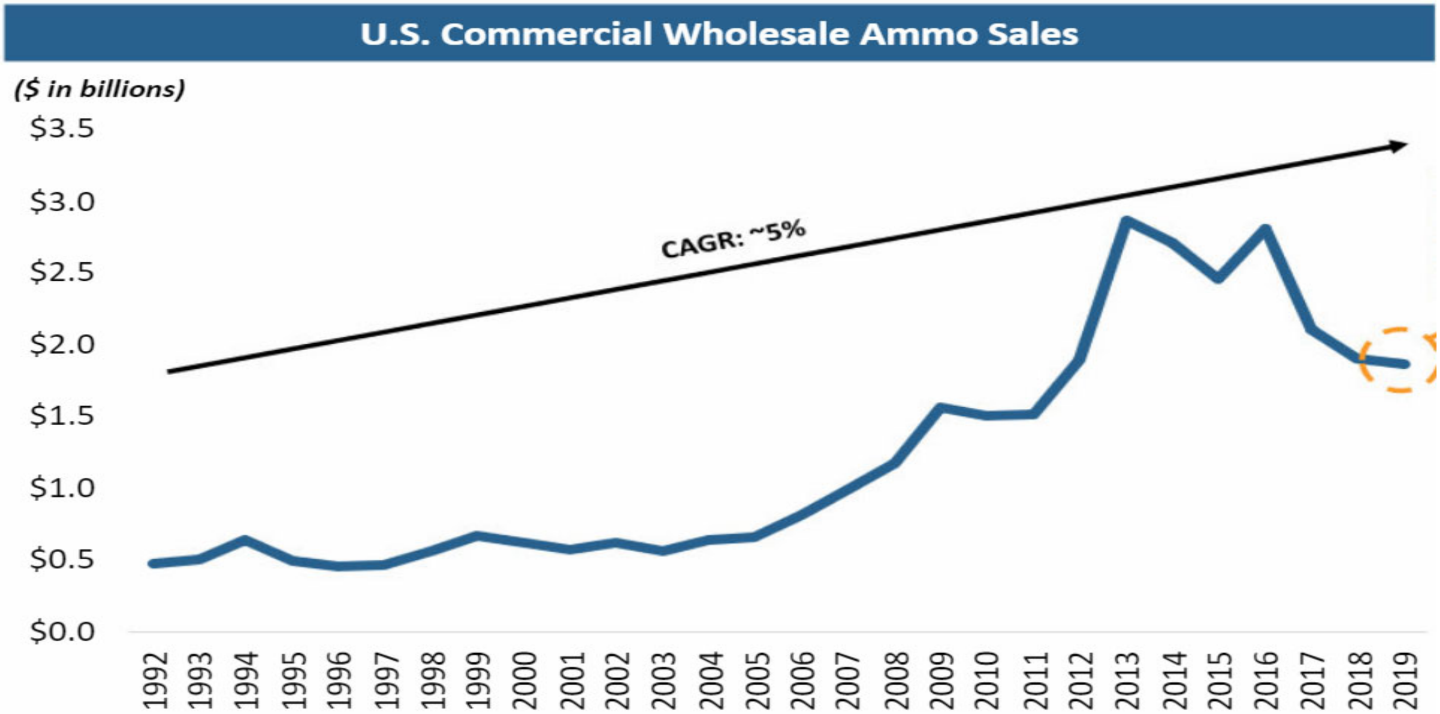


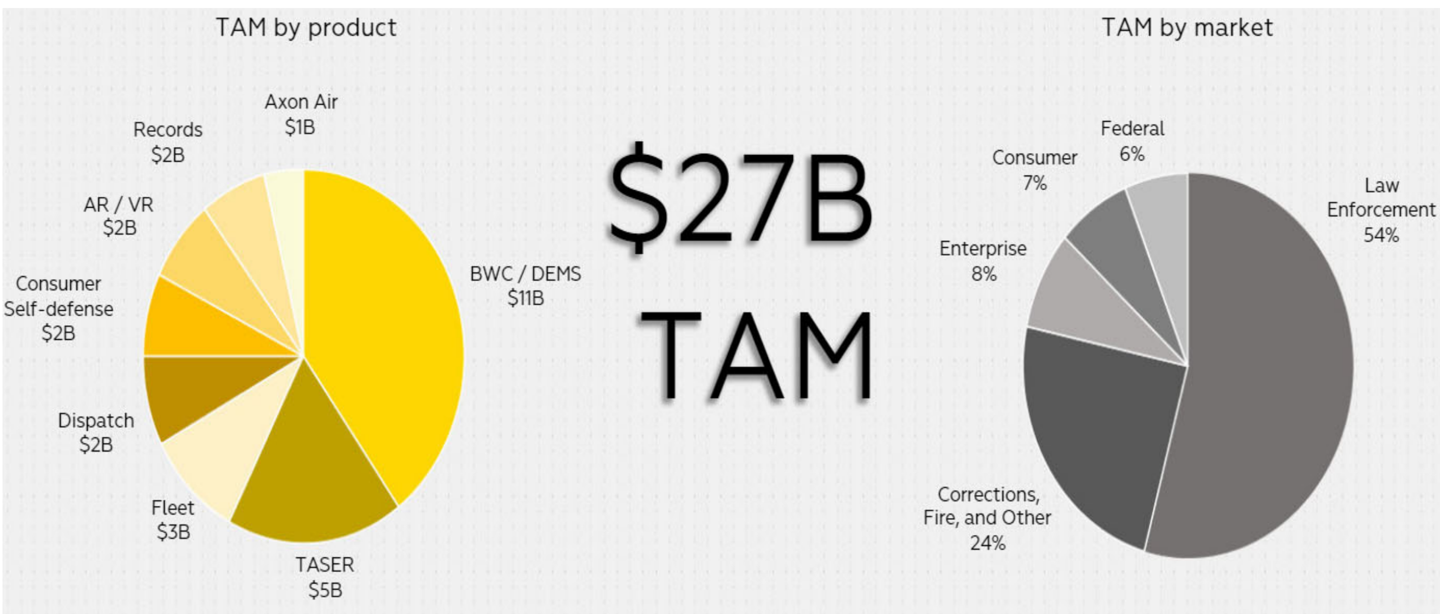


Adjusted NICS Checks Continue to Increase



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Adj. NICS	9.4	10.8	13.8	14.8	13.1	14.2	15.8	14.0	13.1	13.2	10.3
YoY Δ%	(1.0%)	14.4%	27.7%	7.4%	(11.5%)	8.8%	10.7%	(11.4%)	(6.1%)	0.6%	64.9%





Management Commentary:

Whirlpool (WHR) on home trends: "And we see that now across the entire home, that people are starting to invest in home upgrades, people are rethinking the purpose of the home because they know we spend more time over an extended time period. So we do start seeing structurally positive trends for the home. Or to put it even in another way, you have structural positive demand trends, coupled with high disposable income and low mortgage rate. If you put these 2 factors together, you have a very, very healthy mix, which kind of, again, gives us confidence beyond this quarter. And there's a reason why some people start referring to the golden age of housing because there is a lot of positive trends coming together, and we do not see restructured demand trends and refocus on home and nesting going away short term."

Newell (NWL) on online penetration: "During the third quarter, online penetration as a percent of net sales was 21% versus 16% last year. Year-to-date, e-commerce penetration sales was also 21%, almost double year-to-date 2018 levels. Penetration improved meaningfully across our portfolio with the most noticeable acceleration in Home Fragrance, where it nearly doubled the year today. Our promise in e-commerce is further evidenced by the fact that our online sales have grown about 40%, 40%, folks, in third quarter and year-to-date. We also continued to gain market share in the third quarter in many of our segments across Amazon. More recently in October, we achieved excellent double-digit growth on Prime Day. Our e-commerce team is doing an outstanding job in capitalizing on and leveraging evolving consumer behavior."

Helen of Troy (HELE) on strength in Air Purifiers and Water Filters: "Air purification has also been a very hot category. U.S. sales for our Honeywell air purifiers grew strongly during the quarter. The key drivers were increasing concerns around COVID, especially as indoor season approaches for many households as well as institutions such as restaurants, schools and universities. Our air purifier sales were further aided by heightened media attention highlighting the potential health benefits of using an air purifier during the pandemic. We also saw an early start to the wildfire season this year. Finding air quality from wildfires can also compound concerns around COVID-19 as more people are confined to enclosed spaces and polluted air can create risk of airway damage and respiratory infection. The surge in air purifier demand has been much stronger than we expected, straining our supply chain. We have responded quickly with a 50% increase in air purifier supply becoming operational by the end of next month. Our PUR products are benefiting from an increasing trend of single-use plastic bottle bans around the world as mindsets shift towards more sustainable purchase and usage habits. Propelled by these trends and increases in supply and in distribution, syndicated data shows that PUR's growth has outpaced the growth of the category, resulting in market share gains for PUR's U.S. devices and replacement filters in brick-and-mortar."

Yeti (YETI) on the International expansion: "Overall, international grew 165% to reach 7% of sales, the highest mix YETI has registered to date. The biggest factor in the growth was the reopening of our Canadian wholesale, which delivered significant year-over-year growth this quarter. Importantly, the D2C side of the Canadian business, including both e-commerce and corporate sales, also registered exponential growth during the period. While Canada still drives the majority of our current international business, we continue to be highly encouraged with demand we see in other markets. Australia showed more than a threefold increase in both the wholesale and e-commerce businesses due to the extraordinary performance and execution of our Australian team. As we hit the 1-year mark in our U.K. and Europe expansion, we're seeing this business build larger each quarter, and we continue to see a meaningful opportunity to drive performance as retail reopens. We remain highly focused on building the brand internationally in a thoughtful manner, while developing the infrastructure to support smart, sustainable growth."

La-Z-Boy (LZB) on surging demand: "With the surge in product demand, our challenge has been to ramp up capacity at all plants and expand our overall production capacity. Our current backlog for the La-Z-Boy branded business is 5x what it was at the end of Q2 last year, and we are quoting lead times of 16 to 26 weeks depending on product category, which also include an estimate of the delivery time to the ultimate customer."

Estee Lauder (EL) on a game-changer in shopping habits: "So what we see is that people buy online. Maybe in the future when the store will be open, we believe that omnichannel will be very strong. And so people will use both brick-and-mortar and online, obviously. But the amount of partners online will stay higher and, particularly, will stay higher in our estimate in the mature group of consumers, which are very important for us, very important for beauty. So this is a sustainable trend and a sustainable acceleration. The second thing, which is happening, which is very important, is historically our high-touch services of advice or the service of customization of the survey of trying the products was exclusively done in stores. And then online, at the beginning, was mainly a convenience buying opportunity of what you already knew. Shopping was in brick-and-mortar, buying was online. This has changed forever. Now there is shopping in brick-and-mortar, and there is shopping online. And what I mean with that is that the high-touch services of customization of advice of recommendation are now super present online, and the consumer really are catered to this service like never before. So we spoke in our prepared remarks about the availability of chats with consultants, the availability of virtual try-on, the availability of live streaming opportunities, all this is increasing. And the engagement of consumer online is increasing. We mentioned that we have 13 million presence on virtual try-on versus only few millions in the past."

Colgate (CL) on its pet brand Hill's and innovation: "Hill's once again delivered stellar results, with double-digit net and organic sales growth led by the U.S., Europe, Australia and Canada. Higher consumer demand in e-commerce continues to be a significant driver of growth, although brick-and-mortar growth in the U.S. improved sequentially in the third quarter as foot traffic increased. Hill's continues to benefit from increased brand support, which is driving higher brand awareness and market share gains on our wellness products. The vet channel remains subdued due to COVID headwinds, but Prescription Diet sales growth was robust, given the shift to e-commerce. We need to become less reliant on line extensions and by pursuing innovations that really build incremental category growth and market share gains, which is ultimately vital for us to continue to drive gross margin. And we see incredible opportunities, quite frankly, across the mega trends all over the world that we're seeing on the ground. Naturals' sustainability to give an example, the urbanization that we're seeing in the big markets, aging population in developed markets, or younger population and per capita consumption opportunities in developing countries. And clearly, the rapid growth and channel focus that we have as we've seen channel expansions, particularly in e-commerce and pharmacy for us."

Medifast (MED) on its innovative/differentiated business: "From an investment standpoint, we're an innovator that's differentiated, that is science-based and ties products and programs together. We're in a large growing market opportunity. If you go back and look and see whether the country is getting more healthy or less healthy, that number of people who are obese and overweight and who feel unhealthy continues to grow. Now over 2/3 of Americans are either obese or overweight. Scalable, coach-based, direct-to-consumer model. We're attractive and highly predictable business model, and we will talk about how we grow and how that happens. We generate significant free cash flow. And we have a very attractive capital allocation strategy, which means that we don't require a lot of capital to grow. And a demonstrated track record that shows that there's a lot of room for future growth. We don't have a selling network. The coaching service is offered as part of a program. We have clients and certified coaches. A traditional direct seller has distributors/sales agents and wholesale buyers. We are client service -- we provide client service and community building, long-term sustainable growth, holistic health and wellness programs, lifestyle transformation focus. And lastly, and this is an important one, our coaches do not buy inventory and they don't handle transactions. All of that operational element and all the products are shipped directly to the end consumer. So we know who they are, where they live, how much they purchase, which turns out to be a significant advantage for us, but also, as I mentioned, a key differentiator for us as a company."

VF Corp (VFC) on changing consumer habits: "Consumers are prioritizing purchases that align with their values. Our research shows that over 2/3 of Millennials and Gen-Z have changed their purchasing habits due to climate change. And by 2027, we believe this generation will account for 2/3 of apparel and footwear revenue in the U.S. The combination of our exposure to large, growing addressable markets as well as our brand's purpose-led positioning give the VF portfolio a unique opportunity to thrive in this evolving consumer environment."

Nike (NKE) on strength of Jordan brand: "We've talked a lot from a consumer focus, too, that apparel is just a massive opportunity for us. And when you think about that right now, I just talked about the definition of sport. And that's a changing, and that's an opportunity. There's a big spotlight on athlete during COVID right now, and that's an opportunity for us. And when you just think about working out from home, working from home, from a Zoom to NIKE Training Club and back, that's an opportunity for us. We've also got some great proof points in Q1 from an apparel perspective. We grew our apparel business 100% on digital commerce in Q1. And we're also proud to share that with the combination of NIKE Jordan -- the Jordan brand, rather, that team is very focused on apparel growth. And NIKE apparel, together, we assumed the #1 position in market share in apparel and the super competitive, as we all know, in U.S. And then speaking of Jordan, I would just say another consumer-focused obsession of growth for us. And that business is rapidly growing. The growth is skyrocketing, even over the COVID period in Q1, all 4 geographies grew AJ1, our Air Jordan 1, which is one of our top franchises, grew 53%. And as our SNKRS App and the Jordan team together delivered even in this time 2 record-breaking product launches."

Decker (DECK) on expanding the UGG brand: "Fluff is the paramount example of the progress UGG is making to attract a diverse set of consumers with a broad array of product options. The Fluff Yeah remained the brand's top-selling style from both the total peers' perspective as well as in terms of wholesale sell-through. But the UGG team has also done a fantastic job building around the Fluff Yeah with complementary product that is providing incremental growth. New introductions during the quarter included the Disco Slide and Fluffita, which were both among the top 10 styles purchased by customers aged 18 to 34 years old. While Fluff product may have been the primary attraction to the brand for 18 to 34-year olds, we're excited by how many of these customers who bought Fluff also purchased the recently launched Classic Clear Mini. Since its release, over 60% of the Classic Clear Mini purchases online have been made by 18 to 34-year olds. This multi-category purchase activity from younger consumers speaks well to the brand's ability to capture share of closet with fashion-minded consumers."

Capri (CPRI) on Versace and Jimmy Choo acquisitions: "So we think that we have acquired 2 incredible luxury names, first being the Versace name; and second, being the Jimmy Choo name. And one of the great things about the Versace acquisition is not only does it give us really the single biggest growth opportunity in this company, in a space that is continuing to grow, this year it will not grow, but historically, has continued to grow is that -- it also gives us a very strong exposure to the men's business, which is not an area that the company has had a significant amount of exposure to. It also deepens our trajectory in China with both Versace and Jimmy Choo. And as you know, luxury growth in that market has been very robust prior to the pandemic and post the pandemic. And one of the great things that we believe over the next few years is that Versace and Jimmy Choo will account for north of 1/3 of our revenues. And in terms of profitability, approximately 1/3 of our profitability."

Croc's (CROX) on its marketing and brand strength: "I'm pleased to share that this best-in-class marketing is translating into results. In our own 2020 brand survey, which measures participants' views about the Crocs brand globally, results were up double digits for each of our key metrics: brand desirability, brand relevance and brand consideration. We have now averaged double-digit growth across these same metrics for the past 4 years. Another indicator of brand strength is Piper Sandler's fall 2020, Taking Stock With Teens survey where the Crocs brand remained in the top 10 footwear brands preferred by teens in the U.S. In summary, our brand has never been stronger, and the brand strength has further increased through the pandemic. I'm confident that the Crocs brand will continue to drive accelerated growth this year and beyond."

Garmin (GRMN) on more fitness opportunities: "Revenue increased 35%, driven by strong demand for advanced wearables and cycling products. During the quarter, we launched the new Forerunner 745, expanding the features offered in our mid-tier multisport product range. We also launched Clipboard, an app that facilitates team training and performance monitoring using Garmin devices. In the advanced wellness category, we launched the Venu Sq, an entry-level smart watch that combines daily wear style with industry-leading activity tracking and health monitoring features. Looking forward, we expect a broader trends in fitness and wellness to continue. We plan to leverage our recent acquisition of Firstbeat to offer products with unique health, wellness and fitness features. In addition, we intend to capitalize on the indoor cycling opportunity with our Tacx product line."

Sonos (SONO) on reaching an inflection point: "In terms of attracting new customers, we just delivered the 15th year in a row where we've grown the number of homes we're in by 20% or more, ending this year with nearly 11 million households globally. Even with this strong growth in new homes, we continue to see 2.9 products per home in fiscal 2020. I believe we're at an inflection point in the fourth quarter because we are seeing the kind of free cash flow and adjusted EBITDA this model can deliver as it scales. We continued to experience tremendous demand for our products in fiscal 2020. The strong demand has been especially notable for our newest products, Move, Arc, One SL, Sub, Amp and Port, and we saw demand exceed our expectations and our supply for 5 of our key products in the fourth quarter."

Axon (AAXN) on cross-selling International customers: "Ultimately, I think we view any international customer as an opportunity to not only sell TASERs and body cams, but also move them to the cloud and Evidence.com. And for some markets, right off the bat, customers are adopting Evidence.com. For other markets, they're adopting our on-premise solution named Commander first and then subsequently moving to Evidence.com over time. I think for us, the most important thing for any international customer is to get one of our products in their hands. And it really doesn't necessarily matter to us which one they start with because we can really feel confident betting on ourselves that we'll be able to deploy more and more of our products with those same customers over time."

OptionsHawk Executive Summary and Top Picks

In Home & Office goods we are typically looking at individual stock stories considering the diversity across names, a few themes to keep in mind are working from home and out of the office and an overall strong housing market. Like most industries the ecommerce channel is seeing increasing importance, eco-friendly materials and design in demand, and millennials driving the demand. **Yeti (YETI)** continues to be a favorite name with elevated valuation but also high growth, high and expanding margins, high ROIC and an overall powerhouse brand. **Whirlpool (WHR)** is operating well and seeing margin expansion while valuation remains cheap at 8X EBITDA. **Helen of Troy (HELE)** remains a favorite though will lap very tough comps this year but a great management team, leading margins and FCF and a high ROIC. **I-Robot (IRBT)** is another growth name that is continuing to post great numbers with major strength in ecommerce and its Roomba and Braava products accelerating market penetration. **Ennis (EBF)** is a micro-cap that screens cheap in office products. **La-Z-Boy (LZB)** is an overall solid name at 8X EBITDA that is seeing a surge in demand for its products and integrating some key M&A deals. **Tempur Pedic (TPX)** is a favorite name in this entire group with its digital efforts paying off and generating strong margin expansion.

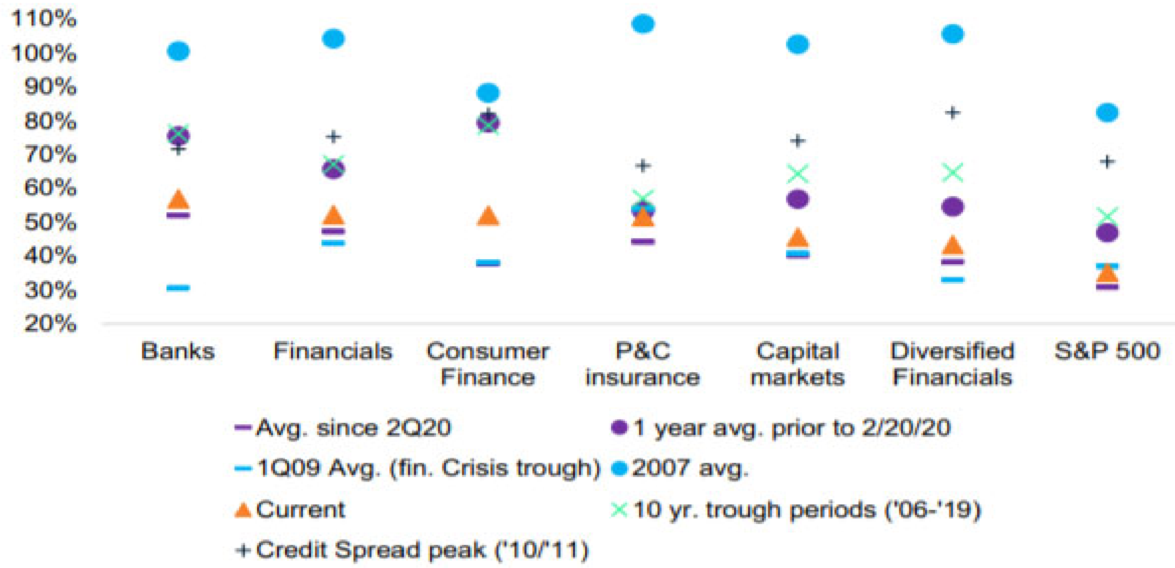
In HPC there are seven $20B+ market cap names and **P&G (PG)** is not only the largest but also the best as it continues to post stellar results. **Estee Lauder (EL)** has long been a favorite but its high valuation coupled with lagging margins puts me on the sidelines. **Colgate (CL), Clorox (CLX)** and **Church & Dwight (CHD)** are all quality names without a lot of separation across metrics, but of the three into 2021 favor **Clorox (CLX)** despite potentially challenging comps while **Unilever's (UL)** valuation at 13.5X EBITDA is most attractive. **Herbalife (HLF)** continues to screen well among the mid-cap names with steady growth, strong FCF and solid margins. **E.l.f. Beauty (ELF)** is a high multiple name with strong margins and seeing a lot of success from it digital strategy, one of the more interest small caps. **Edgewell Personal Care (EPC)** would be the value name at 8.4X EBITDA with strong brands and turnaround potential. **Medifast (MED)** was a big health & wellness winner in 2020 though difficult for me to wrap my head around the sustainability of these MLM companies.

For Apparel & Footwear there are three large caps with **Lululemon (LULU)** a strong growth story with major growth Internationally and now expanding into home fitness while **Nike (NKE)** is another high-quality leader. I am a bit cautious on workwear and both **PVH, RL** look to be names to avoid with sharply contracting margins. **Decker's Outdoor (DECK)** is a favorite mid-cap that remains undervalued for owning some incredible growth brands. **Capri (CPRI)** is the strongest quality own in Luxury and should see benefits of its two key acquisition while having impressive margins and ROIC. **Croc's (CROX)** is the best growth story in the next tier of market caps while **Canada Goose (GOOS)** also an impressive grower with superior industry margins and fits into the small cap tier while seeing a big growth opportunity in China.

In the smaller Consumer Electronics segment **Apple (AAPL)** a clear leader with another launch cycle underway as well as starting to see a stronger mix shift to services. **Sony (SNE)** is another quality name that should benefit from a very strong PS5 launch cycle. **Garmin (GRMN)** continues to post phenomenal numbers and overall my preferred play for the Wearables and Outdoor Recreation themes. **Sonos (SONO)** is the small cap play coming off a great quarter and its brand really resonating with consumers.

Lastly, in Sporting Goods & Toys **Peloton (PTON)** was an incredible story in 2020 and although it may need a breather and face tough comps, it is a dominant brand with a passionate user base and innovating with new products, and is likely to continue to defy the skeptics. **Pool Corp (POOL)** trades at rich valuation but another best-in-class operator with a large market opportunity and excellent management. **Hasbro (HAS)** screens positively across all metrics though business can be bumpy at times, more of an opportunistic buy into weakness. **Axon Enterprise (AAXN)** is a thematic play showing strong growth as well as improving margins with a 25% ROIC. Looking at the small caps **Callaway Golf (ELY)** is an attractive grower with TopGolf upside while not seeing too much of interest in the gunmakers though the spin-out of **American Outdoors (AOUT)** target a $35B rugged outdoor market with leading brands, ecommerce rapid growth and strong margins is worth a look.

Financials: *Financial stocks saw challenges in 2020 with a combination of a weak Macro backdrop and rates that continue to trend lower, the major Bank ETFs (KRE, KBE) down 25%+ much of the year but rallying in November as yields rose. Asset Management firms also struggled for the most part with weak flows though leaders TROW/BLK put in strong years. Insurance stocks also lagged the broader market with the KIE down 18% YTD though some specialty names like GSHD, KNSL, TRUMP, PLMR with big gains YTD and top fundamental plays from last year's report PGR, AJG, BRO outperformed sharply. REITS were also weak at -14% YTD on a combination of weakening occupancy rates and rent collection after the pandemic hit. There were a few strong REITS for niche businesses like SAFE, HASI, and IIPR while Data-Center and Tower plays like EQIX, DLR, SBAC, QTS, CONE continued to generate the best returns in that group. The group related to mortgages outperformed with the strong demand in housing as mortgage rates hit decade lows. Among the aforementioned groups there is not a lot of stock-specific analysis of note as correlations are tight among the names that are tied closely to the Macro backdrop and the cross-asset correlations. It is a group filled with value traps and dividend yielding securities. The most exciting part of this group, and where I spend the most time investing, is across opportunities in Fin-Tech which includes financial software, analytics, payment processors, mobile payments, online lending, real estate services and financial information.*



Foreign Bank Components: AVAL, BAP, BBD, BCS, BCH, BFR, BMA, BMO, BNS, BPOP, BSAC, BSBR, CIB, CM, CS, DB, FBP, GGAL, HDB, HSBC, IBN, ING, ITUB, KB, NTB, RY, TD, UBS, WF, WBK

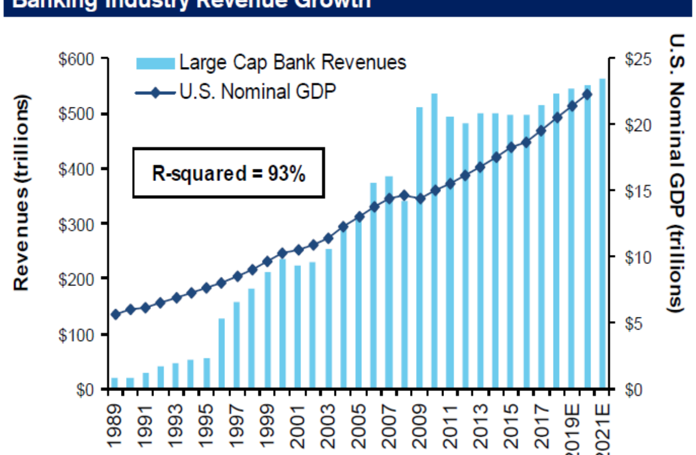
Large National Bank Components: BAC, C, GS, JPM, MS, PNC, WFC, USB, TFC

Trust Bank Components: BK, STT, NTRS

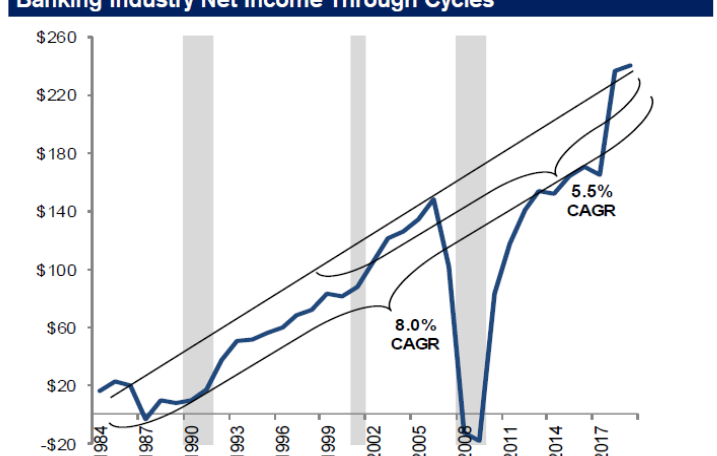
Regional Bank Components: FRC, FITB, EBC, SIVB, MTB, RF, KEY, CFG, HBAN, CBSH, FHN, CMA, EWBC, PB, ZION, PBCT, TFSL, SBNY, FFIN, TCF, SSB, CFR, BOKF, WAL, NYCB, SNV, GBCI, PNFP, UBSI, CBU, VLY, OZK, UMPQ, WBS, CIT, WTFC, UMBF, HOMB, STL, FNB, BXS, PPBI, CVBF, BKU, BOH, FIBK, ONB, PACW, EBC, IBTX, ASB, FHB, TCBI, SFBS, HWC, ABCB, ISBC, COLB, CATY, SFNC, INDB, UCBI, IBOC, FULT, FBC, WSBC, WAFD, CFFN, RNST, WSFS, AX, TRMK, CADE, FMBI, FRME, FFBC, BANR, NWBI, LOB, TOWN, SASR, SBCF, TBK, PFS, HOPE, VBTX, BUSE, EGBN

I broke the Banking group into three above though they are all analyzed in a similar way. There are many smaller regional banks but I am looking mainly at $1B and higher market caps which gives an ample array of companies. The group tends to trade very correlated as Macro influences outweigh individual company attributes, but there are still plenty of metrics to find the best investments. Bank stocks are also in the "value" group and not the "growth" group and the low-rate environment has dictated for value to be out of favor but still worth analyzing for best-in-class names for when/if that relationship shifts. Bank stocks and fundamentals are tightly correlated to macro confidence and investor risk appetite. Revenue is tightly correlated to GDP growth (lending, capital markets), interest rates and the yield curve matter, and then there's credit quality.

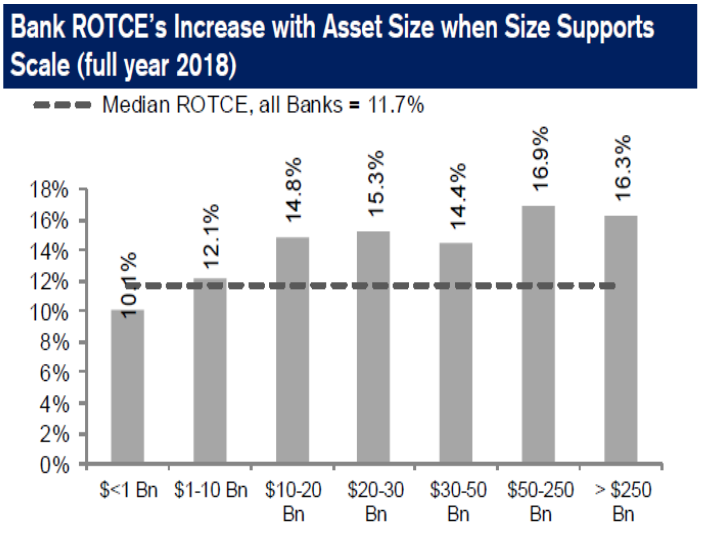
Banking Industry Revenue Growth

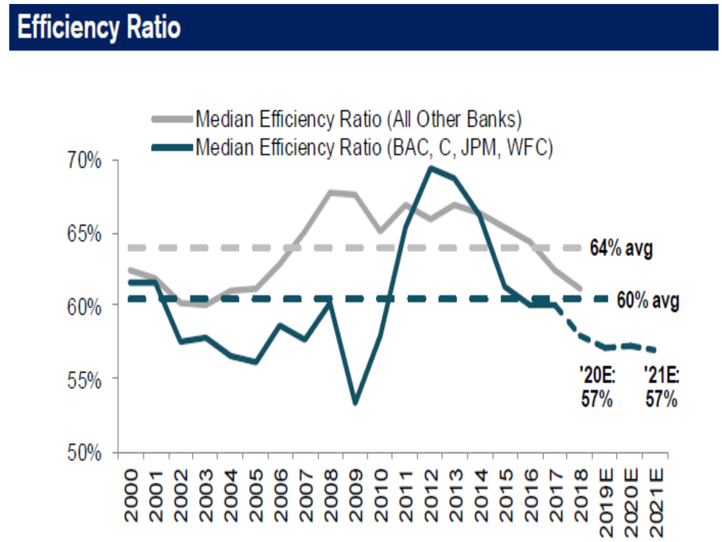


Banking Industry Net Income Through Cycles

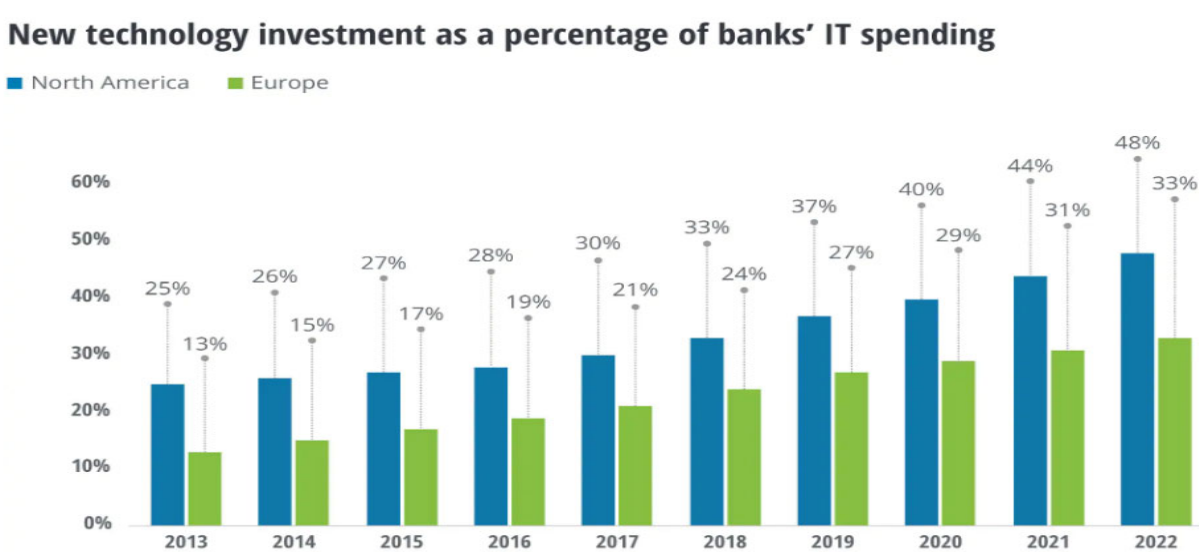


The main business of commercial banks is to match savers and borrowers so that the majority of bank profits is created by the spread between interest earned on assets (mainly loans and securities) and interest paid on liabilities (mainly deposits and so-called wholesale funding). The interest earned on assets is called – surprise – interest income, the interest paid on liabilities is called interest expense and if we deduct interest expenses from interest income we get net interest income (NII). NII is driven by asset volume times the spread that banks earn on assets over funding costs. NII can be further broken down by into an asset margin and a liability margin by using some intermediary interest rate factor (like for example a two-year government bond yield) to separate the two sides. NII divided by the interest-bearing assets (or sometimes alternatively average assets) is called net interest margin (NIM) and is a key profitability metric for banks.

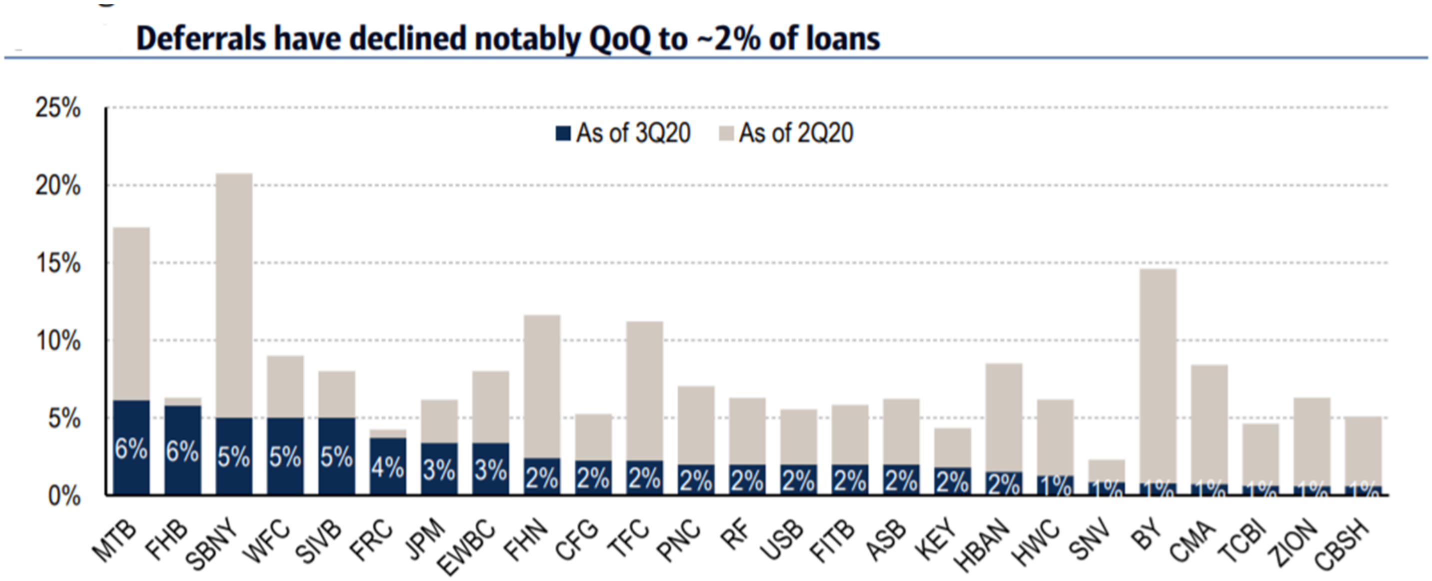




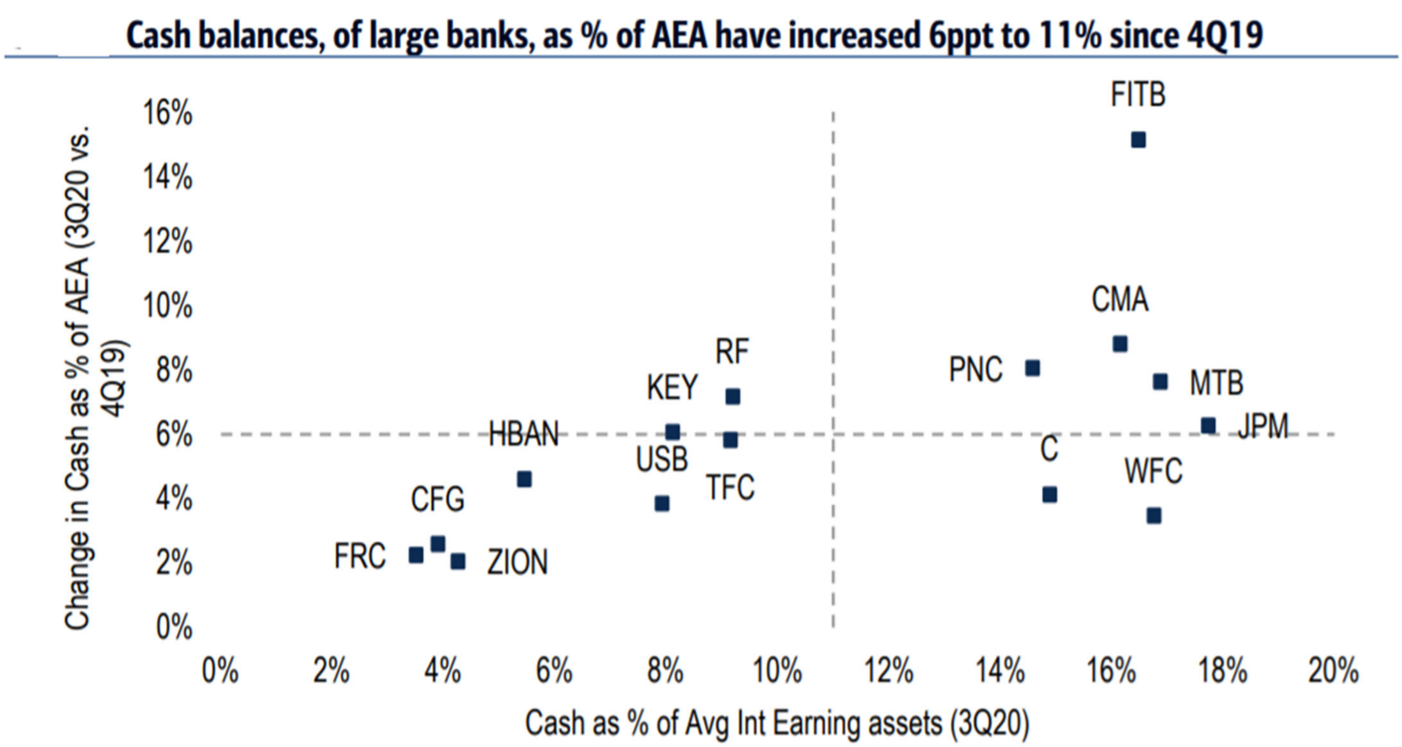
The main metrics for evaluation Bank stocks include ROE, ROA, P/B, P/E, NIM trends, Dividend, Cost/Income Ratio, Balance Sheet (Deposits), Credit Quality (Charge-Offs, Nonperforming Assets/Loans, Loan Loss Reserves, Tier 1 Capital). The U.S. banking industry has been a significant wealth creator for long-term investors. A primary driver of this return has been the industry's compounding of book value—which is a function of its return on equity (ROE)—coupled with dividends paid to shareholders. Book value is one of the most important measures of valuation available to bank investors. It offers a view of the worth of a company's net assets—what the company's shareholders would receive today if all of the company's assets were sold and liabilities repaid. In this way, it can serve as an index to potential shareholder wealth. The compounding of book value, by extension, maps the trajectory of a company's or industry's ability to create shareholder wealth over time. The primary source of compounding book value is ROE, which tells us how much profit a company generates as a percentage of equity. A bank with higher ROE will compound book value at a faster pace. Banks have been investing heavily in Technology to increase efficiency and improve operations as well as improve customer relationships.



The Banking sector has been out of favor throughout 2020 due to the weak Macro backdrop from pandemic challenges and the low-rate environment, although some upside from trading, M&A, and IPO markets. The foreign bank components have been very weak with most down 20% or more YTD, Deutsche Bank the surprising lone exception that is positive YTD. The larger US national banks are down 25% or more on average with Morgan Stanley an outperformer with its acquisition of E-Trade and Goldman performing better than peers on strong trading results. Regional Banks with similar issues with only 4 of 87 tracking with gains YTD (LOB, SIVB, FRC, TBK). Outside of the challenging rate environment, rising loan losses and the absence of buybacks have weighed on the sector. Credit losses are forecasted to peak in 2021 at an average of 2.88% for the big banks and 1.73% for the large regionals. Net interest income is seen toughing in Q3 2020 which could drive a strong EPS recovery in 2021. Banks could also see multiple expansion if they make it through this recession with dividends intact and staying profitable as it will prove balance sheet quality and resilience. Credit quality will be in focus for 2021 after unprecedented government stimulus and relief measures in 2020, deferrals are being eyes as an early indicator of strain, and as shown below thus far not seeing major issues.



Bank cash balances have swelled after material deposit growth from government stimulus and easy monetary policy, cash balances now 11% of average earning assets in Q3 2020 and if deployed could fuel a strong surge in future earnings power.



Ticker	Company	Marke	Divide	P/Bool	ROE	Loan to Depo	Cost of Fur	Loan Y	NIM	DDA (%
PACW	PacWest Bancorp	$2,167	7.38%	0.61	9.58%	98.32%	0.35	5.34	4.18	38%
GBCI	GLACIER BANCORP, INC.	$3,394	3.26%	1.48	12.11%	88.27%	0.21	5.11	4.1	38%
HOMB	HOME BANCSHARES INC	$2,667	3.22%	1.04	11.98%	96.38%	0.67	5.75	4.09	26%
BANR	Banner Corporation	$1,264	3.99%	0.76	9.52%	92.60%	0.3	5	3.88	44%
PRK	Park National Corporation	$1,499	4.57%	1.46	11.40%	92.18%	0.3	4.98	3.84	31%
ABCB	Ameris Bancorp	$2,021	2.06%	0.77	11.36%	91.38%	0.51	4.8	3.81	36%
PPBI	Pacific Premier Bancorp, Inc.	$2,363	4.07%	0.88	8.02%	98.13%	0.43	5.24	3.77	35%
OZK	Bank Ozk	$3,133	4.45%	0.74	10.75%	94.90%	0.94	5.23	3.72	18%
CVBF	CVB FINANCIAL CORP	$2,358	4.14%	1.18	10.78%	86.94%	0.13	4.92	3.68	63%
SBCF	SEACOAST BANKING CORP OF FLORIDA	$1,159	#VALUE!	1.04	10.68%	93.08%	0.35	4.87	3.68	34%
PB	Prosperity Bancshares, Inc.	$4,943	3.47%	0.81	7.38%	77.54%	0.42	5.37	3.67	35%
BXS	BANCORPSOUTH INC	$2,325	3.33%	0.87	9.58%	85.97%	0.55	4.56	3.57	52%
BANF	BancFirst Corporation	$1,407	3.04%	1.33	14.14%	75.66%	0.2	5.3	3.53	39%
FIBK	First Interstate Bancsystem Inc	$2,321	5.51%	1.13	9.76%	76.57%	0.19	5.01	3.51	33%
FFBC	First Financial Bancorp	$1,378	6.54%	0.61	9.76%	97.81%	0.55	5.02	3.42	30%
UCBI	UNITED COMMUNITY BANKS INC	$1,758	3.55%	0.93	12.37%	80.87%	0.47	5.31	3.4	37%
TCF	TCF FINANCIAL CORP	$4,024	5.30%	0.73	10.56%	100.08%	0.56	5.06	3.37	27%
RNST	RENASANT CORP	$1,606	3.08%	0.76	8.05%	94.91%	0.59	4.81	3.36	32%
HWC	HANCOCK WHITNEY CORP	$1,897	4.92%	0.55	10.60%	76.54%	0.39	4.5	3.21	43%
SSB	South State Corp	$4,104	3.25%	0.89	8.26%	93.41%		4.63	3.21	33%
ZION	Zions Bancorporation NA	$5,018	4.44%	0.70	10.47%	85.33%	0.19	3.75	3.21	47%
RF	REGIONS FINANCIAL CORP	$12,221	4.91%	0.74	9.66%	85.11%	0.3	4.34	3.17	41%
ONB	Old National Bancorp	$2,303	4.02%	0.78	8.60%	83.26%	0.35	4.34	3.14	32%
STL	STERLING BANCORP	$2,440	2.23%	0.54	9.53%	95.39%	0.62	4.44	3.14	23%
FMBI	First Midwest Bancorp Inc	$1,373	4.66%	0.55	9.73%	96.90%	0.37	4.46	3.12	36%
LKFN	Lakeland Financial Corporation	$1,249	2.43%	1.94	15.55%	98.39%	0.61	4.56	3.08	31%
SNV	SYNOVUS FINANCIAL CORP	$3,572	5.44%	0.77	15.07%	96.83%	0.64	4.54	3.08	28%
PBCT	People's United Financial, Inc.	$4,472	6.84%	0.58	7.63%	100.21%	0.4	4.2	3.05	27%
CBSH	Commerce Bancshares, Inc.	$6,818	1.77%	2.03	13.29%	71.82%	0.16	4.37	2.93	40%
FHN	First Horizon National Corp	$5,550	6.00%	0.75	11.32%	95.78%	0.39	4.29	2.88	31%
FNB	F.N.B. Corp	$2,334	6.65%	0.48	8.14%	93.96%	0.67	4.5	2.87	30%
HOPE	Hope Bancorp Inc	$975	7.08%	0.48	8.68%	97.97%	0.97	5.03	2.78	29%
SIVB	SVB FINANCIAL GROUP	$18,557	#VALUE!	1.89	19.62%	53.70%	0.06	4.55	2.78	66%
PNFP	Pinnacle Financial Partners Inc	$3,291	1.49%	0.70	9.90%	98.05%	0.73	4.07	2.76	27%
SBNY	Signature Bank Corp	$4,157	2.89%	0.81	12.87%	96.78%	0.73	3.93	2.75	32%
FITB	Fifth Third Bancorp	$15,985	4.78%	0.75	10.68%	86.22%	0.48	4.46	2.73	31%
WTFC	WINTRUST FINANCIAL CORP	$2,666	2.38%	0.72	9.99%	89.02%	0.72	4.46	2.73	29%
FRC	First Republic Bank	$21,317	0.64%	2.15	9.51%	100.74%		3.25	2.72	38%
ISBC	Investors Bancorp, Inc.	$2,066	5.81%	0.76	6.95%	121.52%			2.7	13%
UMBF	UMB FINANCIAL CORP	$2,919	2.05%	1.01	10.08%	62.17%	0.23	4.44	2.68	35%
BKU	BankUnited, Inc.	$2,238	3.76%	0.79	10.15%	94.92%	1	4.11	2.39	23%
TCBI	Texas Capital Bancshares Inc	$2,220	#VALUE!	0.82	11.81%	62.57%	0.48	4.24	2.28	36%
NYCB	NEW YORK COMMUNITY BANCORP INC	$3,748	8.42%	0.59	5.42%	132.34%	1.35	3.76	2.18	9%

Net Interest Income Growth Rates

	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E
Banks >$5 Billion Market Cap.										
Median	0.7%	4.7%	3.1%	6.3%	12.1%	14.7%	7.2%	-0.4%	0.5%	2.0%
Average	4.3%	8.5%	3.7%	6.9%	10.9%	16.8%	7.0%	7.8%	2.9%	1.9%
Banks $2-5 Billion Market Cap.										
Median	6.2%	14.3%	12.8%	12.7%	17.7%	17.2%	7.7%	-0.3%	0.8%	2.1%
Average	8.1%	22.2%	13.3%	15.6%	19.9%	16.6%	14.2%	4.0%	1.7%	2.2%
Banks <$2 Billion Market Cap.										
Median	14.0%	10.5%	21.9%	18.2%	17.0%	23.5%	11.0%	10.9%	4.4%	3.9%
Average	15.9%	11.8%	26.8%	23.6%	25.9%	25.3%	15.9%	17.2%	10.9%	5.1%

Net Interest Margin	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E
Banks >$5 Billion Market Cap.										
Median	3.32%	3.24%	3.16%	3.22%	3.25%	3.59%	3.52%	3.07%	2.88%	2.84%
Average	3.40%	3.30%	3.12%	3.18%	3.33%	3.54%	3.50%	3.08%	2.90%	2.85%
Banks $2-5 Billion Market Cap.										
Median	3.98%	3.92%	3.66%	3.60%	3.65%	3.83%	3.81%	3.27%	3.20%	3.14%
Average	4.04%	4.04%	3.82%	3.75%	3.81%	3.88%	3.78%	3.33%	3.22%	3.17%
Banks <$2 Billion Market Cap.										
Median	3.27%	3.12%	3.19%	3.20%	3.07%	3.39%	3.31%	3.03%	3.02%	2.99%
Average	3.28%	3.17%	3.03%	3.06%	3.24%	3.36%	3.30%	2.96%	2.92%	2.94%

Management Commentary:

Northern Trust (NTRS) on Asset Mgmt. trends and low rate playbook: "Our asset management business is seeing considerable market share gains during 2020 within our liquidity products, which have strategically been positioned over time. We've also experienced recent success in our active and index fixed income and tax-advantaged equity products. We manage nearly $100 billion in assets globally under ESG mandates, where our strong capabilities position us for future growth in this space. As we move forward in the current and persistent low interest rate environment, we will accelerate our focus in 2 areas. First, we will continue to drive greater efficiencies with a focus on technology, solutions to drive productivity gains. Second, from a growth perspective, we're focused on doing more with our existing client base and also bringing on new clients to allow us to continue to grow organically in a scalable, profitable manner."

US Bancorp (USB) on the environment: "So as I mentioned, the consumer side is really good. The combination of the stimulus programs, which have created a bridge over these very troubled waters, the forbearance programs that we and many banks have in place, and the final -- the consumer spend being lower and coming in at a lower leverage level, all those things add up to the consumer actually being in a very strong position. And if you look at all the facts from an economic standpoint and look at consumer delinquencies, you would say you are in 2 different environments. It just doesn't add up. And then on the commercial side, it's actually a tale of 2 cities. We have a number of companies that are struggling in a very significant way. Certainly, the airlines and hospitality, lodging, all those malls are struggling because of all the impacts that we know about. But at the same time, there are a number of companies that are doing very well, in some cases, having record profits and record revenue. So you add all that up, and we project using the CECL methodology, as you know, given the scenarios that we talked about, a loan loss reserve level that we think is -- we believe, is sufficient at the end of the third quarter. And unless the economic scenario deteriorates significantly from where we see it, we would not expect to put in more reserve. And given the delays that we're talking about with the forbearance programs as well as the stimulus, I don't think charge-offs are going to actually peak until the second half of 2021."

Goldman Sachs (GS) on Capital Markets: "Look, I'd say we have a positive view on volumes going forward, and I'd probably take it into 2 pieces. First, on the primary calendar, continues to look very, very strong with very high levels of financing backlog. So we continue to expect elevated levels through the primary calendar, and that obviously plays through into the secondary volumes. On the trading side, I'd say I continue to expect to see elevated volumes as investors continue to adjust their portfolios to a number of things, the trajectory of the economic recovery, additional central bank activity, evolving inflation expectation, another kind of micro level events around individual companies and sectors."

Western Alliance (WAL) on deposit growth: "We continue to believe our ability to profitably grow deposits is both a key differentiator and a core value driver to our firm's long-term value creation. Market share gains in mortgage warehouse and robust activity in tech and innovation continue to be significant drivers of deposit growth. WAL's unique credit risk management strategy is focused on establishing individual borrower level strategies and direct customer dialogue to develop long-term financial plans. Our pipelines are strong, and we expect loan growth to return to previously anticipated levels of $600 million to $800 million for the next several quarters in low-risk asset classes."

SVB Financial (SIVB) on its surge in client inflows despite the environment: "I would put it into 2 categories. Clearly, 1 is the wind at our back from the innovation economy. And what I mean by that is it's the venture capital flowing into the market. It's the fact that there's few places for investors to put their money and you can't put it in fixed income. Commercial real estate, is it looking very attractive right now. And so when you think about where you're deploying money, people are looking at growth. And what are the only places you can invest for real growth is in the innovation economy. And so when you think about even the public markets, the public markets drove roughly $13 billion of client funds in the quarter, right? We have 62% market share of the venture-backed IPOs in the quarter and 73% and of the venture-backed IPOs health and tech over the course of the year. So you've got the wind at our back from the innovation economy, and you marry that then with execution. Again, where we're investing in people, where we're investing in technology. So it's executing our strategy with the wind at our back and the economy and the combination of those 2 things is driving incredible total client funds growth."

Triumph (TBK) on Business Capital segment: "In addition to benefiting from the aforementioned industry tailwinds, Triumph Business Capital's new client growth pipeline is more robust than ever, with each month in the third quarter successively setting records for new client applications. In the third quarter, Triumph Business Capital received more than 1,800 new client applications, which represents clients new to factoring as well as factoring veterans choosing us over competitors. That is a 63.7% increase over the third quarter of 2019. We recognize this quarter was the intersection of a perfect storm of a liquidity surge, low capacity, unique consumer behavior, inventory restocking and seasonal holiday builds. And so while these spot rates may not be sustainable in the long run, the fundamentals of our factoring operations are strong and continue to grow in both scale and efficiency and our technology advantage over our competition."

OptionsHawk Executive Summary and Top Picks

In Q3 we saw Bank EPS rebound but the resurgence in COVID could restrain any growth opportunities near-term. Spread revenue pressure should continue particularly as loan demand remains weak. Fee income should be aided by more moderate strength in mortgage banking and gradually improving activity levels. Expense control is a focus, with some of the opportunities in real estate.

In the large cap group, for Capital Markets, **Morgan Stanley (MS)** screens strong and should benefit from its large deal for **E-Trade (ETFC)**. **JP Morgan (JPM)** remains the best-in-class US Bank operator with its industry leading ROE and growth while **PNC Financial (PNC)** valuation is attractive while offering strong metrics and closing 2020 with a key deal for the US operations of **BBVA**. **Northern Trust (NTRS)** is the preferred Trust Bank play.

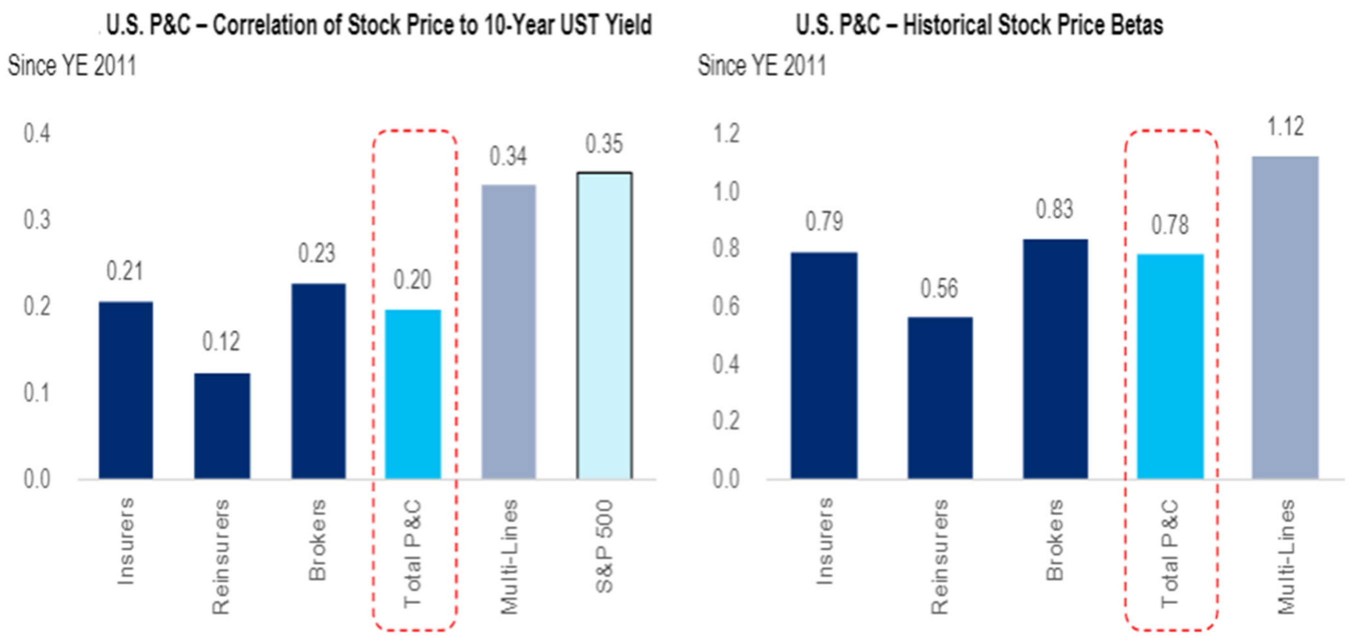
Keeping this group as simple as possible, among the Regional Banks, the preferred large cap leaders are **SVB Financial (SIVB)** with its best-in-class ROE near 20%, and **Western Alliance (WAL)** with a 14.4% ROE and strong NIM. **East-West (EWBC)** is another quality name. Among the smaller names **Glacier (GBCI)** with a strong ROE and NIM, **Home (HOMB)** and **Park National (PRK)** all stand out as best-in-class across operating metrics. **Lakeland (LFKN)** is a small cap with a leading 15.55% ROE and **BancFirst (BANF)** also screens well. There are two small cap outperformers from 2020 with impressive growth, **Live Oak (LOB)** a specialty vertical lender, and **Triumph (TBK)**.

Insurance Providers

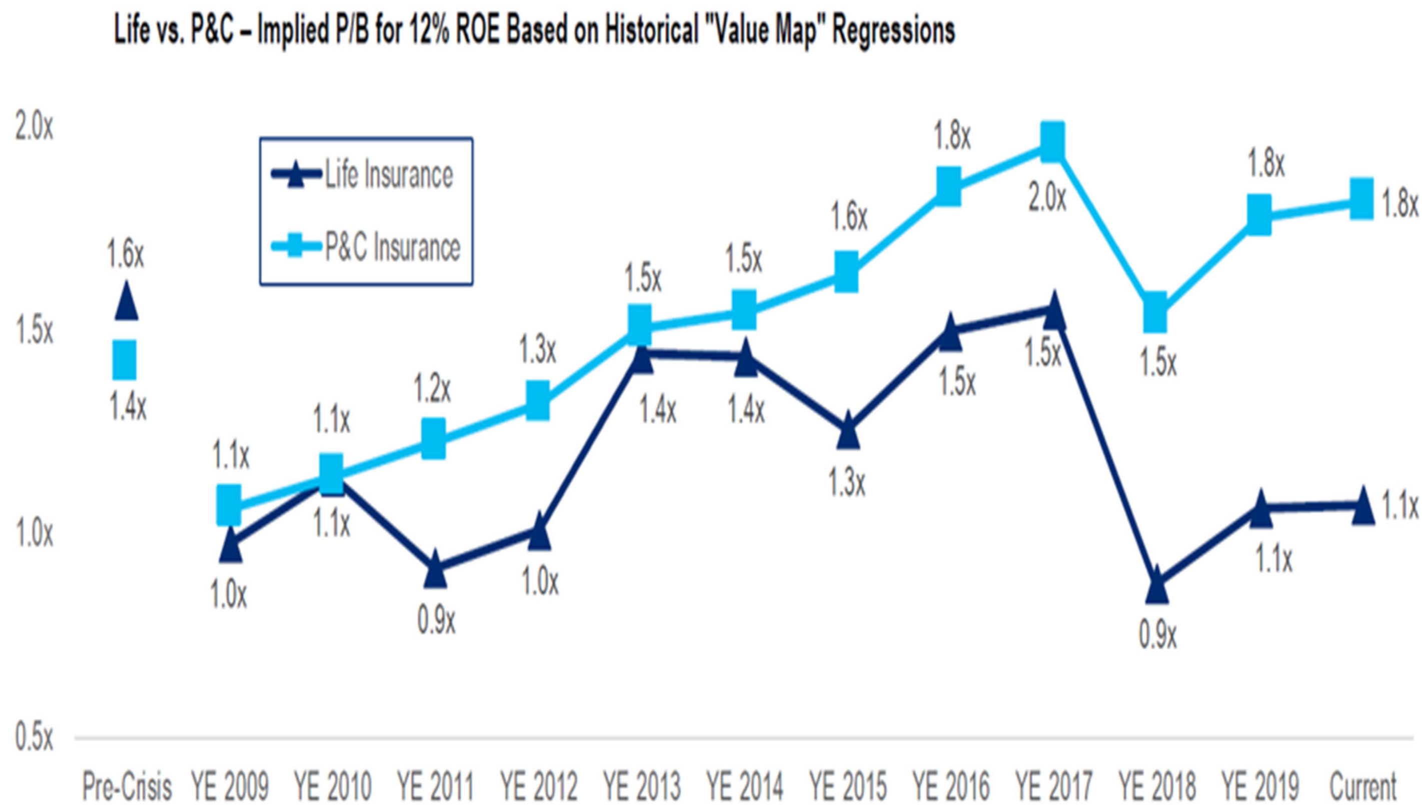
There are more than 65 insurance companies with a market cap above $2B so the group is easier to digest breaking down into Life/Health, P&C, Reinsurance, Specialty, and Mortgage/Title. Insurance income statements have two segments – underwriting income (or loss) and investment income. Underwriting income is the profit from selling premiums less claims paid out. For insurers, there is a difference in timing between when premiums are collected and when claims are paid. However, the cash is received upfront and the claims are paid out at a future date. This account is called the float. During the time before claims are paid, the insurance company invests the cash into securities such as stocks and bonds to earn a return.

It was a tough year in the low-rate environment for the group with all but 15 of the names down 10% or more YTD. Notable outperformers were best-in-class picks from last year's outlook like PGR and BRO while specialty names GSHD, TRUP, PLMR had big years. Technology is playing an increasing role in this industry as well with "Insure-Tech" start-ups including online brokers and a surge in software/analytics to improve operations.

There are a number of large foreign companies and many provide very good research and industry intelligence on their websites. Some of the larger players include AXA SA, China Life, Ping An, Allianz SE, Munich Reinsurance, Nippon Life, Zurich Insurance, Swiss Life, Swiss Reinsurance, Tokio Marine, Aviva, and Sumitomo Life. There are also large private players like Liberty Mutual and State Farm.



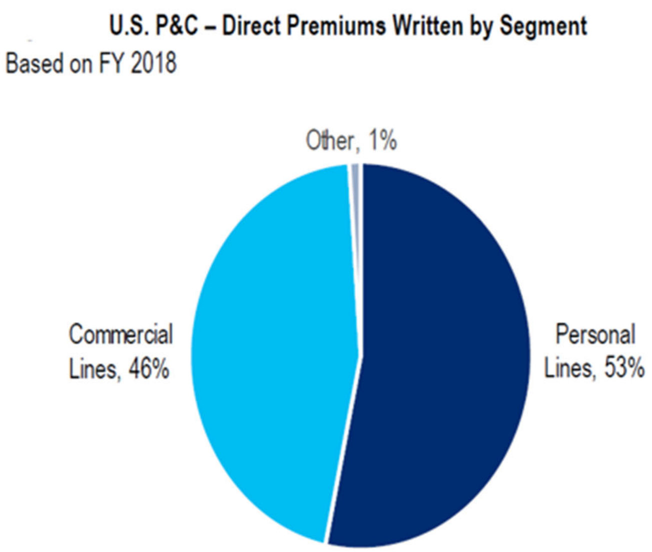
ROE is a strong measure of profitability and P/B often used in valuation, while specific ratios to the group are combined and operating ratios, underwriting leverage, investment yield, and investment return. The most simplistic, yet effective approach, is looking at Price/Book and Price/Earnings compared to ROE, which has shown the strongest coefficient of determination of performance. Analysts will look at growth in premiums written, in particular direct premiums written (DPW) as a function of higher market penetration and organic growth. Analysts will also look at the combined ratio year-over-year as well as trends behind the combined ratio in the loss and expense ratios.

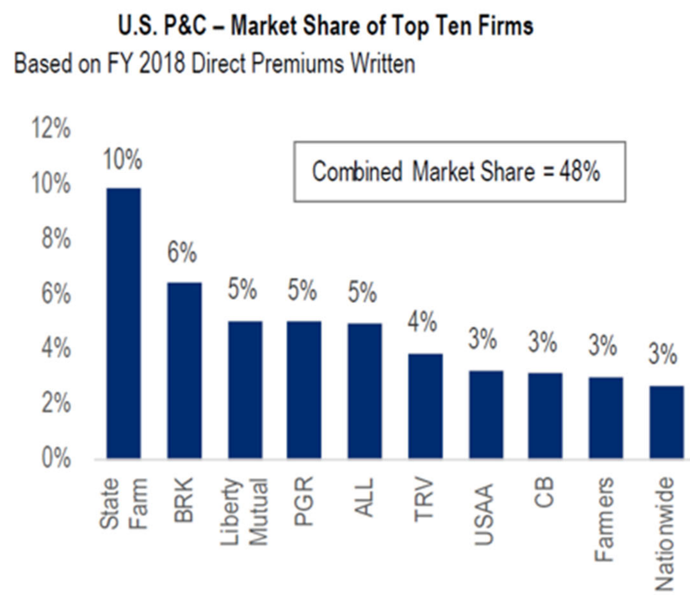


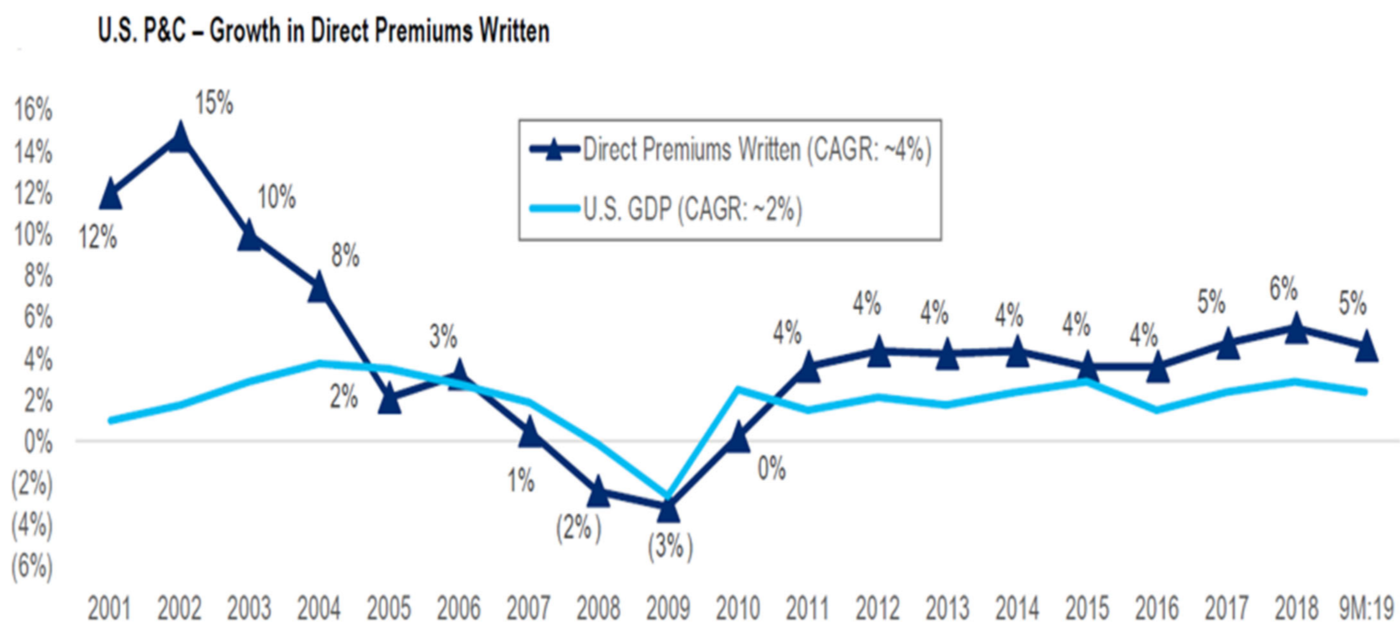
P&C Insurance Components: FANH, EIG, TPRE, RLI, PRA, KMPR, KNSL, L, HMN, CB, CINF, CNA, AFG, THG, SIGI, TRV, UIHC, UVE, Y, ANAT, MKL, BRK.B

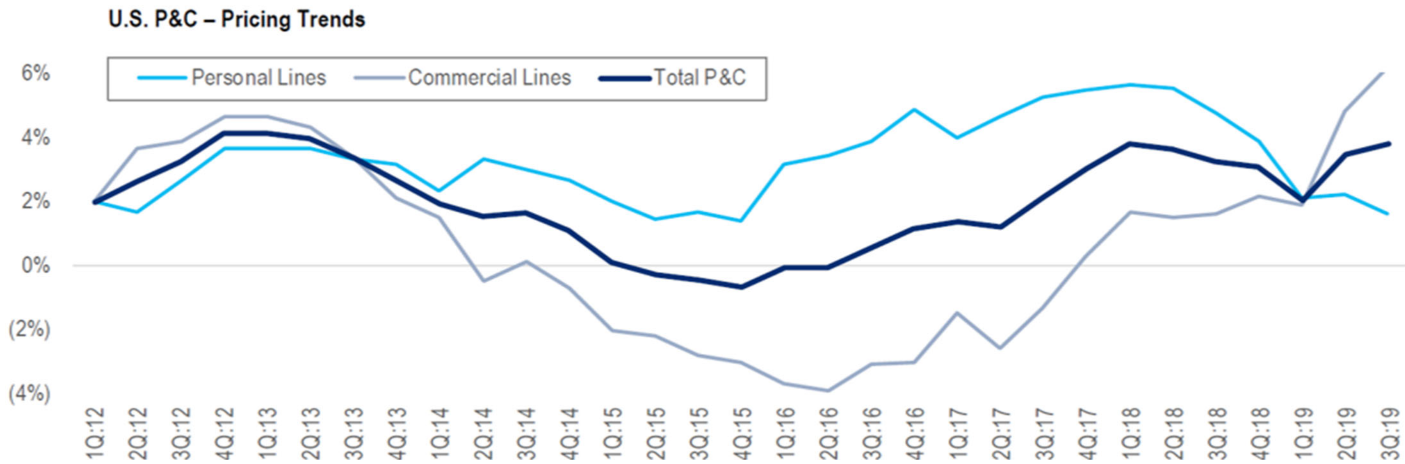
The P&C Insurance group differs from many other companies as revenues hold less importance and metrics like Net Premiums Written and Net Premiums Earned, and their respective ratios are observed. The combined ratio is another metric, the sum of the Loss and Expense ratios, and 100% minus that ratio is the Underwriting Margin. Investment income is also closely watched, often called Float, and secondary source of earnings and closely tied to the rate environment. Reserves is another balance sheet item of important, and a Reserves-to-Loss ratio should be in the 2.5 to 1 range.

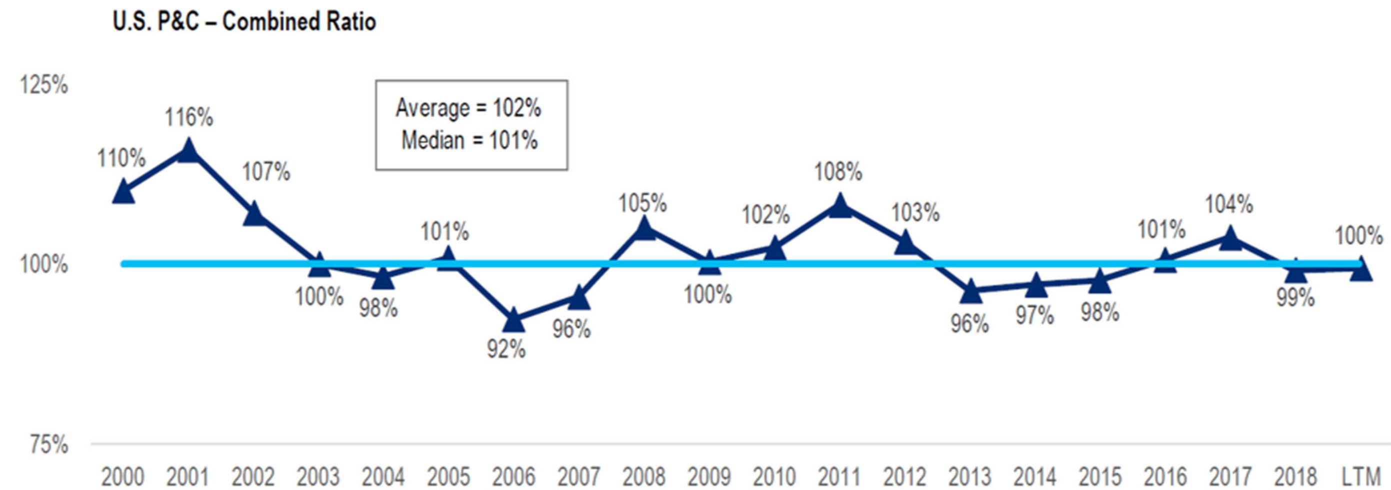
P&C insurance is considered one of the most defensive sectors in US financials with minimal fundamental exposure to equity markets while its correlation to interest rate movements is also below that of the market. P&C companies also have low credit exposure given the low leverage and high-quality portfolios. Core growth in the P&C industry has been strong in recent years at a mid-single digit pace with pricing strength contributing. Many personal line products are mandatory and thus demand for P&C strong irrespective of market/macro conditions while new and evolving sources of exposure such as cyber can drive incremental growth. The main concern is rising loss costs due to social inflation, high severity liability exposure, and climate change.









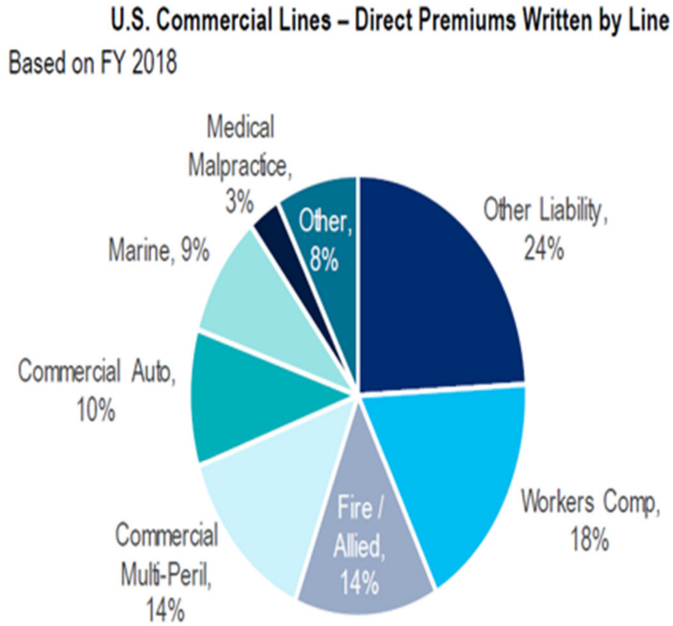


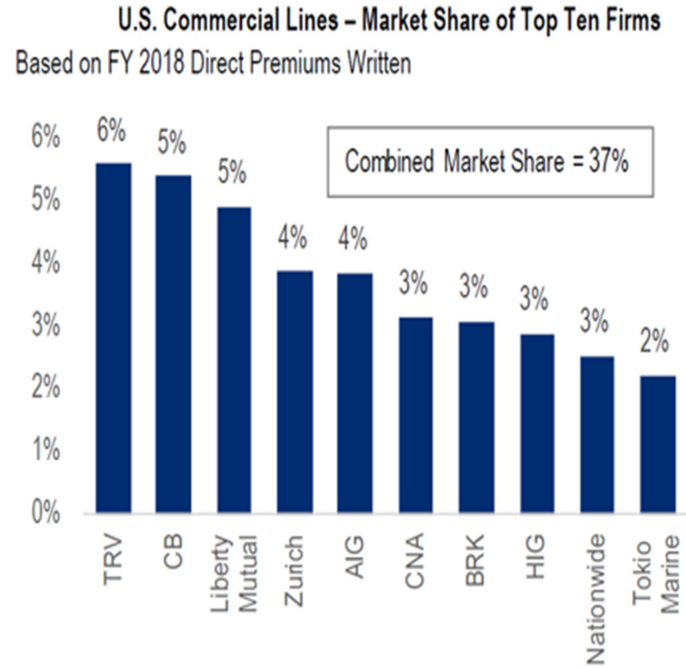
Life Insurance Components: UNM, BHF, AFL, AEL, CNO, LFC, LNC, MET, MFC, PRU, PUK, PFG, HIG, EQH, AIG, ATH, SLF, GTS, VOYA, GL

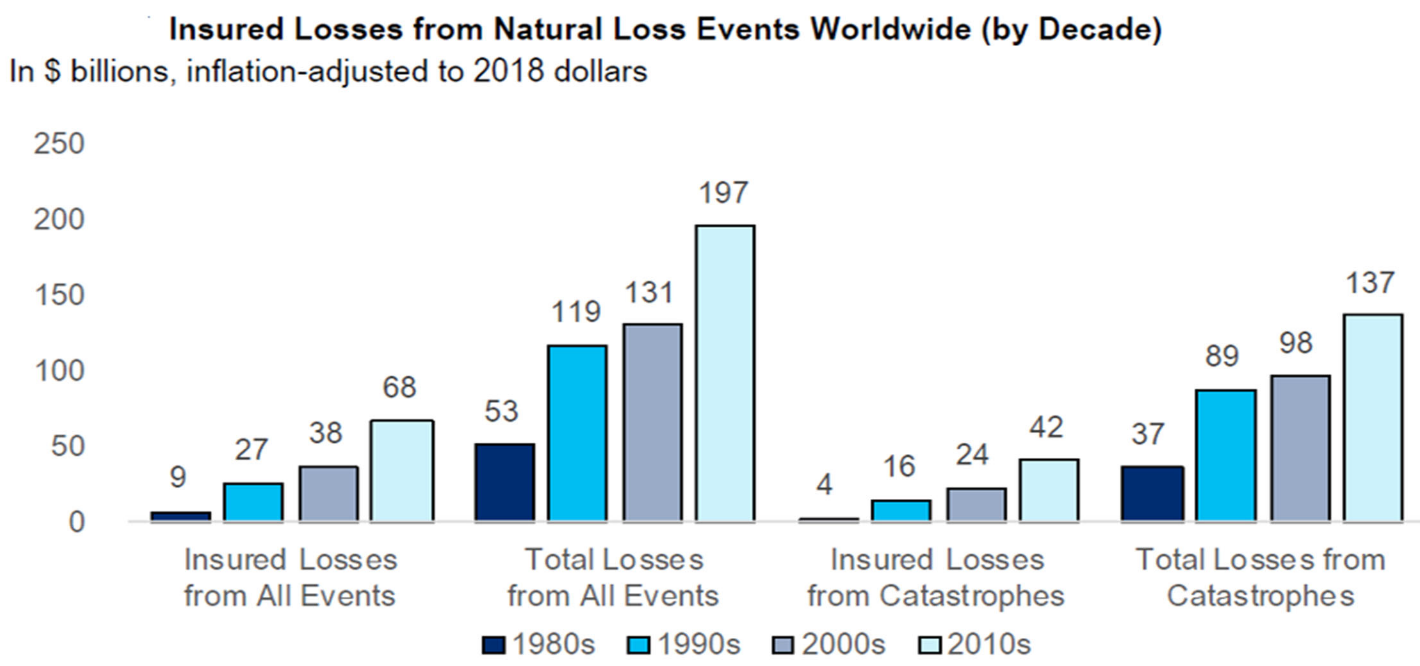
Life stocks have underperformed the broader equity market over a multi-year period due to periodic volatility, pockets of regulatory uncertainty (i.e. Department of Labor's fiduciary rules), concerns on long-tail liabilities (i.e. LTC and variable annuities) and generally low long-term interest rates. Life stock moves can be 90% explains from the YS 10-year Treasury yield and the S&P 500 level. There are industry-specific factors that impact stocks prices including regulation, growth expectations, and capital trends. In 1H19 life insurance companies reported $28B in net income, rising 36% Y/Y and net premiums and deposits rose 14%.

Emerging Risk Landscape	TREND 1	Insurers explore wellness initiatives to monitor, manage, and improve policyholders' health
	TREND 2	Life insurers begin to provide flexible offerings to emerging customer segments
Changing Business Environment	TREND 3	Ecosystem collaboration opens avenues for insurers to serve customers better
Evolving Customer Preference	TREND 4	Life insurers are exploring digital-only offerings to improve operational efficiencies
	TREND 5	Insurers reduce customers' purchase cycle to improve customer experience
Enhancing Operational Efficiency	TREND 6	Insurers enhance underwriting process by leveraging analytics and AI
	TREND 7	Life insurers are exploring a variety of blockchain use cases and long-term benefits
	TREND 8	Epigenetics may pave the way for personalized life insurance premiums and more accurate underwriting

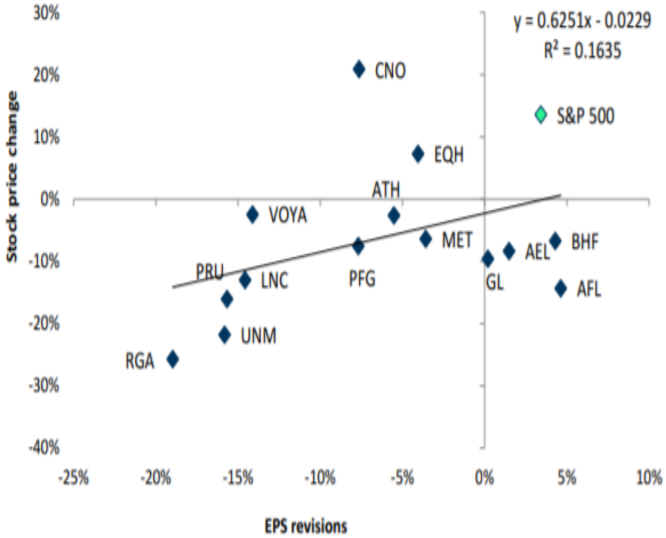
Global premiums are forecast to increase by 2.9% in each of the next two years—much better than the 0.6% annual average over the last decade. This increase is once again driven largely by emerging markets, where premiums are forecast to rise by a robust 8.7%. Life insurers have been experimenting for several years with new sources of data and analytic tools to improve customer experience, streamline the sales process, and engage with policyholders more often, rather than only at renewal.

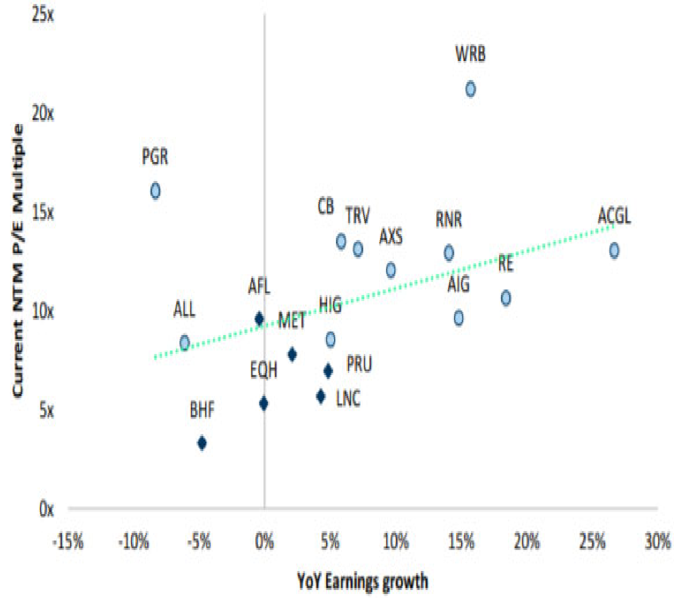






Considering the wide range of businesses that fall under life, with varying risk profiles, capital requirements, cash flow generation and growth rates, a sum-of-the-parts valuation is most appropriate. More capital intense, macro sensitive earnings streams (such as long-term care, secondary guarantee universal life and variable annuities with living benefit guarantees) should be assigned a P/E discount to less capital intensive and less macro sensitive earnings (such as variable annuities without living benefits, shorter-tailed accident and health products, and asset management businesses). In terms of cash flow a more relevant measure is sustainable cash generation yield, with cash generation defined as deployable capital generated during the year, and sustainable cash generation defined as deployable recurring capital generated during the year. This is different from free cash flow, which is capital remitted to the holdco, including from non-recurring releases, less holdco costs.

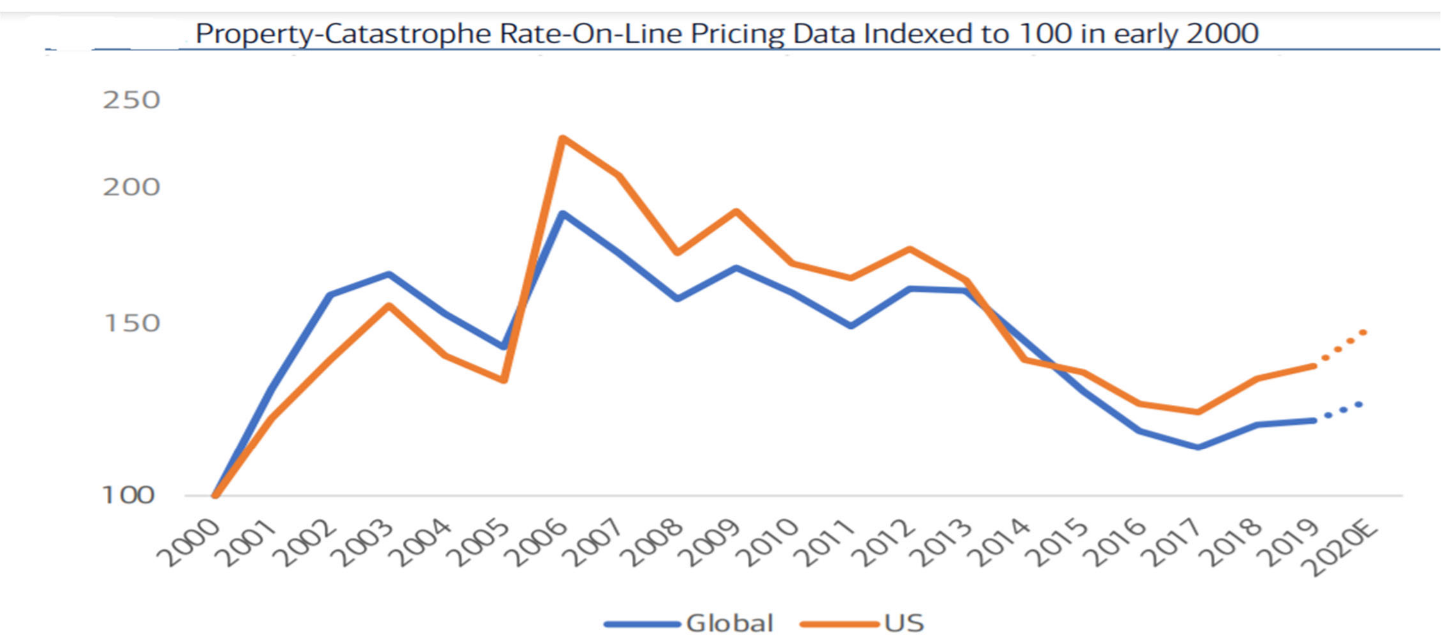




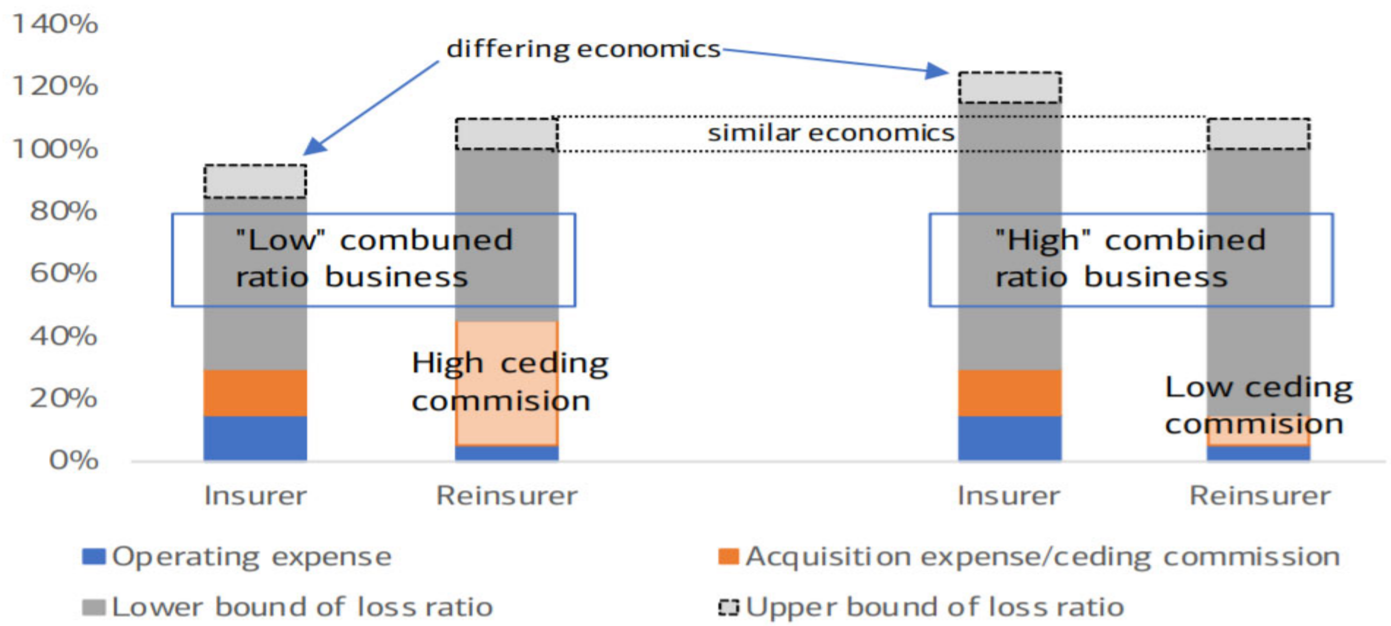
EPS revisions are based on 2021 estimates.

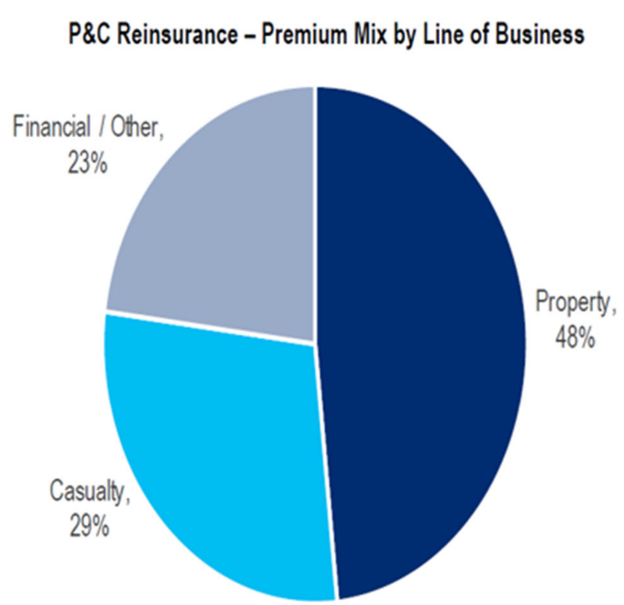
Reinsurance Components: JRVR, RNR, RE, RGA, AXS, WRB, ACGL, ESGR

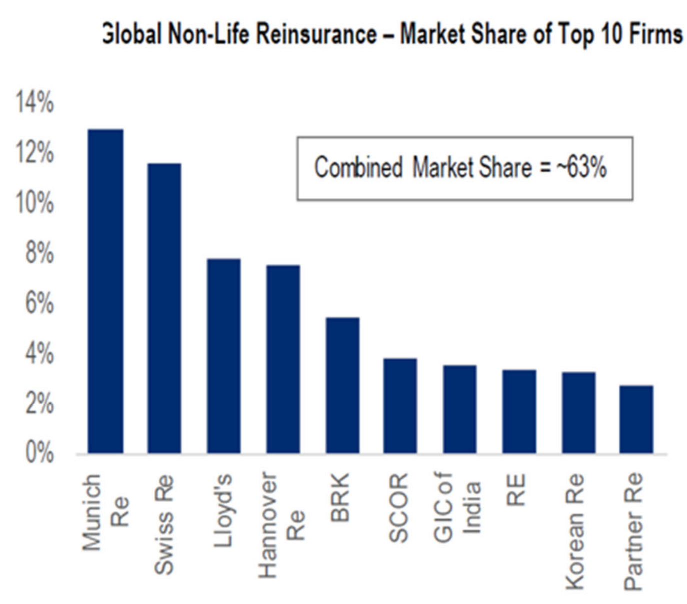
The reinsurance group tends to insure the P&C companies against various natural disasters and other events. Reinsurers provide insurance to companies that can utilize reinsurance to free capital, reduce exposure concentrations, improve returns, or validate underwriting. Reinsurance business can be divided between treaty (coverage for a book of risks, the vast majority of risk transferred to reinsurers) and facultative risks (the transfer of part or all of a single reinsurance contract). Treaty risks tend to be divided between pro rata (the transfer of a proportion of the economics to a reinsurer) and excess-of-loss risks (the transfer of a layer of risks to a reinsurer). While most reinsurers are open markets that write pro rata treaty, excess-of-loss treaty and facultative risk, the companies that formed following Hurricane Andrew, 9/11 and Hurricane Katrina tended to be markets that targeted the excess-of-loss market upon formation, while the legacy European reinsurers and Everest Re were known as reliable counterparties in the pro rata treaty market (but were also willing to underwrite excess of loss risk). The Reinsurance market has increasingly been split between traditional players and alternative capital providers, the latter has pressured pricing and thus ROE of the traditional players that also face headwinds from low interest rates and rising loss costs. The prevalence of alternative capital does have one benefit, providing a potential fee revenue stream for providing services to third-party capital.



The combined ratio is important in this group and the business is very cyclical with Hurricane season June 1st to November 30th, and most policies written near the end of the calendar year. Reinsurers are expected to be long-term beneficiaries of rising Commercial Line loss costs as primary insurers look to offload more risk, though these trends have also pressured ROE. M&A potential has provided some valuation support. Over the past three years there have been $300B in insurance industry catastrophe losses and hesitant capital deployment as constriction of the reinsurance industry's balance sheet will likely cause greater pricing lift relative to primary pricing. Simplistically, these two types of business—excess-of-loss and pro rata—yield a very different set of financial outcomes, though reinsurance contracts can mix qualities of both. Historically, reinsurers have built companywide combined ratios as a mix of the two types of business. Excess-of-loss contracts can have de minimus loss ratios in most years with materially high loss ratios in the years where the big loss is triggered. The most structured of pro rata contracts have tended to produce combined ratios modestly north of 100%. The more volatile the results, the more skewed a book is toward excess of-loss treaties with the "accident-year ex-catastrophe combined ratios" almost always low. The more stable the results, the more skewed a book is toward pro rata agreement, but also the more difficult it is to achieve an underwriting profit. The goal of the reinsurer is to find the "magic middle" between these two underwriting styles that maximizes return with the lowest capital consumption.

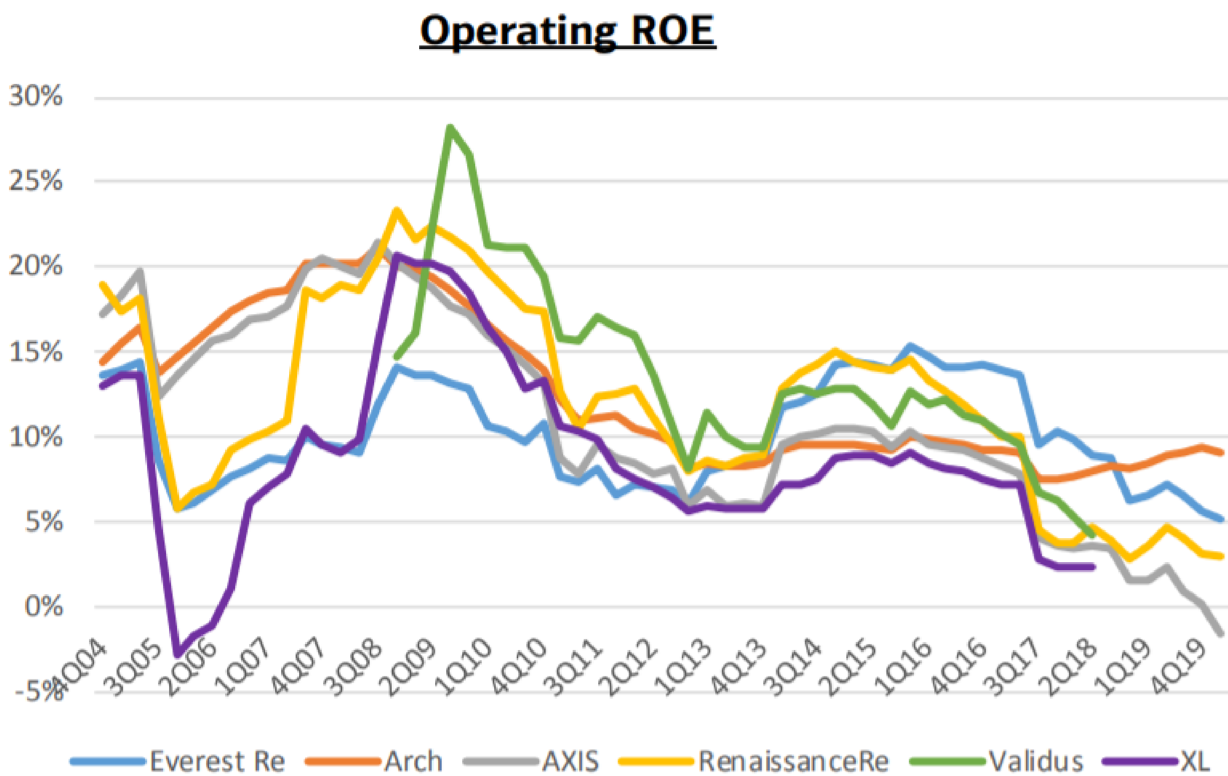






Consolidation has been a major theme in reinsurance, several deals over the last few years shown below:

Announced	Buyer	Target	Deal Value ($Bn)
Nov 2011	Alleghany (Y)	Transatlantic (TRH)	3.5
Dec 2012	Markel (MKL)	Alterra Capital (ALTE)	3.1
Nov 2014	RenaissanceRe (RNR)	Platinum Underwriters (PTP)	1.7
Jan 2015	XL Group (XL)	Catlin Group	3.8
Mar 2015	Endurance Specialty (ENH)	Montpelier Re (MRH)	1.4
Apr 2015	Exor SpA	PartnerRe (PRE)	6.1
Jul 2015	China Minsheng	Sirius International	2.2
Oct 2016	Sompo Holdings	Endurance Specialty (ENH)	6.3
Jan 2018	American Int'l Group (AIG)	Validus (VR)	5.5
Mar 2018	AXA	XL Group (XL)	15.4
Aug 2018	Apollo Global (APO)	Aspen Insurance (AHL)	2.6



Personal Line: Auto, Mortgage & Title Insurance Components: ESNT, EFC, AMBC, FNF, RDN, FAF, MTG, MBI, NMIH, STC, PGR, NGHC, MCY, ALL, ORI, GSHD

In Personal line insurance there is high concentration with solid growth prospects. In Auto pricing has flattened out recently and severity is a headwind, but profitability is strong and advances in technology such as Telematics and ADS can lower frequency of claims.

Specialty Insurance Components: CRVL, AIZ, TRUP, PLMR, ECPG, AGO, WTM

Insurance Broker Components: EHTH, GOCO, SLQT, ROOT, MAX, LMND, EVER, ERIE, BRO, ARGO, AON, MMC, WLTW, AJG, PRI, AFSI

The brokers are positioned as a better low risk play on Commercial Line price increases and growing complexity of insurance exposures. Included in this group are the online insurance quote providers like EVER, MAX, EHTH, SLQT, GOCO and LMND which exhibit much stronger growth and have potential to disrupt the industry.

Management Commentary:

Chubb (CB) on more frequent catastrophic disasters: "The increasing trend of both frequency and severity of events from a variety of natural perils, wind, flood and fire related, informs our views of current and future expected cat loss levels as well as our view of required rate to ensure the exposure in both commercial and consumer property-related lines. Where we can get paid adequately for the volatility and uncertainty, we will maintain and even grow our exposures. Where we cannot, we shrink. And in either case, shape our portfolio according to our risk appetite."

RLI (RLI) on pricing momentum: "Pricing momentum continued in a number of our products and the pandemics influence was modest this quarter, with Casualty posting 11% top line growth, while Property and Surety were up 8% and 1%, respectively. Casualty market dynamics do appear bifurcated in that primary casualty products with limits of $1 million or less, many construction risks and workers' compensation still remain very competitive."

Kinsale (KNSL) on its business performing at a high level: "The combination of disciplined and highly controlled underwriting, combined with technology-driven low costs and a focus on the E&S market is propelling our profitability and growth, and we believe will continue to do so over the long term. Kinsale's growth rate at the moment is being enhanced by continued dislocation within the P&C market. Some competitors are reacting to substandard results by restructuring books of business, canceling programs and withdrawing capacity. This behavior is causing Kinsale's new business submissions and premium to grow at strong double-digit rates, and we continue to expect this extraordinary growth to continue through 2021. Beyond the accelerated growth, industry dislocation is also allowing Kinsale to raise rates, and in some cases, restrict coverage to further expand our profit margins."

AIG (AIG) on the rate environment in P&C: "I want to provide context for how we view the rate environment in the P&C market. Insurance carriers have faced challenging business conditions for more than a decade. Soft market conditions have gripped the industry since 2007 and have been coupled with historically low interest rates and an increase in frequency and severity of natural catastrophes. As an example, when looking at Property, the expected aggregate industry natural CAT losses for 2017 through the third quarter of 2020 are estimated to exceed $400 billion. Median annual losses over the last 15 years have been approximately $65 billion. These amounts are nearly double the amount of expected loss. For natural catastrophes, pricing has adjusted in light of these new norms. And keep in mind, none of these numbers include catastrophe losses from COVID-19. The momentum we have generated in General Insurance is significant and we believe that we will achieve top line growth in 2021. And by the end of 2022, we'll achieve an accident year combined ratio, excluding CATs, below 90%. This will represent a 1,000 basis point improvement since 2018."

MetLife (MET) on its aggressive M&A: "Despite the extreme disruption 2020 has presented, we are on track this year to deploy $4.3 billion of capital towards strategic M&A, common stock dividends and share repurchases. We believe this underscores the durability of our all-weather Next Horizon strategy and MetLife's consistent execution across a range of economic scenarios. We rolled out our Next Horizon strategy almost 1 year ago with 3 main pillars: focus on deploying scarce capital and resources to their highest use, simplify MetLife by driving operational efficiency and improving the customer experience and differentiate to drive competitive advantage in the marketplace. At Investor Day last December, I noted that our capital management philosophy at MetLife has not changed. Capital is precious, and we are disciplined in deploying it to the highest-value opportunities. Our purchase of Versant Health, which we expect to close before year-end, demonstrates our commitment to this approach. Vision Care is a capital-light business with strong risk-adjusted returns and high free cash flow generation. Like our U.S. Group Benefits franchise more broadly, it is precisely the kind of business we want to grow."

Goosehead (GSHD) on share gains: "In the U.S. personal lines industry, the independent agent channel is poised for continued share gains as many traditional and established personal lines insurance carriers look to other avenues to improve their growth trajectory. Within the backdrop of this ongoing market shift, we believe Goosehead is uniquely positioned to continue to gain significant share as clients increasingly see the value creation and superior insurance experience driven by a choice product portfolio, knowledgeable agents, best-in-class service and unmatched proprietary technology designed to address personal lines client needs."

Assurant (AIZ) on its unique business: "Last week, we made 2 announcements that underscore our focus on our market-leading lifestyle and housing businesses while capitalizing on the convergence of the connected mobile device, car and home. Our Connected Living, Global Automotive and multifamily housing businesses have a history of profitable growth, and we believe compelling future growth potential. In addition, our specialty P&C offerings, including lender-placed insurance, are extremely well positioned. The countercyclical nature and strong returns of the business continue to make it a critical part of our portfolio. Together, lifestyle and housing should drive ongoing above-market growth and superior cash flow generation with the ability to outperform in any economic cycle and, ultimately, to create greater shareholder value over time. Our acquisition of HYLA Mobile, a leading provider of smartphone software and trade-in and upgrade services, will strengthen our market position with increased scale, complementary client bases and favorable tailwinds in the global mobile market."

Trupanion (TRUP) on some key metrics: "Similar to Q2, Q3 was another strong quarter with high retention rates, driving accelerated growth in net subscription pets. Total revenue grew 31% year-over-year, and we ended the quarter with over 804,000 total enrolled pets. Within our subscription business, new pets, net of cancellations, grew 30% year-over-year. Average monthly retention increased to 98.69% on a trailing 12-month basis. We calculate this has extended the average pet's lifetime with Trupanion to 76 months, up from 71 months in the prior year period. As a result, lifetime value of a pet, including fixed expenses, grew 20% year-over-year to $615."

James River (JRVR) on its strong market: "We're selective underwriters and 8 of our 12 E&S underwriting divisions grew. Trailing 12-month Core E&S premium is $615 million, a 91% increase over the same period just 2 years ago. We continue to be able to get more rate per unit of exposure. This last quarter was the 15th quarter in a row, we've reported significant rate increases. In 8 of these 15 quarters, renewal rate increases on our E&S business have been greater than 5%. In every quarter this year, rates were up over 10%, and this quarter, rates were up 12.8%. An already hard market continues to gain strength."

Arthur Gallagher (AJG) on P&C rate environment: "Now let me give you an update on the P/C rate environment. Rate again continued to move higher around the globe during the third quarter. Globally, caught up nearly 7% with tighter terms and conditions and increasingly restrained capacity. By geography, Canada has seen the greatest rate increases, up more than 9%; the U.S. is up about 8%; followed by the U.K., including London specialty at about 6%; and Australia and New Zealand, around 3%. By line of business, property remains the strongest, up 12%; next is professional liability, up over 10%; other casualty lines are up 5% to 10%, with umbrella rate increases at least twice that level; and workers' compensation is flat. So while P/C rates are moving higher, the total amount of premium increases our clients are paying are more modest. This is a result of reduced exposure units, higher deductibles, lower limits and clients opting out of coverages."

OptionsHawk Executive Summary and Top Picks

The quality insurance names tend to carry over each year as there is not a whole lot of room for incremental value creation and mostly driven by industry-wide trends. It is a massive industry so there are some unique disruptors that are gaining market share as larger players cut costs.

First, looking across the larger P&C names **Chubb (CB)** slightly edges **Traveler's (TRV)** as the preferred name mainly due to potential tax shifts while having the best industry-specific income/expense metrics. In the next market cap tier **Kinsale (KNSL)** continues to stand out in a class of its own across all metrics including a 15% ROE. In the next tier **RLI Corp (RLI)** stands out across all metrics while **Kemper (KMPR)** continues to screen attractive as well.

In the Life Insurance group, **Sun Life (SLF)** excels across most metrics as high quality and also offers a strong yield while coming at a premium valuation. **MetLife (MET)** offers a great yield, very cheap valuation and I like the acquisitions it is making. In the mid-cap tier **Axa Equitable (EQH)** sets up for strong growth and has a strong ROE at cheap valuation. **CNO Financial (CNO)** screens best among the limited amount of small cap names in this group.

In the Personal Auto & Home group, **Progressive (PGR)** always screens as the best operator and no change this year despite some headwinds from less miles traveled. **Fidelity National (FNF)** is the leader on the title/mortgage side with a strong 3.9% yield, ROE above 20%, and solid growth. **Mercury General (MCY)** screens best among the small caps while **Goosehead (GSHD)** has the most compelling growth story and upside potential as it continues to gain market share.

In the Specialty group we are mainly dealing with small cap companies but the largest one **Assurant (AIZ)** is an intriguing attractive business. **Palomar (PLMR)** is a growing niche play I continue to like and has pulled back late in 2020 but stands to be a long-term winner. **Trupanion (TRUP)** is the other interesting growth name with pet insurance still lowly penetrated and it has secured partnerships with big insurance players like State Farm and Aflac.

For Reinsurance **Everest (RE)** looks attractive to peers at current valuation, trading at a discount while having the best dividend yield and near-best ROE. At the small cap level **Axis (AXS)** feels like the next M&A target in a consolidating industry while **James River (JRVR)** the small cap growth story to be aware of seeing strong policy growth and strong financials.

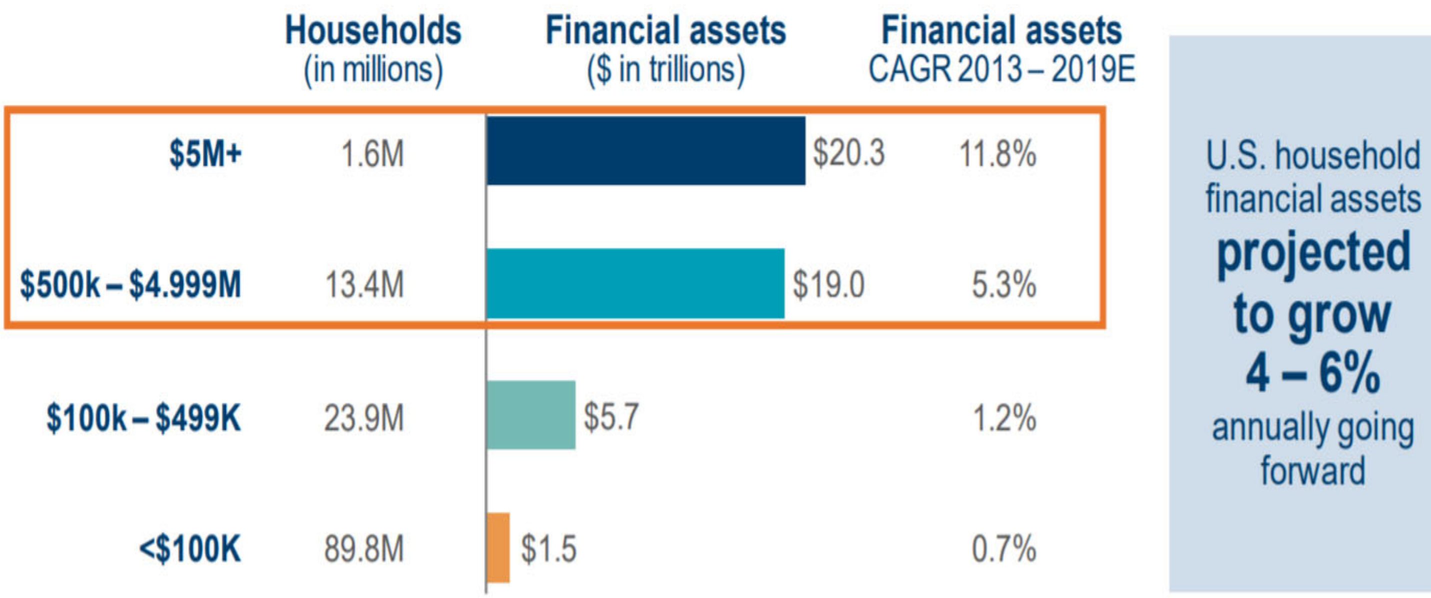
Lastly, in the Brokers, **Arthur Gallagher (AJG)** screened best last year and has outperformed peers by a wide margin, so see no reason to change. The other name I like is **Aon (AON)** with its large deal for Willis and its investments into data & analytics. **Brown and Brown (BRO)** is another repeat best-in-class name in this group and performed very well in 2020. In the more speculative online platform providers there are a lot of new entrants coming into that market and likely need to see some more results with many of the names new, but **SelectQuote (SLQT)** is one to watch.

Asset Management, Brokers, Exchanges

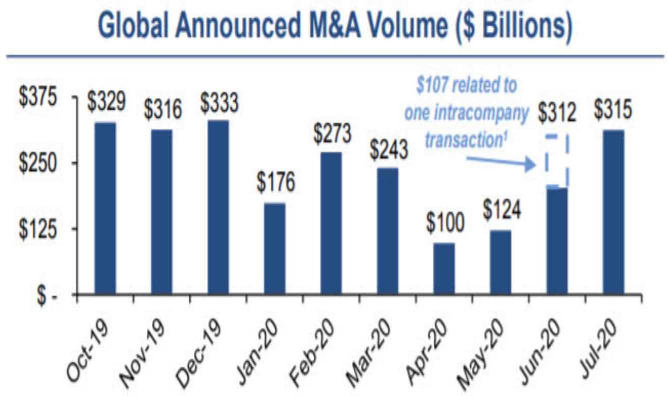
Traditional Asset Manager Components: BLK, TROW, AMP, BEN, SEIC, AMG, APAM, AB, CNS, JHG, FHI, ATCO, FOCS, WDR, NOAH

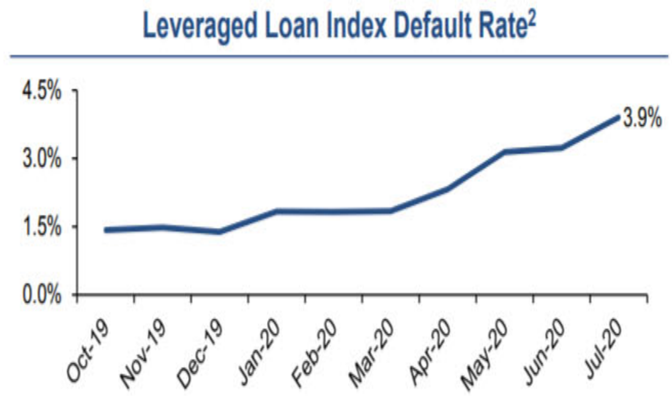
Alternative Capital Components: BX, BAM, KKR, APO, ARES, CG, ARCC, IVZ, HLNE

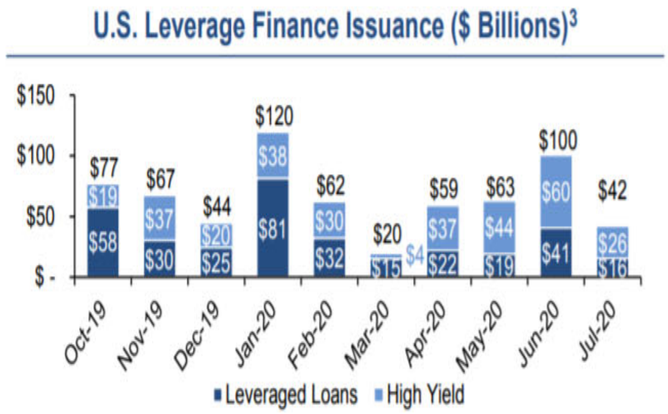
This is a large group with over 200 stocks but when screening for $2B and higher market caps it is reduced to just 34 names. In the Asset Manager group, benefits have been seen from pro-growth policies and tax reforms as well as deregulation, though the ability to see new funds remains in question with the recent shift to passive investing. We break this group down into Traditional, Trust Bank, Capital Markets and Alternative Capital. Through each group I have provided key questions for the group going forward, an area to focus on when perusing individual company management calls.

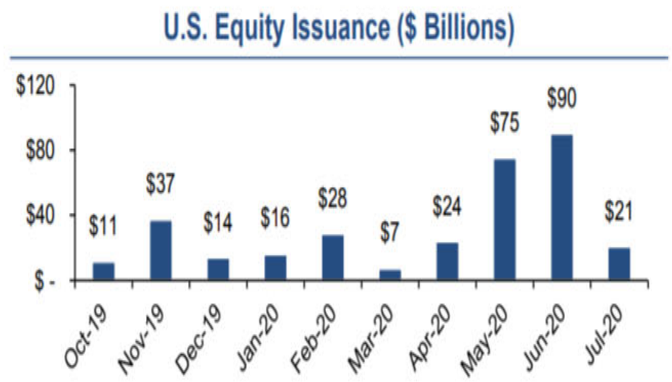


One specific ratio for the traditional names in Market Cap / AUM. For the Alternative Managers, Price / Distributable Earnings (DE), and Distributable Earnings / Unit. Due to the steady nature of the business (taking a percentage of assets under management per year), asset managers have a business valued more like a basic corporate than financial institutions such as banks and insurers. Asset managers are usually valued on a Price/Earnings, EV/EBITDA and EV/AUM basis. As a secondary metric, large asset managers with diversified businesses may also be looked at from a free cash flow yield perspective. Asset management valuation primarily focuses on Assets Under Management (AUM). A larger AUM means a larger fee base which means more revenues while incremental expenses do not scale as much. Accordingly, AUM growth is imperative for share price appreciation. However, the quality of AUM growth is even more important. AUM can grow organically because of 1) rising markets boosting the value of the assets managed – which can be looked at as beta exposure; 2) the outperformance of the asset manager versus its benchmark – which can be looked at as alpha generated and 3) net inflows via more investors giving the asset manager their money. Monthly AUM metrics are often announced and followed closely by analysts.









The asset and wealth management industry is facing numerous headwinds, chief among them being ongoing pressure for lower fees. Traditional asset and wealth managers feel this pressure acutely, which has likely contributed to their relative underperformance. Structural headwinds remain for the asset managers, including the shift to passive, active underperformance, pressure/transparency on fees, and more regulations, which come with higher costs and complexity. In addition, market volatility later in a cycle generally does not bode well for interest in the sector and valuations. ESG has been a major theme and growth driver for flows.

Key questions for the Asset Managers into 2021 include: (1) What's the outlook for flows by strategy (value vs. growth, etc.), asset class, channel & geography in this market backdrop? (2) What is the outlook for active flows & pricing in this more volatile backdrop and how is performance? (3) Where are institutional allocations headed? (4) What new product areas are gaining traction, incl. ESG (environmental, social & governance)? (5) What is the impact of e-broker consolidation? (6) What is the outlook for semi-transparent ETFs post recent approvals? (7) What is the outlook for margins / expenses given inv areas and efficiency plans, but volatile markets? (8) What is the outlook for cash use (M&A, BBs, debt pay down, & seed) & taxes/election?

Growth will be driven by:

Corporate Finance

- Continued expansion into Europe and the Asia-Pacific region
- Building out our Capital Markets and Fund Placement platforms
- Adding incremental domain industry expertise
- Increasing deal size and deal fees

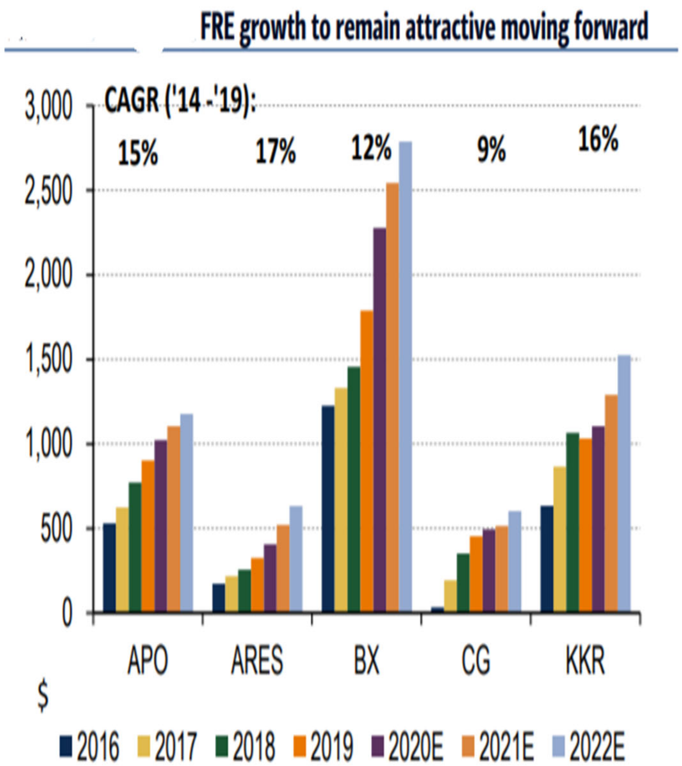
Financial Restructuring

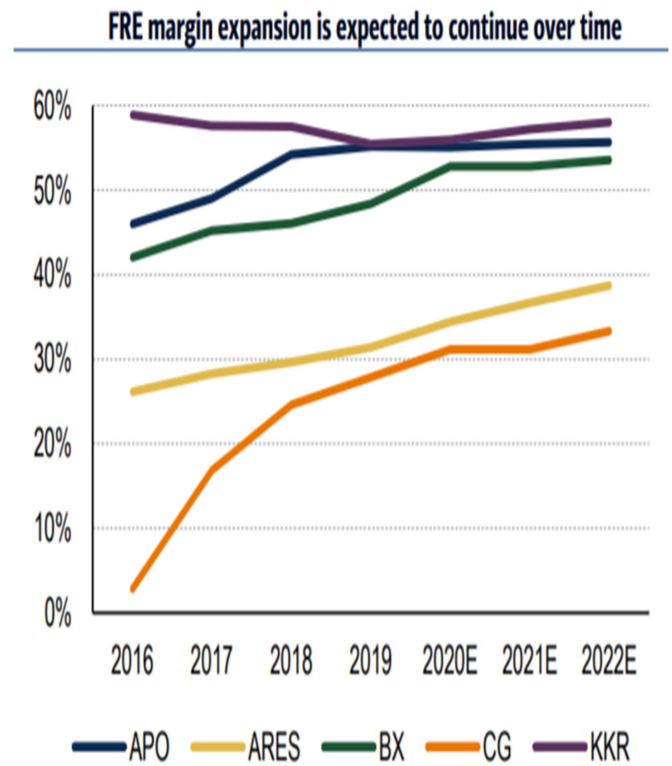
- Growing availability and use of leverage
- Increasingly complex balance sheets
- Continued globalization of financial restructuring
- Increasing restructuring of different asset classes

Financial and Valuation Advisory

- Increasing client relationship focus
- Utilization of industry expertise
- Increasingly complex regulatory and tax environments
- Greater transparency requirements

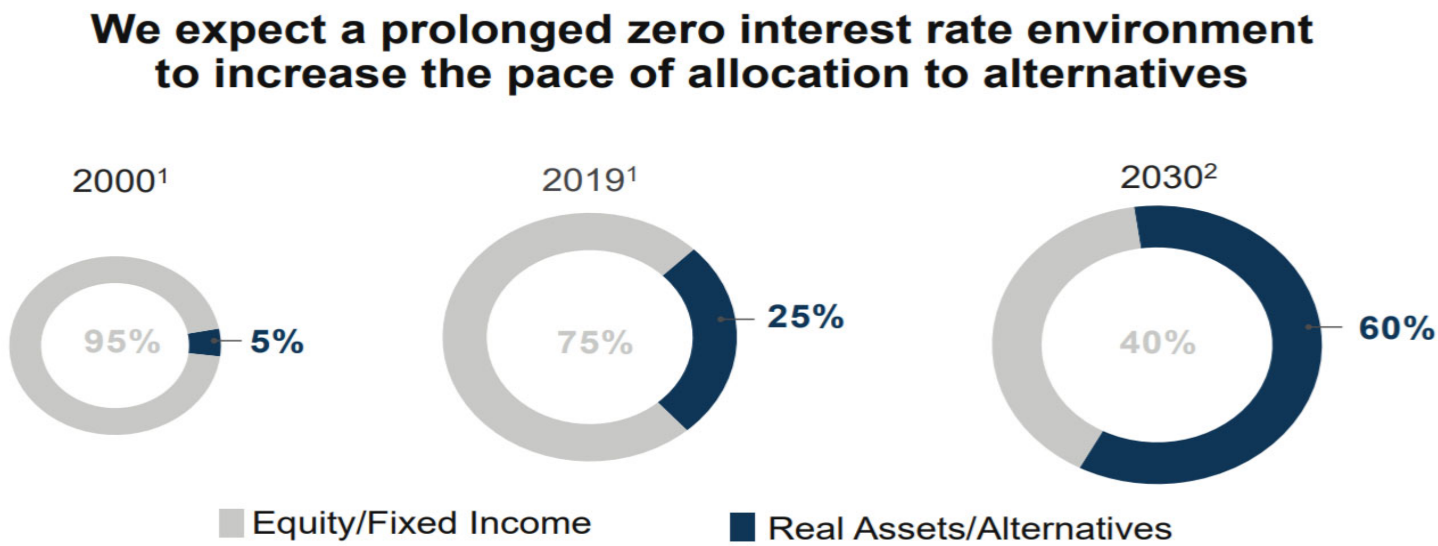
Alt managers, which have been the sector's sole bright spot during this time, are more insulated from fee pressure due to the lack of passive alternatives to drive fees down. Most investors still value the diversification offered by alternative assets, particularly late in the economic cycle. Fundraising for alternatives and real asset valuations benefit from a prolonged zero interest rate environment. Fee-Related Earnings (FRE) should benefit from a prolonged low-rate environment and larger players are expecting to capture market share. Fee-related earnings (FRE) is a recurring earnings stream used to assess core operating performance for the alternative asset managers and consists mainly of management fees charged on fee-paying assets under management (FPAUM). While management fees make up the majority of fee revenues (88% on average for the most recent year), monitoring/advisory, transaction, and other fees are also included, while base compensation, G&A, and other operating expenses make up fee expenses. Given that FRE is relatively stable and predictable, due to the anticipation of fundraising cycles and long term nature of locked up capital commitments and perpetual capital, it is the highest valued portion of alternative asset manager earnings and utilized for valuation. Over the last 5 years, FRE has grown at a 14% CAGR, on average, for the alternative asset managers, driven by increasingly larger successor funds and expanding private capital strategies (including some acquisitions). During that same time period, the FRE margin has expanded 150-200 bps per year to an average to 44% in 2019, as firms realize the benefits of additional scale.





As we emerge out of COVID there should be improving portfolio performance and an acceleration of monetization activity. With private markets only estimated at mid/high single digit to low/mid double digit of the overall market, yet delivering attractive and diversified returns, expect healthy allocations and growth to continue ahead.

Key questions for Alternative Managers into year-end are: (1) What's the outlook for distributable earnings (DE) given good fee-related earnings (FRE)/margin trends, but a muted near-term realization outlook? (2) What challenges/opportunities has this environment provided for firm fundraising? (3) What is the outlook for deployment/returns given healthy dry powder levels, some attractive opportunities, & rebounding portfolio performance? (4) What's the outlook for index inclusion & stock ownership trends? (5) How big of an opportunity is the 401(k) market & what is the timing? What is the outlook for taxes given gov't spending/election?



A BAML study shows that relative performance ranks of 3 and 5 year track records is a key driver of flows and therefore asset manager earnings and valuations.

There was a large deal in the space this year when Morgan Stanley bought Eaton Vance for $7B in October. Another deal earlier in the year took place when Franklin (BEN) bought Legg Mason (LM) for $4.5B. There have been several smaller consolidation deals in the capital market names as well, in December Waddell & Reed (WDR) bought at a healthy premium for $1.7B by Macquarie.

Management Commentary:

Blackrock (BLK) on inflows and demand for alternatives: "Our broad-based platform, pairing diverse investment capabilities with best-in-class technology and rigorous risk management, has now generated almost $400 billion of total net inflows over the last 12 months, representing 7% organic base fee growth. Not only did we see positive flows across all asset classes, investment styles and regions for the quarter, we have also generated positive flows over the last 12 months across each product type on our active platform, evidencing the strength of our alpha generating capabilities. Overall demand for alternatives also continued, with nearly $5 billion of net inflows into illiquid and liquid alternative strategies during the third quarter, driven by infrastructure, real estate and liquid alternatives. Momentum in fundraising remains strong, as we have approximately $23 billion of committed capital to deploy for institutional clients in a variety of alternative strategies, representing a significant source of future base and performance fees."

Artisan (APAM) on second-generation and third-generation strategies: "Our second-generation global strategies continue to experience strong demand, in particular from non-U.S. institutional investors. Year-to-date, the second-generation strategies have raised $1.6 billion in net client cash flows. And our third-generation strategies continue to see extremely strong business development, particularly in the U.S. wealth channel, which we expect to be a source of long-term secular growth. Year-to-date, the third-generation strategies have raised $5.7 billion in net inflows, an annualized organic growth rate of 63%."

Focus Financial (FOCS) on its business model: "We have extended our presence in key wealth management markets across the U.S. and extended our track record of acquiring excellent firms with strong records of growth. We have also further expanded our presence internationally. Through mergers, we are substantially accelerating the speed at which our partner firms are growing their businesses. We remain highly selective and continue to maintain strong multiple discipline. We can do this because we acquire firms whose founders highly value their entrepreneurship and operational independence by gaining Focus as a partner. Our business model is the only one in the market that is based on the noncontrolled structure, yet provides access to deep intellectual expertise in permanent growth capital. This is an important, but often overlooked competitive distinction."

KKR (KKR) on capital raising and deployment: "New capital raise totaled $8.7 billion in the quarter, driven by fundraises across private markets in our U.S. real estate strategy as well as across 3 strategies in Asia: real estate, infrastructure and private equity. he $32 billion of capital raised year-to-date importantly sets us up with $67 billion of dry powder, which is a high point for us. Now focusing on this deployment more specifically. Our private markets business had a record investing quarter with $6.2 billion deployed, which was largely in transactions that were entered into during the more heightened market dislocation in the spring and early summer. In Europe, 2 previously announced core PE investments closed. Our infrastructure team continued to find compelling opportunities across various sectors in Europe and in Asia, and a number of Asia PE investments closed, including our investment in Jio."

Blackstone (BX) on thematic investing: "Yes. I think as investors, being thematic is the best way to do it. And you tend to be more proactive and you have a clear view. You can build a management team and have real conviction. And today, I think you have more conviction and more thematic opportunities around some of these faster-growing sectors that are benefiting from the enormous transformation that's going on. So that's the movement of goods, from physical retail to e-commerce, which you can play in digital payments. You can play it in last-mile logistics. It's the content explosion that's happening as we go directly from movies and TV shows and video games and music from the producers directly to our mobile devices. A good example, we have a video game online advertising business that's been doing quite well. Digital infrastructure, fiber, data centers, towers, another area where we've deployed a lot of capital around the globe, it's got real tailwinds. And the migration to the cloud would be another area. Life sciences, which I mentioned, we've been so active in, it's getting a huge boost. And then green energy. And it's not just in private equity. I mean, in green energy, for example, we've really pushed in our credit area, doing a bunch of recent deals in the renewable space. So if you can identify some of these big themes, mostly technology-driven, then you can sort of play them directly or also one derivative."

Carlyle (CG) on its businesses: "We operate in 4 businesses. First, our most known business is our Corporate Private Equity business. It's the biggest. It's $85 billion of assets under management. It's generated mid -- low to mid net IRRs for a long, long time, very consistent performance. These are big buyout and growth capital funds within U.S., Asia, Europe, Japan, et cetera. And it's really what -- when people think about our brand, that's what they think about. Second is our credit business. It's really quickly growing. It's really a lot of white space in front of it still, $53 billion of AUM, various investment, risk and liquidity strategies. It's got -- it's done really well, and I'm excited about what it can continue to do. Third is our Investment Solutions business. It too is about a $52 billion assets under management. That business invests in primary funds on a fund to fund basis, secondaries and also co-investments, and it's grown also real nicely over the past year or so. And then finally is our Real Asset business. It's a $40 billion AUM business with an exceptionally strong U.S. real estate platform."

Ares (ARES) on importance of Asia investing: "Yes. Look, Asia -- I'm going to oversimplify it and everybody can do their work. But if you were to map out expected GDP growth over the next 20 years, you will find that the Asia Pacific region is predicted to outperform for all the reasons that we all know. So if we're going to be a global asset manager and offer global solutions to our global client base, we have to be in Asia. We have to be in Asia in a scaled, diversified way in the way that we've built our business in the U.S. and Europe. And you can't ignore it, right? And I think that if you adopt a growth mindset as a company and you think about business building, we have to be looking out 10 or 20 years with a view as to where the market is going and not be complacent. Asia is going to be very interesting for us because those markets are still developing. And the same way that we don't talk about Europe necessarily as one thing because we have people in local markets where there are different cultural challenges or regulatory frameworks, the same is true for Asia. And so in order to be successful there, we think we have to be pan-Asian, we have to be hyper local in the way that we build our business, in the way that we exploit our relationship networks there. But we have to be global in the way that we think about the business build in terms of how we bring capital into the market, types of partnerships that we can develop to scale up."

Apollo (APO) on public versus private markets: " But we're seeing some selective distressed opportunities. And even though the public markets are overvalued relative to fundamentals, as we discussed, we're seeing the bottom 25% of the public markets trading around a 10 P/E. So the markets no longer care about cash flow, right? I mean, they care about growth. And that's what they're focused on. There used to be about 8,000 public companies. Now there's just over 4,000. There's 35,000 private companies. And so in many cases, the public markets aren't an appropriate home for even larger cash flow-oriented companies that might have -- might not be industry leaders or might have some complexity to their business. They might be in multiple business. They may not be in tech businesses. They may have some cyclicality. And so we see that as a good ground for doing deals. And we would expect our pipeline is building as is others. And we would expect to be announcing some stuff shortly."

OptionsHawk Executive Summary and Top Picks

Among the Traditional asset management group, I continue to favor **Blackrock (BLK)** as one of the best companies in the entire market capitalizing on the key changing dynamics of the investment business and making smart tuck-in acquisitions, though **T. Rowe Price (TROW)** also continues to screen well across all metrics and a high quality name. The mid-tier names are not all that attractive, **Janus Henderson (JHG)** is cheap on valuation, received a large investment from China, and offers a big 4.9% dividend yield. The small caps have some attractive names seeing solid AUM growth and could be further consolidation targets, **Cohn & Steers (CNS)** screens very strong while **Artisan (APAM)** has a good team and vision. **Focus Financial (FOCS)** a big winner in 2020 continues to be set up well for the M&A environment and posting impressive growth.

In the Alternative space, **Blackstone (BX)** screens best for value/yield while also still being a top operator. The mid-tier market cap names there is not a ton of separation on metrics but **Apollo (APO)** is cheap, has a big yield, and expect it to be active with deals in 2021, so like it while also **Ares (ARES)** growth strategy in Asia is attractive. **Hamilton Lane (HLNE)** is the small cap play and sets up very well in this environment, strong fee-earning AUM growth.

Broker & Exchange Components: SCHW, XP, CME, ICE, MKTX, NDAQ, TIGR, TW, CBOE, XP, IBKR, BGCP

Capital Market Components: JEF, RJF, NMR, LPLA, VIRT, SF, LAZ, HLI, EVR, PJT, MC, FRHC, PIPR, COWN

This group has changed a lot the last two years via further consolidation, Morgan Stanley with a $13B deal for E-Trade and Schwab and Ameritrade merging.

In the investment brokerage group, DARTs is a group-specific metric released monthly, daily average revenue trades. The group also tends to benefit from strong markets and increased trading activity. Net Interest Margin, Net New Assets, and Total Client Assets are other observable metrics. Increased capital flexibility should lead to dividend raises, buybacks, and further M&A. The industry saw a lot of change in 2019 with the move to zero commissions as well as the pending Schwab acquisition of TD Ameritrade while Robinhood a major new player as well as other robo-advisors like Wealthfront and Betterment. An increasingly lower rate backdrop and near peak retail engagement for the cycle are additional headwinds. Given these shifts, the revenue outlook has become more uncertain, the need for scale, efficiency, & client assets has taken on even greater importance. Core revenues continue to decline given weaker spread-based revenues (rate pressure), fee-based revenues (increased fee waivers, but higher average markets), and transaction revenues ($0 commissions, but elevated trading activity).

Q3 was favorable for capital markets activity with markets strong. Trading volumes were mixed y/y, with US Cash (+44%) and US Options (+49%) higher, while US Futures (-21%) and Euro Futures (-18%) were lower. I-banking activity was also mixed y/y, with stronger equity cap markets (ECM; +55%) and announced M&A (+4%), but lower completed M&A (-56%) and debt cap markets (DCM; -19%). Interest rates remained lower, as the Fed remained near zero & some macro/virus uncertainty persisted, while credit spreads narrowed. Equity & fixed income markets were higher in 3Q while long-term mutual fund flows improved driven by better fixed income flows.

Key questions for the Brokers in the current environment include: (1) How is capital markets activity trending in 3Q post an active 2Q, and the outlook for IB & trading given the backdrop? (2) How could COVID19 vs. pro-growth policies vs. election impact the revenue, cost, tax, capital, & ROE outlook? (3) What's the outlook for the EU & Asia with Brexit/MiFID & trade wars? (4) Given the CCAR test & COVID, what are expectations for capital return? (5) What is the outlook for efficiency ratios? (6) What is the magnitude of M&A opportunities, new growth areas (WM/IM) or tech opportunities? (7) What is the ROE outlook in 12-18 months and 2-5 years? And key questions for the online brokers are (1) How has the competitive/strategic landscape changed given recent acquisitions & $0 commissions? (2) What is the outlook for NII given lower rates, rising cash balances, rebounding margin loans, & competition? (3) What are the main drivers of NNA growth & retail trading volumes & can strong 1H20 NNA/client engagement trends continue? (4) How are trends for RIAs & Retail, margin, advisory, & PFOF? (5) What is the outlook for exp/margins, investments, & taxes/election? What are capital priorities?

The exchange stocks have performed better than most financial peers for the most part with Bond/Credit names like MKTX and TW outperforming as electronic trading tailwinds continue to be favorable, though CME and CBOE have been very weak. Many of the exchange names are also seeing a positive margin mix shift with data & analytic service offerings. Secular trends including market automation, passive investing and regulation are reshaping the capital markets landscape and driving strong customer demand for data and technology solutions. The group often performs well in times of Macro uncertainty and increased volatility, a defensive group. Trading volumes may moderate into 2021 after key events in 2020 like the US Election, COVID, and Brexit make for difficult comps.

Key questions for the Exchange companies into year-end include: (1) What's the outlook for volumes across products given some tougher volume comps, mixed volatility & lower rates, and some structural headwinds & tailwinds? (2) What's the outlook for competition/market share with pricing, listings, market data, and new growth areas? (3) What is the reg outlook with the SEC market data review, as well as EU regs (MiFID II/EMIR), Brexit, global items (Basel rules, etc.), & 2020 Election? (4) What's the outlook for exp/margins, cash use/M&A, & taxes/election?

Management Commentary:

Houlihan Lokey (HLI) on the business environment: "Our second quarter benefited from a significant increase in closings and financial restructuring, very strong capital markets and an improving M&A and valuation market. Currently, the overall economic environment is very conducive to our balanced business model. Our financial restructuring results are at record levels, and we expect to experience elevated levels for some time. Meanwhile, the favorable interest rate environment and stable asset valuations over the last few months have prompted strategic firms and sponsors to reenter the M&A marketplace. This has led to improved deal closings versus Q1, but more importantly, to a substantial increase in new business activity, which should have a positive impact on subsequent quarters."

PJT Partners (PJT) on growth in restructuring: "Revenues in our global Restructuring business were up sharply for the quarter and for the 9 months compared to comparable periods a year ago. The ever-increasing collaboration between Restructuring and the rest of our firm enables us to leverage our collective expertise, consistently delivering exceptional results for our clients. During a market backdrop characterized by economic contraction, dislocations and disruptions, our team has excelled. While the pace of new restructuring activity is likely to slow in the near term, we expect it to remain elevated relative to historical levels. There are a significant number of companies and industries whose businesses have been meaningfully, and in some cases, permanently compromised by dislocations caused by the pandemic. Accordingly, we expect to see an active restructuring environment for the foreseeable future."

Evercore (EVR) on strength in Non-M&A business: "Non-M&A activity, including Underwriting, has been a distinct opportunity during the past several months and has become an increasingly important part of our business in the current environment. We've been able to support clients to enhance their liquidity, raise investment capital and shore up their balance sheets. We are particularly proud of our CAPS product, which is designed to be an alternative to SPACs, which we originated during the quarter and which we are in the early stages of building our convertible securities capability, including enhancing our distribution capabilities and our origination team."

XP (XP) on metrics: "The DART is the same story we told last quarter. I mean the numbers have stabilized in a very high plateau of 2.7 million trades per day. And when we look at the market share, in equity retail, we kept our leadership, but not only cap the leadership, but we are able to increase our market share in a very favorable market for newcomers to the stock market in Brazil. And in terms of custody, equity custody, we now are by far #1 with 28% of market share in equity custody. And our NPS, around 70, keeping the highest of the industry so far."

TradeWeb (TW) on headwinds and share gains: "At Tradeweb, cyclical macro headwinds from subdued rate volatility and lower yields continue to partially mask encouraging secular and organic growth across our rates, credit and money market asset classes. Our team remains focused on the future, operating purposely to execute on our growth road map by managing what's within our control, which is relentlessly engaging clients, innovating with technology and improving trading workflows to gain share. Amidst the backdrop of heavy stimulus driven issuance, the composition of the U.S. treasury market has shifted towards the institutional sector as client activity served while wholesale activity slowed. At Tradeweb, share gains within institutional have been driven by existing clients doing more business, competitive share gains versus Bloomberg and further inroads into the Tivo market, capitalizing on the recent wave of short-dated issuance. Looking ahead, we are also investing in driving adoption of our early-stage protocols such as STAQ, Tradeweb Plus and request-for-market, RFM."

MarketAxess (MKTX) on low penetration: " And just on that first item, which is priority #1, to increase market share in our core products, what you see on this page, the left side shows our best estimate of average daily market volume across those -- across our credit products, and it comes out to about $70 billion a day. Around $60 billion of that would be in our core 4 products. So across U.S. high-grade, U.S. high yield, emerging markets and Eurobonds. Overall electronic penetration in our market share does vary by product, and our best estimate -- if you look at our market share, our best estimate for our core 4 products, it ranges from low double digits in Eurobonds, the mid-teens in high yield and emerging markets and over 20% in U.S. high-grade. When you combine those 4 products together and look at it on a composite basis, we've traded about $10.5 billion a day in those 4 products in 2020. So our composite market share would look something like the mid-teens. Treasuries is a newer area for us. It's -- right now, we're primarily active in the dealer-to-dealer space, and our market share there is somewhere in the 7% to 8% range, but the big investment and the big push for us is to leverage our client network and to build out client-to-dealer trading capabilities in treasuries."

CME Group (CME) on low volatility, product groups: "We continue to see historically low levels of volatility in several of our asset classes, which began in the second quarter. During the third quarter, we averaged 15.6 million contracts per day, down from 17.6 million contracts per day in the second quarter. We're fortunate to have a broad product portfolio. During the third quarter, we saw strength in our Equity business. Our higher rate per contract Metals and Agricultural products delivered volume growth in Q3, and FX volume recovered an average of 100,000 contracts per day, higher in Q3 than Q2. Our Market Data business during the quarter had exceptional results, with revenue of $139 million, the highest quarter in our history. Clearly, the lack of volatility is impacting 2 of our largest asset classes, Rates and Energy. That is the current reality, but not a permanent one."

Intercontinental (ICE) on Data business: "Servicing data, which ranges from organizing raw and unstructured data such as with this MERS database example, to our analytics, indices and connectivity solutions across asset classes, these are a core competency at ICE, a competency that we apply across all of our businesses. The types of data, information and analytics that we're creating helps our customers transact, manage risk and become more efficient. Coupling the high quality of our data, our technology and the productivity of our sales force, this expertise has been core to building a track record of consistent and compounding growth. Through an array of challenging economic conditions, our data business has proven to be resilient. And at a time when some of our peers have understandably guided to revenue erosion, our platform is seeing an acceleration, having registered its 43rd consecutive quarter, nearly 11 straight years of year-over-year revenue growth."

CBOE (CBOE) on its leadership in options: "Cboe has since become known for other products and services, but we have always remained committed to being a leader in the equity options space. Our recent initiatives have focused on accessing and engaging in broad market through our acquisitions of Hanweck, FT Options and Trade Alert, the expansion of our Options Institute offering and the introduction of products for sophisticated retail market participants. In the third quarter, retail trading led the way to a 42% increase in equity options trading at Cboe with smaller short-term positioning trades. Each of our 4 options exchanges saw year-over-year increases in average daily volume. Zero broker commissions and free trading apps ushered in a new generation of retail traders who continue to contribute to record volumes in 2020."

OptionsHawk Executive Summary and Top Picks

In Capital Markets, **LPL Financial (LPLA)** is the best-in-class operator seeing strong AUM growth and high ROCE. There are a few smaller cap names that could eventually become M&A targets with **Evercore (EVR)** always screening strong, **Houlihan Lokey (HLI)** a niche play on the M&A market strength, and **Freedom (FRHC)** a very strong growth story. These names look way more attractive than larger peers like **Raymond James (RJF), Stifel (SF), Lazard (LAZ)** and **Jefferies (JEF)**. **PJT Partners (PJT)** is one of the smallest names and screens very strong across growth and efficiency metrics.

In the Exchange & Broker group, **XP Inc. (XP)** is a high growth story in Brazil that you need to separate from the group and continues to look like an attractive long-term own. **MarketAxess (MKTX)** and **TradeWeb (TW)** are both great stories but **MKTX** with the better margin profile, growth and history of execution despite the premium valuation still the preferred name, while **TW** still quality. **Intercontinental (ICE)** the best-in-class operator of the big exchange plays and doing a large deal for Ellie Mae while **CBOE (CBOE)** is the value play and liking its data & analytic acquisitions, though the stock has been a laggard it stands out as the one with the most turnaround/upside potential. **Schwab (SCHW)** should continue to thrive as it integrates its large TD Ameritrade deal and becomes the only pure-play leader in brokerages.

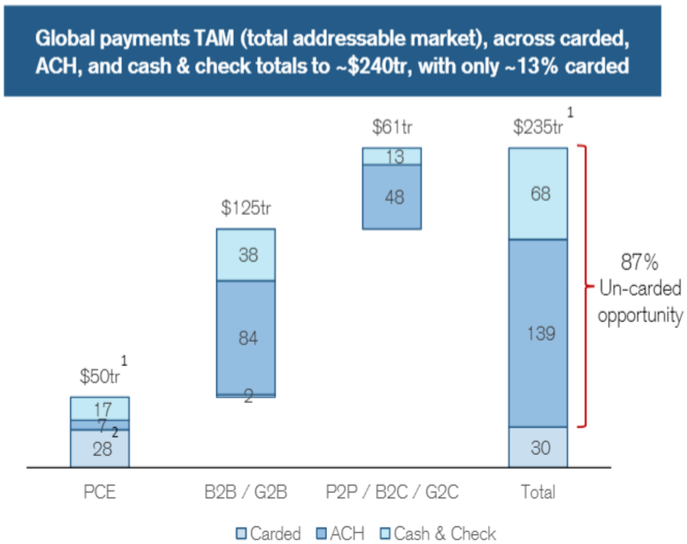
Financial Tech and Services

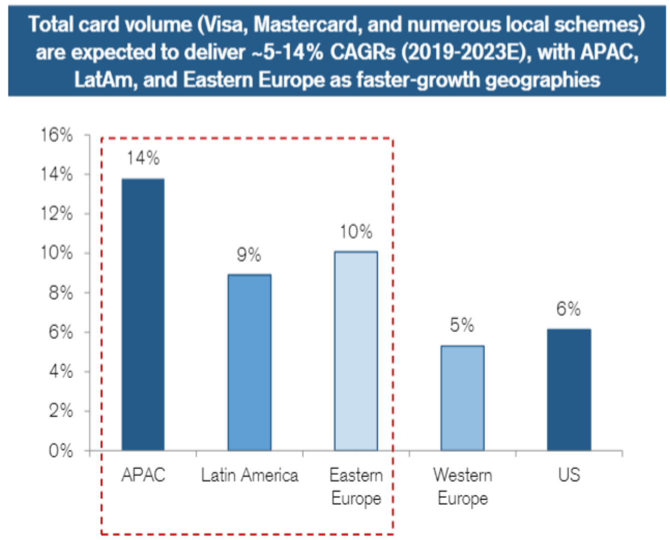
This expansive groups falls under the Financials umbrella but features an array of different industries with Credit Services, Payment Processors and Technology, Financial Data, Risk Management & Analytics, and Real Estate Services. In here we find some of the best growth names in this sector due to the prominence of online payments, digital transformation of banking and financial companies and overall higher global consumer spending.

Credit Card & Mobile Payment Components: AXP, COF, DFS, V, MA, PYPL, SQ

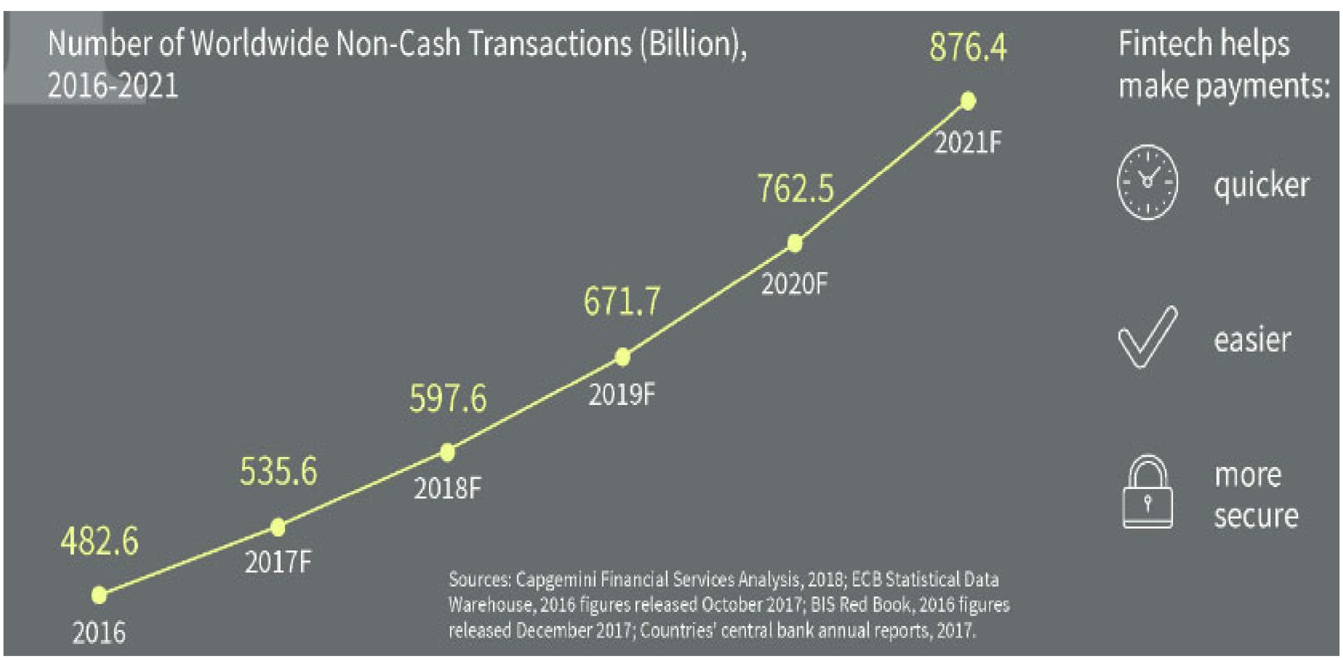
Payment Processors & Transactional Service Components: FLT, GDOT, PAYS, WEX, FIS, FISV, EEFT, EVTC, EVOP, GPN, QIWI, BCO, CATM, DBD, NCR, WU, IMXI, USAT, GSKY, IIIV, RPAY, STNE, ACIW, PAGS, FOUR, EPAY, VRRM

The credit card / services group is one where we look at industry-specific metrics like NCO (net charge-off) and DQ (delinquency) rates. It is also a group set to benefit from higher rates, reduced regulations, and increased consumer optimism. PayPal (PYPL) is the disruptor in this group with the increased amount of online transactions and now has partnerships with both V and MA. Square (SQ) is another up and coming name in the group with the growth in mobile payments. This group includes remittance (WU, EEFT, IMXI) and fleet/B2B (WEX, FLT, EPAY, VRRM).





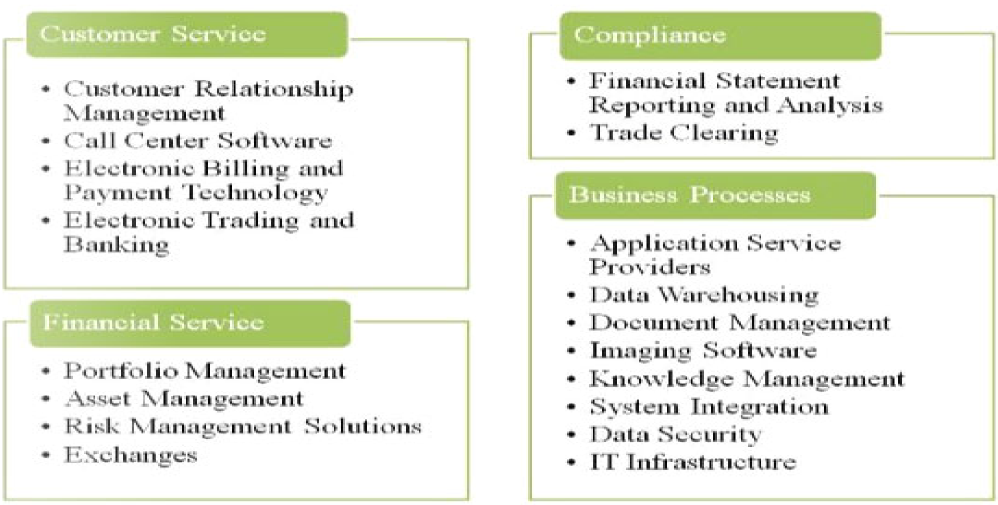
Card Networks provide and maintain the infrastructure necessary to facilitate electronic forms of payments. The four largest U.S. players are Visa (V), MasterCard (MA), American Express (AXP) and Discover (DFS). Of these, V has the largest share of Gross Payment Volume (GPV) at 59% followed by MA (33%), AXP (6%), and DFS (2%). The companies earn revenue by connecting issuers and acquirers involved in a transaction in exchange for a fee generally based on a percentage of total transaction volume. V and MA do not issue cards themselves (unlike AXP and DFS, which are hybrid networks/issuers), but partner with financial institutions that issue cards that utilize either network for authorization, settlement, and clearing of payment transactions between consumers, merchants, and businesses. The payment processors group has seen a lot of consolidation in recent years, FISV, FIS, and GPN completed transformational acquisitions in 2019 for nearly $80B in combined equity value.

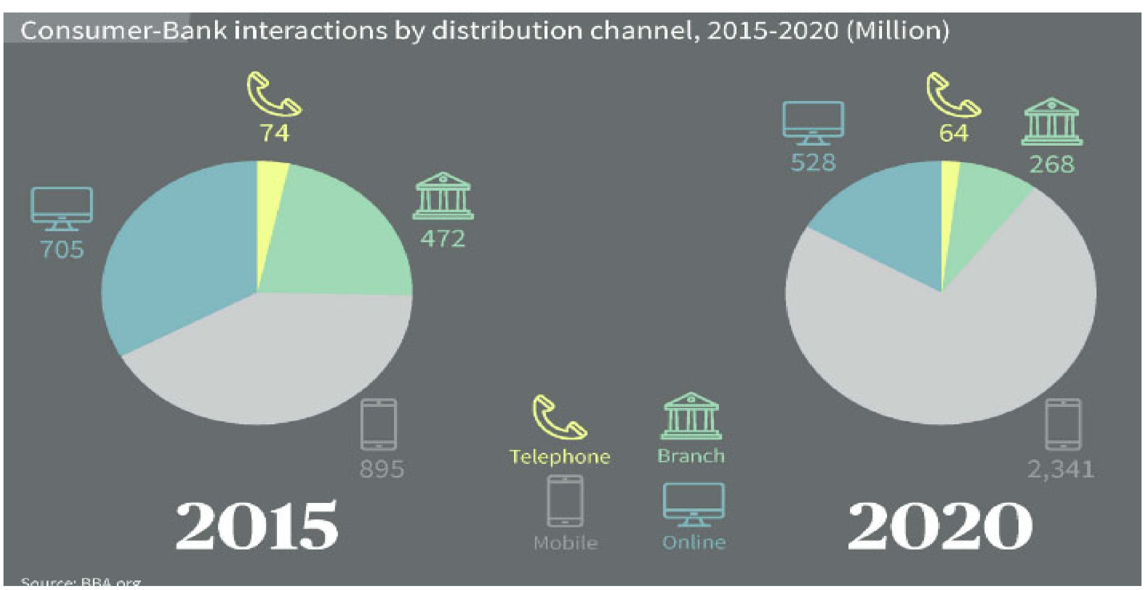


Fin-Tech: BR, EFX, FDS, INFO, MCO, MSCI, SPGI, MORN, VRSK, RELX, TRI, TRU, CDLX, DFIN, FICO, JKHY, IT, SNEX, VALU, DNB, ENV, PAGS, AON

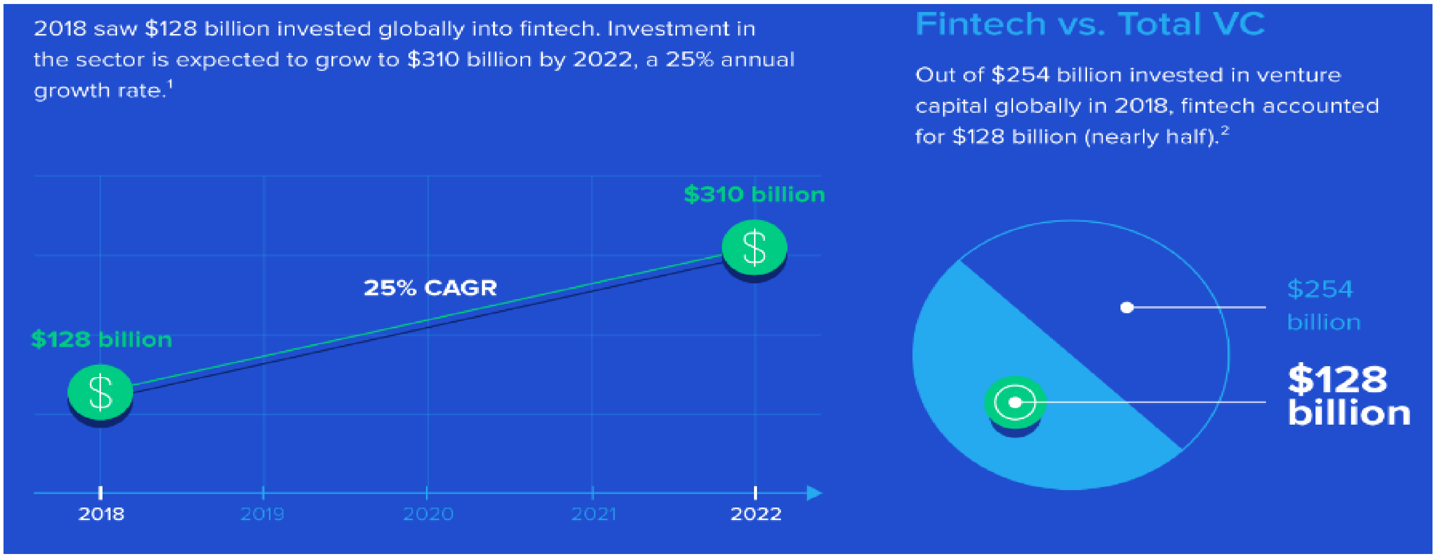
The financial technology industry encompasses technology-enabled firms offering financial services, as well as entities providing technology services directly to financial institutions. Fintech companies employ technology to support financial transactions among businesses and consumers. Fintech is a combination of technology and financial services that's transforming the way financial businesses operate, collaborate, and transact with their customers, their regulators, and others in the industry. All types of companies, from startups to tech companies to established firms, are using fintech. The fintechs are the disruptors; businesses that are looking to challenge the traditional financial services model. Mobile banking is a large part of the fintech industry. In the world of personal finance, consumers have increasingly demanded easy digital access to their bank accounts, especially on a mobile device. Running parallel to fintech is the birth of cryptocurrency and blockchain. Though both are different technologies considered outside the realm of fintech, there are complimentary applications in which all three can work together to deliver new kinds of financial services. Fintech has caused an explosion in the number of investing and savings apps in recent years. More than ever, the barriers to investing are being broken down by companies like Robinhood, Stash and Acorns. Fintech is also overhauling credit by streamlining risk assessment, speeding up approval processes and making access easier. While insurtech is quickly becoming its own industry, it still falls under the umbrella of fintech. Insurance is a somewhat slow adopter of technology, and many fintech startups are partnering with traditional insurance companies to help automate processes and expand coverage.

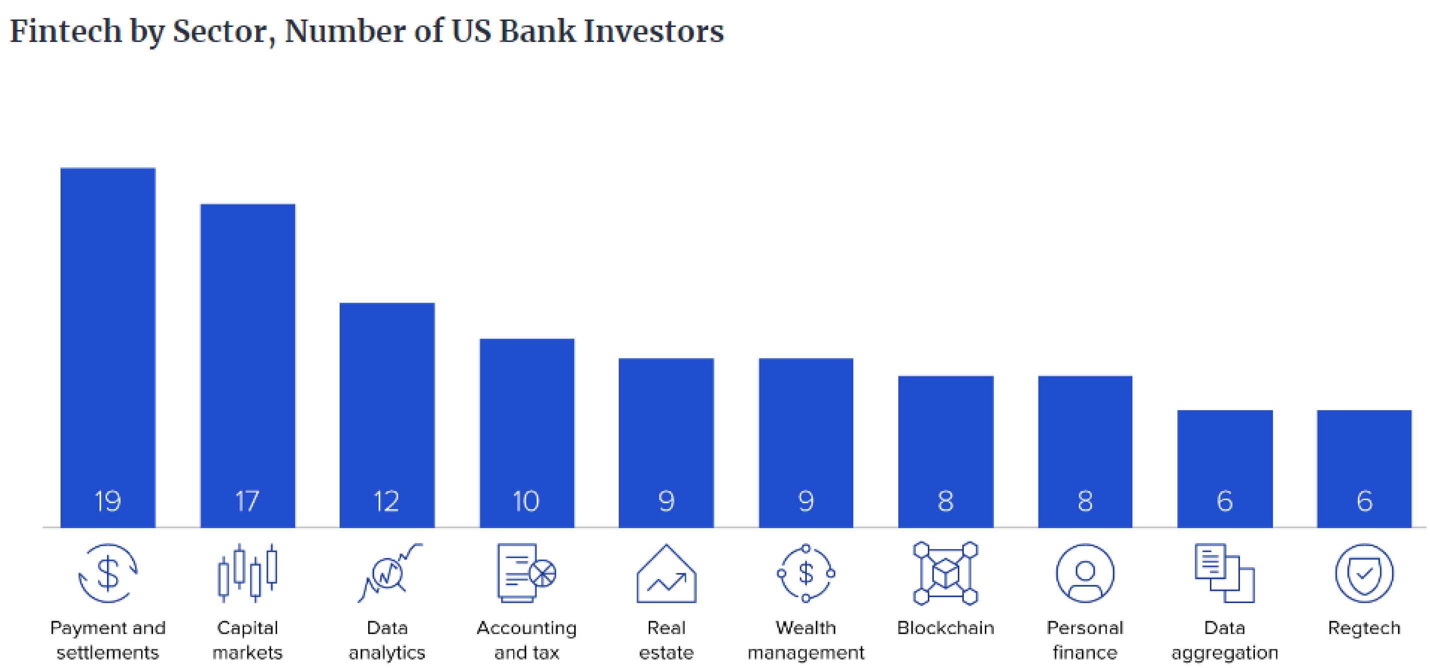
Fintech typically falls into four categories of customer service, compliance, financial service and business processes broken down below:



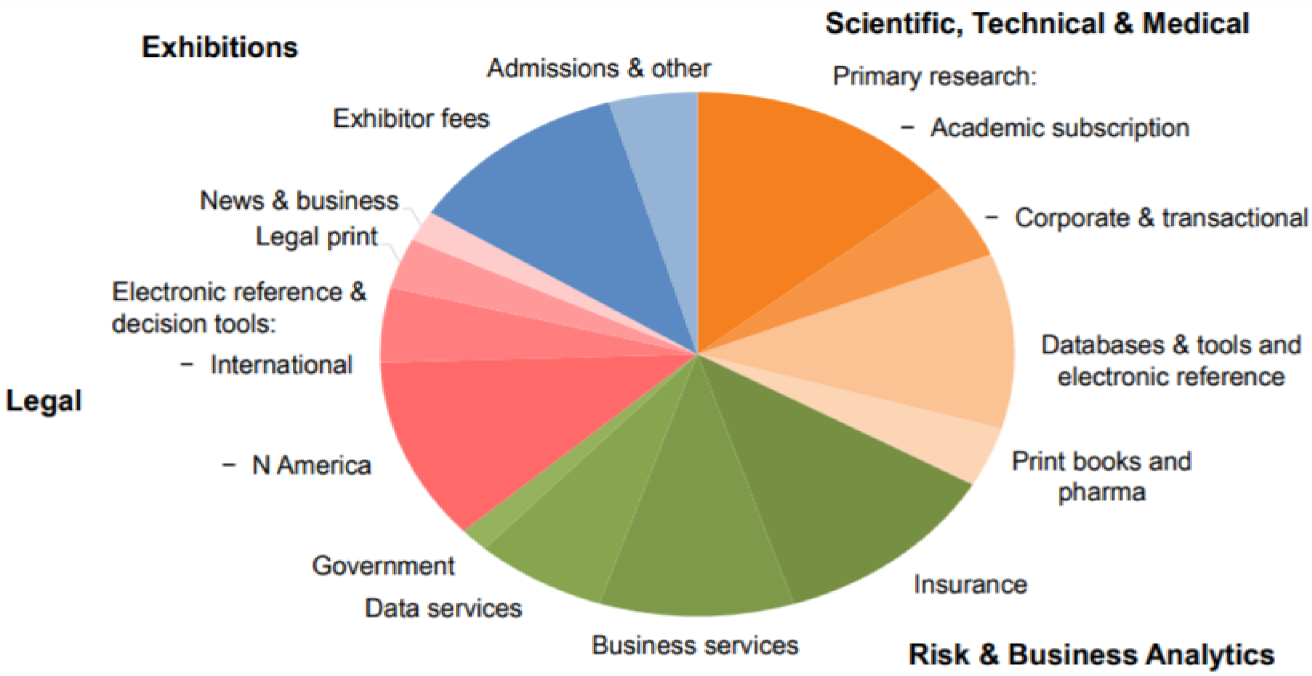


Revenues from Fintech are expected to increase from $150B in 2018 to $500 billion by 2030 at an average annual growth rate that's about 3x faster than the larger financial industry's projected revenue growth according to UBS. Key Fintech growth areas include digital payments, online lending, insurance technology (Insurtech), Wealthtech, and capital markets technology. AI and Machine Learning will be key to improving traditional business processes. Fintech has seen a great deal of investment activity from venture capitalists:

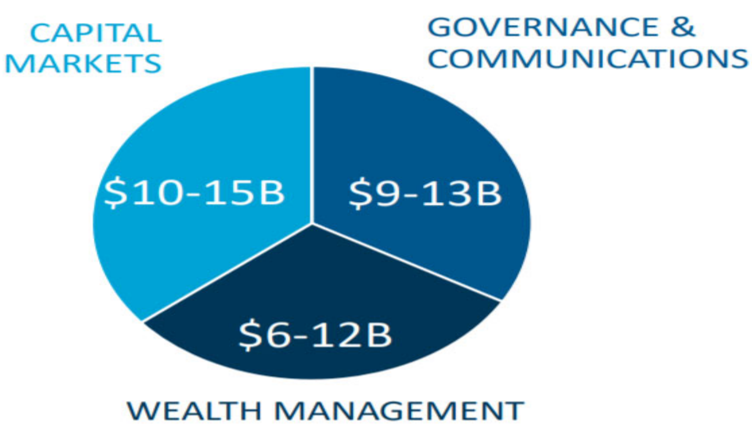




S&P Global is the largest component in this group with a $77.5B market cap and participates in data & analytics, research & commentary, benchmarks, credit ratings and ESG solutions. It notes key secular growth trends include rising total corporate debt, investors searching for unique data, ESG momentum, China capital markets reform, assets shifting to passive, and trade flow changes. MSCI estimates the Analytics TAM at $20B which aligns with other estimates seeing a 10-12% CAGR through 2027. HIS Markit estimates Information Services as a $250B market growing at a 5.1% CAGR. The Risk & Business Analytics market is estimated at $23B and seen growing to $45.9B by 2024, a CAGR of 14.8%. The Financial Software market is estimates at $21B while Professional Content estimated at $13B. Broadridge is a leader in Governance, Capital Markets and Wealth Management services and sees long-term trends of mutualization, digitization and data & analytics as favorable It estimates TAMs of $9-$13B, $10-$15B, and $6-$12B respectively.



Large Growth Opportunity

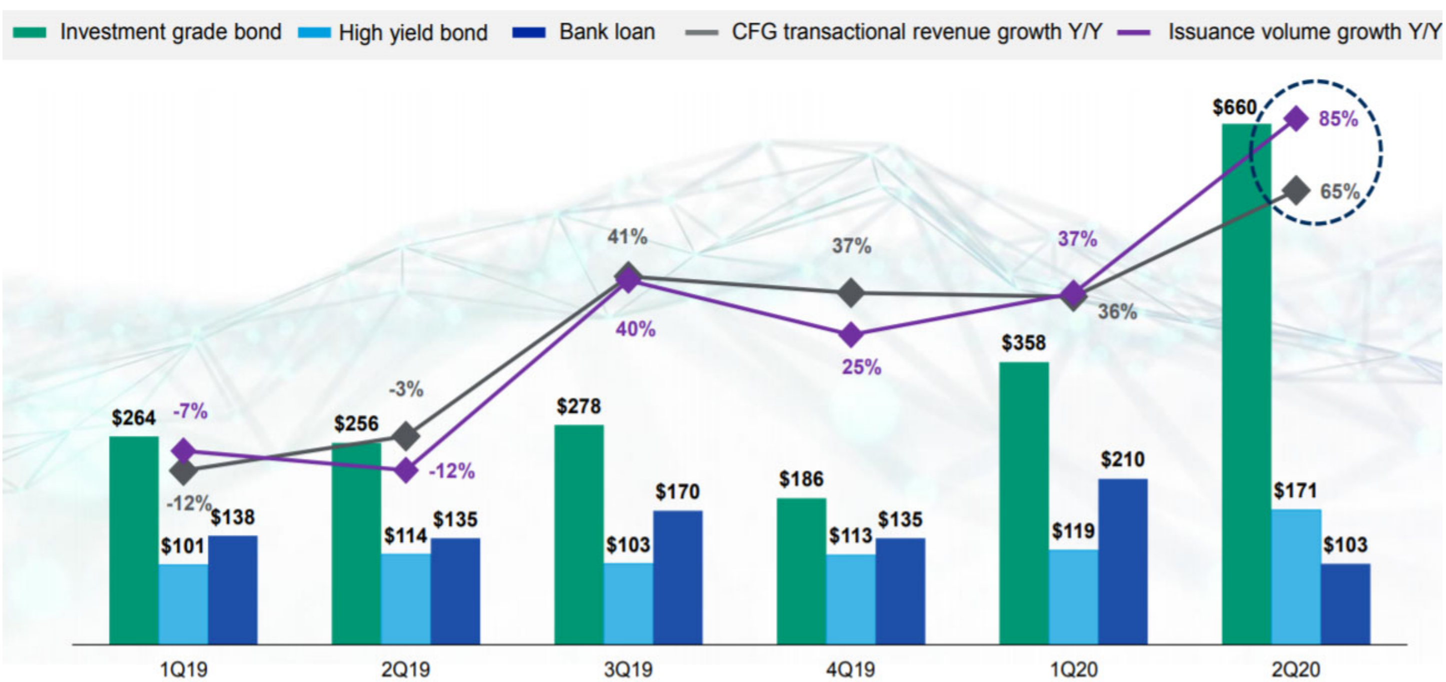


KEY MARKET TRENDS

MUTUALIZATION

DIGITIZATION

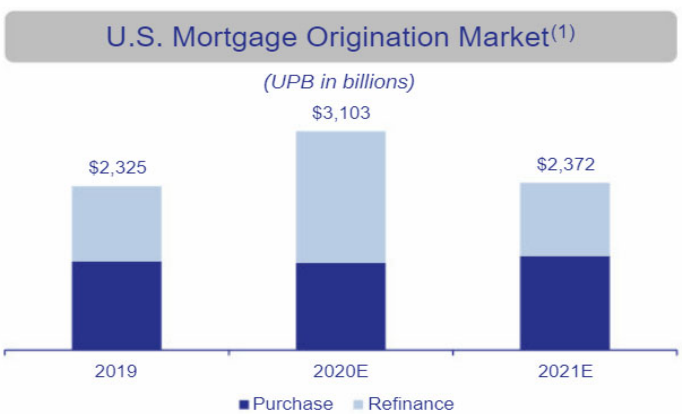
DATA & ANALYTICS

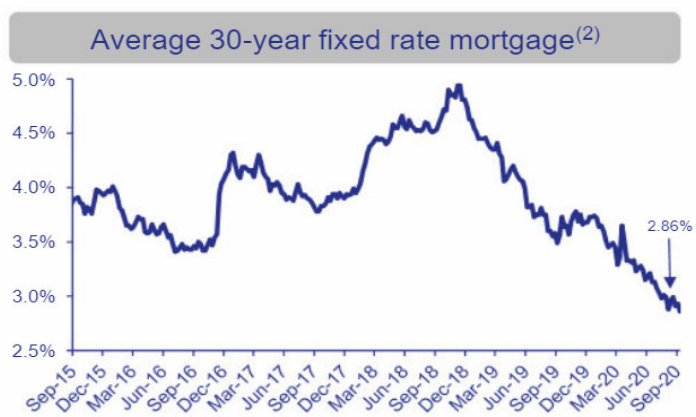


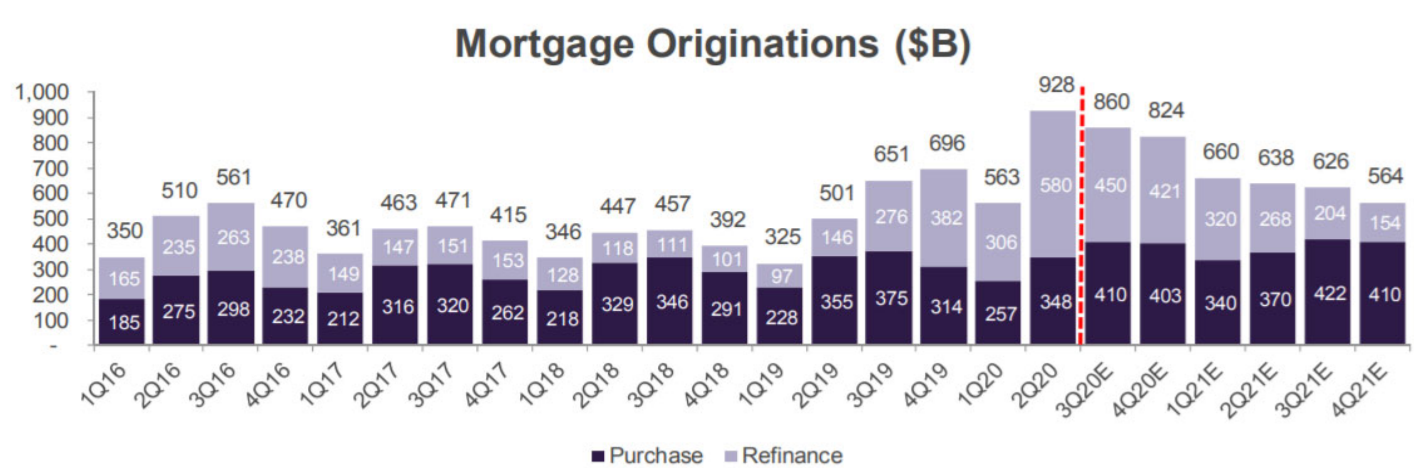
Real Estate, Loans and Tax Services: HRB, Z, FRG, RDFN, RLGY, RMAX, CLGX, CSGP, CBRE, JLL, CWK, NMRK, MMI, CIGI, FSV, RKT, PFSI, WD, COOP, HTH, BEKE, EXPI, BKI, TREE, GHLD, CLCT, HHC

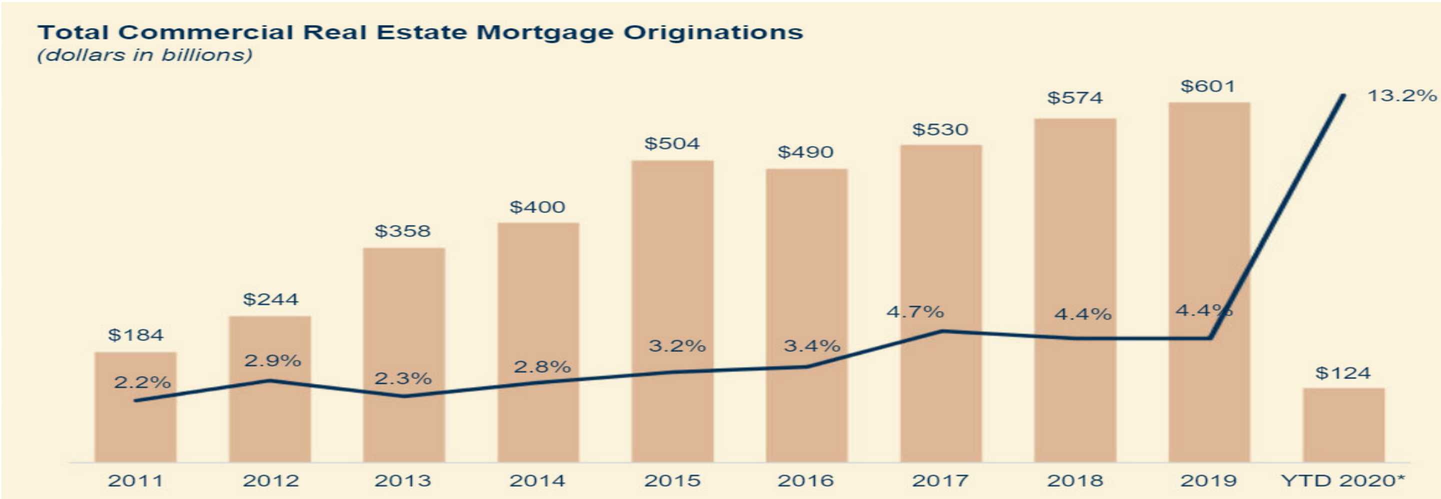
This is a diverse group that include service providers to residential and commercial real estate, ranging from home buying, property management, property services, project/facility management, advisory, brokerage services, loan origination, lending platforms, and more. Colliers estimates the real estate services market at $240B and notes it is highly fragmented with the top five firms accounting for less than 20% of market share and seeing massive consolidation potential.

For the US residential housing market annual brokerage market accounts for $1.5 trillion with 5.3M existing homes sold annually. Real estate sales and brokerage revenues have grown at a 4.3% CAGR since 2008. The mortgage industry has $1.3 trillion annual purchase origination loan volume and Title/Closing a $17B annual revenue industry. The tax industry is a $21B annual industry. Large and growing markets include the $44B mortgage originations market, $35B escrow market, $45B property management services market, $99B home insurance market, $2.5B home warranty market, $355B home renovation market and $18B moving services market.









Consumer Financing: WRLD, SLM, NAVI, SC, ALLY, SYF, ENVA, CACC, NNT, PRAA, ADS

The consumer loans market is estimated at $70B while Small Business Finance an $82B industry.

Business Development Components: HTGC, FSKR, STEP, OMF, GBDC, CODI, CNNE, MAIN, ORCC, PSEC, TSLX

Business development companies provide businesses with capital, and in turn, give people access to investments that were once exclusive to the wealthy. The purpose of a BDC, like any investment company, is to invest its shareholders' money to generate income and turn a profit. While venture capital and private equity funds are open to only a few wealthy investors, BDCs allow anyone to purchase a share on the open market. The middle market loan market consists of about 200,000 private businesses in the U.S. that make up roughly 33% of GDP. These are small companies, generally non-investment grade, and so large banks are less likely to lend them growth capital. Arguably the most important distinction that a potential BDC investor must make is between internally and externally managed BDCs. Internally managed BDCs such as Main Street Capital (MAIN), Triangle Capital (TCAP), and KCAP Financial (KCAP) generally have lower costs due to a lack of external management fees, as well as compensation incentives that are better aligned with shareholders because usually they are based on growth in NAV per share. The key metrics for BDC's are weighted average portfolio yield, NAV/share, the non-accrual ratio, and the NII payout ratio.

Management Commentary:

Square (SQ) on Cash App: "Now moving on to Cash App. With Cash App, we've continued to find ways to make financial services more relatable and accessible for individuals. We have seen strong adoption across the Cash App ecosystem, including our stock brokerage products, which have seen the fastest adoption of any product to date. Since launching it less than a year ago, more than 2.5 million customers have bought stocks using Cash App, and billions of dollars have been traded by the end of the third quarter. In October, we expect Cash App gross profit growth of more than 160% year-over-year. We continue to grow the network through strong new customer acquisition, drive adoption of our products and see healthy engagement and daily utility. Given Cash App's incredible growth year-to-date in 2020, we will lap particularly challenging comparisons in the second and third quarter of next year."

MasterCard (MA) on B2B: "I think the thing about the B2B opportunity as things we've been doing for some time now as a company and things which are paying off in the short term. And this is all the activity which goes on in our commercial business on card rails. And we mentioned to you historically that we have roughly 11% of our GDV, which relates to our commercial capabilities and our commercial products. And that includes our small business propositions. It includes our T&E propositions, our purchasing card propositions as also our virtual card capabilities. And we're clearly market leaders on the virtual card side. We've created initiatives across several areas on that front and continues to remain an important part of what we want to do from a B2B standpoint. I know there's a lot of discussion and dialogue around Mastercard Track BPS, and I'll come right to that. They're closed-loop ecosystems where the person who's processing the payables has a unique set of suppliers who they can pay to, but that's the extent of their reach, and there are all these islands which exist."

Visa (V) on the still large opportunity in digital payments: "If you look at the so-called developed markets, the U.S., Europe, where we've been at it for a very long time, there's still a ton of cash to digitize. Our payment volume across the network is about $8 trillion today. There's $18 trillion in cash still left. That has even gone up in the last 4 years, even though we've digitized a lot of cash. So that gives you a sense of how much more is left. And out of that $18 billion and $8 billion, or almost as much as the volume we have today globally is in the developed markets. And there are 3 vectors of growth that are still left in our traditional consumer payments business. And then, of course, the third vector of growth is the shift to e-commerce, which, even though there's been an acceleration of the shift, there's a long way to go. I mean, e-commerce penetration was still quite low coming into this, and there's a significant amount of runway there."

Fiserv (FISV) previewing its Investor Day: "I think we'll answer every question everybody's ever asked about this company, including the size and scope of our e-comm business, which we're darn proud of; how Clover will continue to win in the market; why we believe we have one of the strongest cloud-enabled companies in the fintech space; why our technology stack wins; why the client gives us orders regularly that allows us to have the sales numbers we have; how the integration of these companies have made it so much better; why we are able to accelerate our synergies and raise our synergies at the pace we have; be very clear on our capital allocation strategy; show how we have a decade of growth; and be able to have people understand that this tried and true EPS growth model to double-digit EPS growth model is very sustainable; the resilience and the sustainability of our recurring revenue and how we're going to continue to accelerate growth."

PagSeguro (PAGS) on the long runway for growth: "Brazil still has a long road to run, as online represents less than 5% of the total retail sales, bringing a relevant opportunity to PAGS to explore a potential addressable market of almost BRL 130 billion in TPV, assuming that Brazil can reach similar online penetration levels compared to U.S. Accorded to Ebit/Nielsen survey, in the first 6 months of 2020, online sales grew 4% (sic) [47%] year-over-year, meaning a growth 3x larger-than-expected before COVID-19, the highest growth in the last 20 years. Brazil reached 41 million online users having almost 7.5 million new ones only in the first half of this year. Additionally, 58% of the total users made online purchase at least 4x in the period. And 20% of the users did more than 10 purchases in the period, showing a very healthy combination of new users, both sellers and consumers and recurrence. PAGS is well prepared to explore this growth. As we have one of the most complete platforms that combines web checkout for micro, small and medium businesses, many of those going online for the first time; a complete end-to-end acquiring platform for marketplace in e-commerce, with the recent acquisition of MOIP; wallet services for consumers in cross-border trade with our BoaCompra company."

FleetCor (FLT) on some of its challenges: "I think, in some cases, yes, certainly, our gift card business, our brick-and-mortar retailers, is that the way of the future? Probably not, and so as you know, it's not our favorite business. But nonetheless we do operate it. We do try to continue to grow where we can. But it's always going to face a headwind in the new digital world, right, and folks like Amazon and such. One, because we're still out where some of our competitors may not be."

Shift4 Payments (FOUR) explaining its business: "So Shift4 Payments, one of the largest, fastest-growing integrated payment companies that no one's really ever heard of. So over 200,000 businesses in the United States rely on some form of Shift4 Payment technology. They, on average, process over $200 billion a year in payment volume. When you think about the integrated payment landscape, which means you're connecting software to hardware, to analytics, to encryption payments, we live on the extreme end of the complexity scale. Well, in our world, our customers are using multiple different software applications that all need to be networked together. So it's very complicated. So examples of our customers would be like Hilton or Hyatt or Ruth's Chris or Pebble Beach or really half the Las Vegas strip runs on Shift4. So like Caesars Palace and stay suites would be examples. So very sizable portion of food beverage, hospitality and specialty retail commerce in the U.S. is powered by Shift4's payment platform."

Repay (RPAY) summarizing its business and TAM: "We started in the loan repayment space, specifically in personal loans. We now have other sub verticals within loan repayment. We're in auto, mortgage, credit unions. But we started in personal loans, really providing debit card processing to personal lenders who have been really slow to adopt electronic payments in general. And so a lot of them are heavy cash and check and maybe starting to use ACH at that time, but a lot of them never taken debit before. We were starting to go into auto organically and realized there were some players that we thought made sense to acquire. So we started to acquire our way into auto, moved into that space. That's a $600 billion market opportunity, including captives, which we're now addressing the captive space as well. And then more recently, through an acquisition, we entered mortgage and credit unions evented organically. And so that is a very nice part of our business that probably represents somewhere around $1.3 trillion of TAM across those verticals. And then -- so that's where we started. And then more recently, we've now entered the B2B space. And that collectively represents about $3.4 trillion of TAM. So in total -- our total addressable market across loan repayments and B2B now is about $4.7 trillion of annual payment volume. So much more comprehensive than when we started."

RELX PLC (RELX) on online commerce & digital impact: "In Business Services, as you would expect, areas serving online commerce are performing strongly. We continue to see high growth in products providing services for online identity verification, fraud prevention and financial crime compliance. Both ThreatMetrix, a provider of digital identity solutions, and Emailage, a provider of e-mail-based fraud prevention solutions, are growing in the 30% range. The integration of Emailage, which we acquired earlier this year, is now largely complete and the development of products combining new data sets is progressing well. I think the risk business, as a whole, is well positioned. Clearly, you've got some pockets of -- where there are some challenges, but if you look at it overall, it's performing well. We -- the data -- the availability of data, the customers' willingness to engage with us on the potential for new products and if you take Insurance, where I mentioned the connected car strategy, there's a lot of interest in those products and bringing together data on people, assets, in an Insurance context, in a identity verification context, in fraud prevention, as you say, as more and more of commerce goes online. So I think we remain very excited about what the -- what we can do with those -- the new technology, new data sets. In Legal, the same. I think the acceleration from print to digital is a good thing. And once people are using digital reference products, you then have the opportunity to get the analytics products in front of them and with new natural language processing techniques, machine reading, call it, AI, but what you can now do things that even a few years ago you couldn't, and the analytics you can then bring to bear on legal information is that much greater and the value you can add. And we see continued interest in those products and good growth in those products, and we're continuing to innovate and develop them and add value to our customers and, ultimately, add revenue for ourselves."

MSCI (MSCI) on helping investors: "MSCI continues to play a central role helping investors build better portfolios for a better world. We are executing our mission in 2 key interrelated ways. Creating indices that serve as underlying components for client portfolios and equipping our clients with the essential ingredients for them to build their own optimized portfolios. Indices as underlying components for client portfolios include benchmarks for active managers, replication tools for indexed managers and underlying indices for listed futures and options, structured products and OTC derivatives. These indices can cover a very wide spectrum of client portfolio construction needs from equities to fixed income, from market cap weighted to ESG and climate overlays, and from factor tilts to thematic megatrends. Consequently, indices as underlying components have a vast number of use cases, and therefore, our business opportunities in this area are enormous. The essential ingredients to equip our clients to construct their own optimized portfolios, include our factor, risk and performance models, our ESG ratings and screenings, our climate metrics and Value-at-Risk models, and tools for thematic and megatrend exposures. Across these 2 interrelated offerings, we see incredible opportunities that expand new product areas, new client segments and new capabilities. New product areas include fixed income, ESG and climate and derivatives, to name a few. New client segments include wealth management, corporates for ESG offerings and insurance companies for fixed income offerings. New capabilities in support of our new product areas and new client segments include the enabling technology, and the strategic partnerships that we're looking in a wide variety of different areas and with different entities."

S&P Global (SPGI) on the China bond market opening: "During the quarter, Ratings completed 5 domestic ratings in China, bringing the total to date to 18. In addition, the PBOC, CSRC and SAFE jointly released a draft policy to attract international investors to the domestic bond market on September 2, which indicates another round of opening of China's capital markets. The draft policy includes suggested actions to simplify the market access process, integrate access to the interbank bond market and exchange bond market and reduce foreign exchange control. There are 2 major bond markets in China. One is the interbank market, where we received a license to operate from the PBOC in 2019. The other is the exchange market, which is regulated by the China Securities Regulatory Commission. Just last week, we successfully filed a registration with the CSRC to rate products on Chinese exchange bond market. This means we have the widest remit of any wholly foreign-owned credit rating agency in the market and one that is on par with the domestic players. We've built strong relationships with issuers as well as the investors as well as the banks that are involved in the debt markets. We think that we're very well positioned as the Chinese market continues to reform further in their credit and debt markets."

Broadridge (BR) on virtual meetings opportunity: "Mutual fund and ETF physician growth also picked up to 6%. With Travel Steel Limited, demand for a virtual shareholder meeting solution remains very strong, keeping pace with momentum we saw at the end of last year. We provisioned well over 200 meetings in the quarter, nearly 5x more than in the same period a year ago. Post-COVID, we expect most of these meetings will remain virtual. And thus, this revenue is likely to continue. We have now greenlit most of our planned investments for this fiscal year, which are focused around our people, platforms and technology. Some of these investments, I'd like to call out specifically, include expanding and broadening our virtual shareholder meeting capabilities, providing additional enhancements and developing new digital products, our LTX corporate bond trading platform and additional wealth capabilities."

TransUnion (TRU) on tough comps in some segments for 2021: "Both refinancing and home purchase activity remained very strong throughout the third quarter on the strength of our historically low interest rates. The cyclical strength in mortgage has certainly helped our results, but we remain cognizant that the cycle will run its course in 2021 and create some challenging comparisons. The current MBA outlook calls for mortgage volumes to decline 23% next year, while Fannie Mae forecast a 38% decline. In either case, we would expect the preponderance of the impact to occur later in the year. Now auto financing held up well in the quarter as low rates and attractive financing offers stimulated shopping activity in both the new and the used car market. As our customers shifted to more digital acquisition channels, we've won new business for our prequalification tools. Looking ahead, tight inventory levels of both new and used cars resulted in constrained industry volumes. Additional market growth will likely require increases in production as well as used vehicle supply from trade-in and auctions to meet the current heightened demand."

Equifax (EFX) on its valuable data-sets: "Certainly, the income and employment data we have at Workforce Solutions and our Work Number database is the most differentiated because of the scale of it, over 110 million records every pay period, over 400 million total records, 85 million uniques every pay period is immensely valuable and one that is very differentiated for Equifax. If you come into USIS, we've got a number of very unique databases at scale, which is really the other important point, our -- we call it our NCTUE database, but it's the data set that we have around cellphone primarily, but also utility payment data, immensely valuable. And we have that for over 250 million Americans, that's a very large-scale database. We have a wealth database that has securities holdings for U.S. consumers called IXI. It's another very unique and valuable and scale database. So those are examples of some of the data sets that we have. We've also been on the M&A front, looking to expand to our data sets."

Cardlytics (CDLX) on scaling: " So what I would say is today, we have enough scale that advertisers can't ignore us. It doesn't mean they have to use us, to be clear. And I'll talk about what prevents them from using us. But it does mean that they're taking our phone call. And the hardest challenge still with Cardlytics is we are still -- I say this all the time, we are the biggest company that no one's ever heard of, still getting into the door of the right decision-maker who really actually believe that we are a platform that has the same scale and can drive the same impact as a Google or a Facebook for them in terms of driving sales. That is still our biggest challenge, is to get into the door to the right person and have that conversation. Once we do, things tend to go pretty predictably and pretty well. And we tend to know what that ramp pattern is going to look like. And in many cases, that pattern has accelerated because, again, scale matters. So that's why it's so important."

Black Knight (BKI) summarizes its business: "Black Knight, to summarize is the only end-to-end provider of technology, data and analytics across the home ownership life cycle. So what I mean by that is if you think about the front end of the process. It's multiple listing service platform or people are searching for homes to purchase. And then that's really the start of the home buying process. So we have platforms on the front end of the process. Where we really get the bulk of our revenues, though, begins with the origination software part of the process where it goes from the point-of-sale all the way through underwriting and then closing. And then when the loan closes, it goes into what's called servicing. And we have a servicing platform that has more than 60% of the first lien mortgage loans in the country on the platform, it's called MSP. And then to the extent that alone, unfortunately, would potentially go into nonperforming status we have solutions that we would refer to as specialty servicing solutions like foreclosure and bankruptcy and then to the extent that a loan continues to perform, say it's securitized. We have some capital markets solutions as well around MBS, some behavioral models and other things like that."

CoStar (CSGP) on Apartments.com growth: "Our sales team at Apartments.com turned in one of their best performances ever in the third quarter, with net new sales up a massive 59% versus the same quarter a year ago. Customers continue to invest in Apartments.com because of the strong and growing lead flow we delivered, driven by growing site traffic and engagement. During the quarter, we set yet another record for site traffic. According to comScore, for the third quarter, average unique visitors per month to the Apartments.com network of sites in the quarter was over 25 million, up 20% from the same quarter a year ago. The growth in lead flow was even stronger as total leads generated for our clients from the Apartments.com network of sites in the quarter was up 43% over the prior year quarter, beating the previous record by 16%."

Zillow (Z) on structural changes seen in the real estate market: "I'd say the 2 key things I'd point out that we're kind of finding and we continue to see more support for is, first, people want to move and we're seeing that. There was initial uncertainty, obviously, with the shelter-in-place. But then we started to see transactions pick up. And we've continued to see those trends increasing. We see those in our inputs across our site in terms of unique visitors, over 200 million a month in visits, hitting record levels. And we're seeing that in the industry transaction data and transactional levels. So people want to move. And what we've also seen is the industry has been incredibly resilient. Another thing, we paused our Zillow Offers business in late Q1, just based on the uncertainty of transactions. But we've continued to see the industry leverage technology and continue to move safely and offering services remotely to continue to process transactions. So I'd say the 2 biggest keys we've seen now are a desire to move and a resilient industry that's starting to leverage technology across all aspects of the services, both of which position us very well with our customer base and the platforms that we're building to continue to innovate for our customers and to serve the industry and to help our agent partners."

Rocket (RKT) on market share potential in all rate environments: "And so each and every day, everyone here wakes up thinking to themselves, how do I innovate? How do I create a better experience? How do we drive efficiency into our tech platform? And so market share, when there's opportunities like this year, where we see north of a $3 trillion mortgage market, that's at scale. Can you go from $14 billion or $15 billion closed in January to north of $35 billion closed in October? How do you achieve that? Do you have a platform that allows you to scale at those levels? And we've demonstrated we can do that. And as we get into a more challenging rate environment, whenever it comes, we'll do that again. Again, leveraging the tech in our platform, leveraging those efficiencies, now leveraging the machine learning and the ethical artificial intelligence that we're building, our data group is generating leads for us here that don't take marketing dollars. So all of those things position us to be able to grow in a rising rate market because we have an advantage, which is profitability."

OptionsHawk Executive Summary and Top Picks

In the Credit Card group, we want to continue to focus on the technology focused names and the slower growth names like **COF, AXP, DFS** are just not worth our attention when there are much better plays. **MasterCard (MA)** is the preferred play in 2021 to **Visa (V)**, though each a quality own. **Square (SQ)** and **PayPal (PYPL)** are both strong stories though I prefer **PYPL** for its stronger financial metrics while **SQ** the larger growth opportunity but also will face very tough comps for Cash App in 2021.

Among the large Payment Processors, **Fiserv (FISV)** screens the best across all metrics including margin leadership though still difficult to prefer to the digital payment names. Both Brazil focused larger caps, **Stone (STNE)** and **PagSeguro (PAGS)** are excellent growth stories though prefer the former by a slight margin. **FleetCor (FLT)** is the preferred B2B name and has a lot of levers to reaccelerate growth with most of its business bottoming and likely to do another M&A deal. At a $5B market cap, **Shift4 (FOUR)** is an exciting new name and with its end-markets set up for a much better 2021, feels like a great own. There are then four niche small caps in this group I like, **Evertec (EVTC)** with its strong Latin America presence, **Repay (RPAY)** disrupting massive loan markets, **i3 Vertical (IIIV)** which has performed very well despite exposure to school lunch programs, and **International Money Express (IMXI)** is very small but interesting Latin American threat to take market share from Western Union (WU), Euronet (EEFT) and MoneyGram.

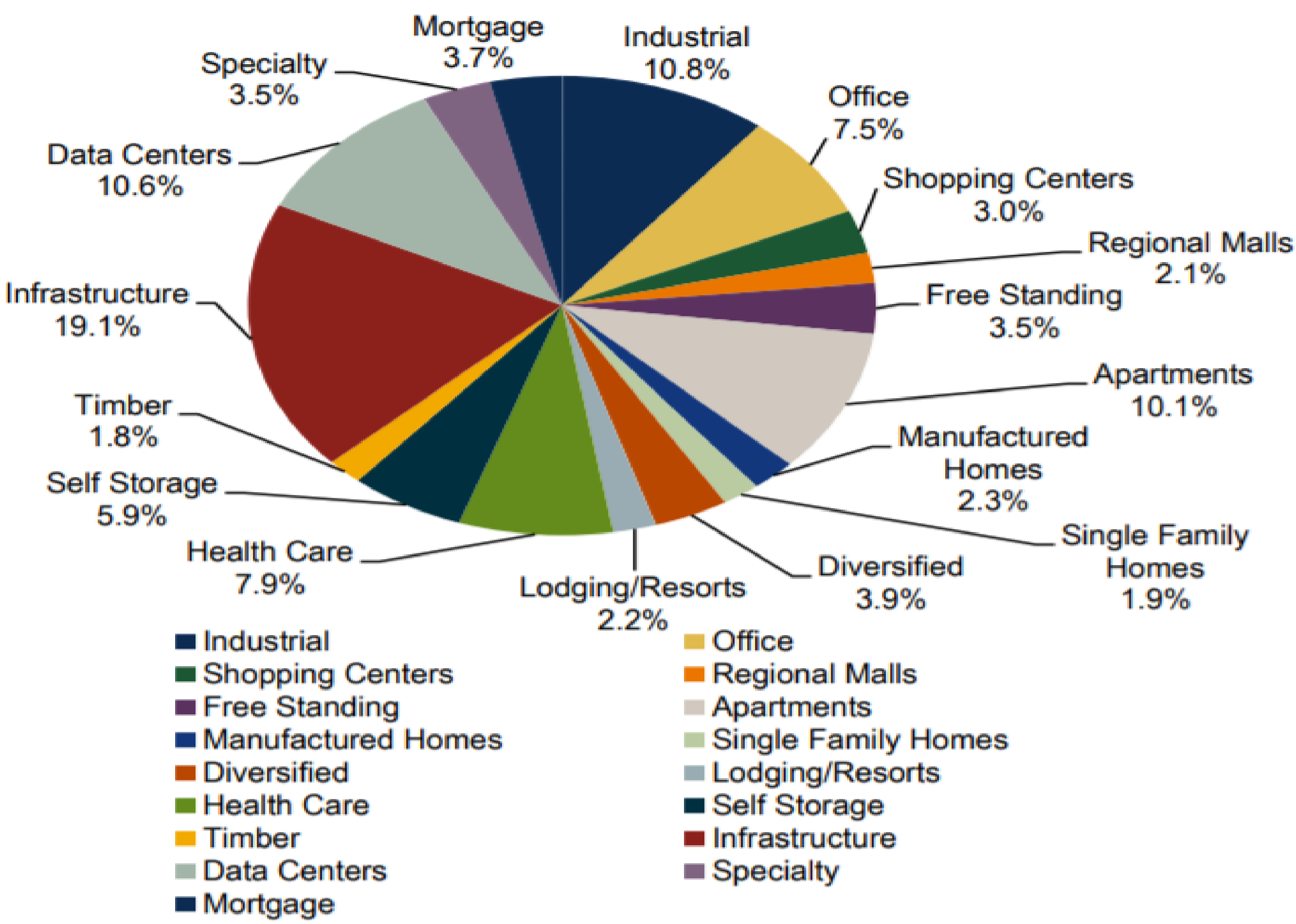
In FinTech the year is closing out with a $44B mega-deal with S&P Global looking to buy IHS Markit, though could face regulatory scrutiny. I like the industry as a whole so there are several high-quality names and really want to focus on those with more concentration to the strongest thematic trends. **S&P Global (SPGI)** is still the best-in-class name despite some M&A risk from this large deal, have to have faith in that management team. **MSCI (MSCI)** is the other top name with high margins and high returns on capital along with solid growth. **Verisk (VRSK)** is quality but more Neutral on it and one to own into weakness. The next tier is tricky, **Broadridge (BR)** has weaker margins but they are expanding yet trades at premium valuation with lower growth but has the best return on capital numbers. **Equifax (EFX)** trades cheap to peers with strong metrics, but overall **TransUnion (TRU)** checks the most boxes as the preferred name. **Fair Isaac (FICO)** and **FactSet (FDS)** are two more mid-cap quality names, the former screens a bit more attractive but also at premium valuation. Lastly, **Cardlytics (CDLX)** is the small cap growth favorite with the US Bank launch set for 2021 to further its MAU base.

The Real Estate services group has so many exciting growth stories, a massive market undergoing a digital transformation, and while Housing numbers soared in 2020 and face tougher comps in 2021, expect that improving consumer confidence and low rates support a healthy backdrop. With that said, pairs trading could be effective shorting the lower growth, lower margin names like **JLL** & **CBRE**. **Zillow (Z)** is a must own at any price type name while the Chinese version **KE Holding (BEKE)** is looking to be a similar situation. **Rocket Mortgage (RKT)** is the preferred mortgage originator name with its disruptive approach and demographic tailwinds. **CoStar (CSGP)** continues to be a leader in commercial real estate and making key tuck-in acquisitions expanding its impressive moat. **Black Knight (BKI)** is the top play from the data/analytics perspective for this industry while **CoreLogic (CLGX)** is quality but stretched as it continues to receive buyout offers. Onto the smaller cap names there are a bunch of growth names, **Redfin (RDFN)** plays second fiddle to Zillow but is a compelling story with its multiple new initiatives. **eXP World (EXPI)** is an explosive growth story in a disruptive cloud brokerage segment. **FirstService (FSV)** is a high-quality play in a fragmented property services market that is a solid grower. Lastly, **Colliers (CIGI)** a top pick in 2020 having a strong year and continues to screen attractive across all metrics as a provider of commercial real estate services.

The Consumer Finance group is not as exciting, but of the four $5B+ market cap companies, **Ally (ALLY)** stands out with its high margins from its digital efforts. There is a small cap that stands out, **Enova (ENVA)**, strong growth, and ROIC with expanding margins and should be positioned well for a recovery in small businesses. In the Business Development group it is a tough group to assess with metrics and best to look at capital returns and performance, two small caps standout, **Cannae (CNNE)** has strong management and a good set of investments, while newcomer **StepStone (STEP)** also looks attractive.

REITS

A REIT, or a real estate investment trust, is a company that owns income producing real estate. REITs were formed in 1960 by Congress as a way for small investors to obtain an ownership in commercial real estate. REITs are required to derive at least 75% of their income from real estate and distribute 90% of their taxable net income as dividends. Similar to a direct real estate holding, REITs are taxed at the investor level (not the corporate level).

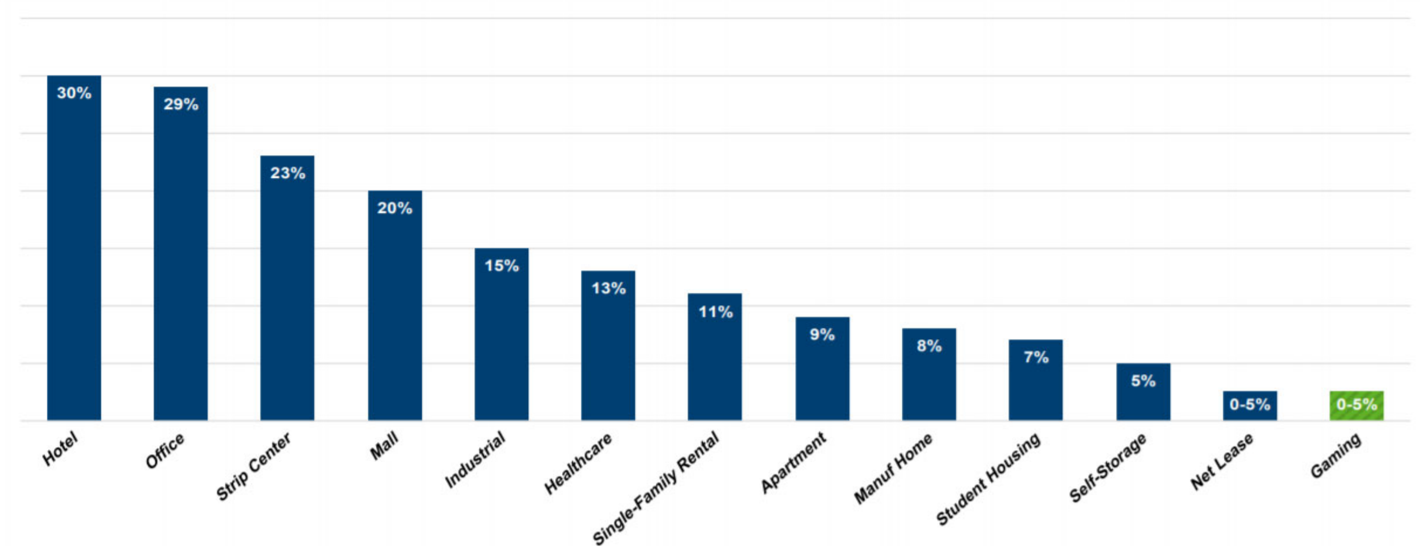


Property Type	Average Lease Duration
Hotel / Lodging	daily
Self Storage	monthly
Apartments	annual
Manufactured Housing	annual
Single Family Rental	annual
Student Housing	annual
Retail - Inline (Strips)	3-5 years
Industrial	3-5 years
Office - Suburban	5-7 years
Retail - Inline (Malls)	5-8 years
Retail - Anchor	10+ years
Office - Central Business District	10-12 years
Healthcare (triple net leased)	10-20 years
Retail triple net leased	15-20 years

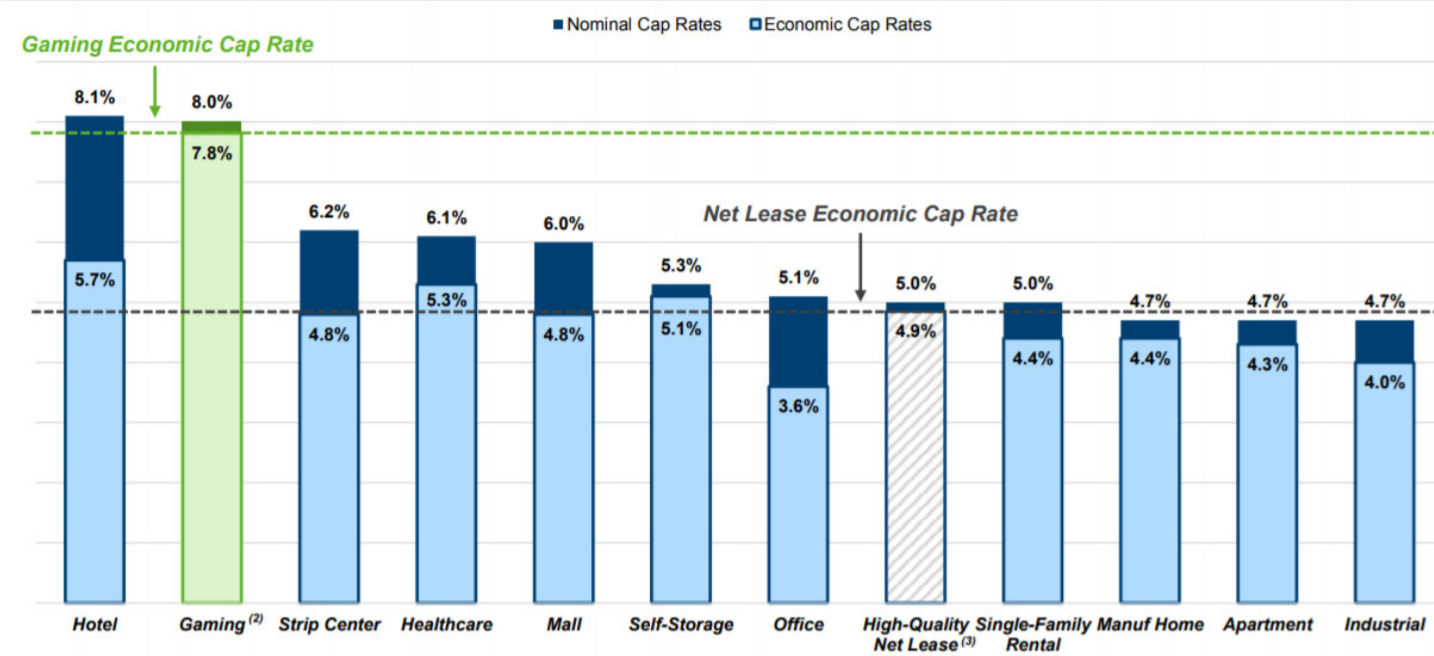
Collecting rent continues to be the main source of revenue for REITs. REITs grow internally through occupancy and rent increases, tenant upgrades, and redevelopment of existing properties. REITs generate external growth through accretive acquisitions and ground-up development. REITs only own about 15% of institutionally-owned US commercial real estate. A REIT's return profile has characteristics of both bonds and equities. The long-term nature of REIT leases provides income visibility (like bonds), while the mark-to-market of leases allows REITs to take part in the economic cycle (like equities). In valuing REITs, we use a number of metrics, including: price-to-fund from operations (FFO), a key earnings metric for REITs; price-to-net asset value, which values REITs based on their underlying assets; relative yield analysis, which compares yields across different asset classes; and implied cap rates, to determine where the market is valuing a company or sector. The 3 types of REITs are Equity, Mortgage and Hybrid. Due to the significant contribution to a REIT's total return (on average around 60%), comparing yields among REITs as well as bonds (the 10-year Treasury and corporate bonds being most relevant) can provide investors as useful relative valuation tool. A REIT's return profile has characteristics of both bonds and equities. The long-term nature of REIT leases provides income visibility, like bonds, while the mark-to-market of leases allows REITs to take part in the economic cycle, like equities. In valuing REITs, we use a number of metrics, including: price to funds from operations (FFO), a key earnings metric for REITs; price to net asset value, which values REITs based on their underlying assets; relative yield analysis, which compares yields across different asset classes; and implied cap rates, to determine what yield the market is using to value a company or sector.

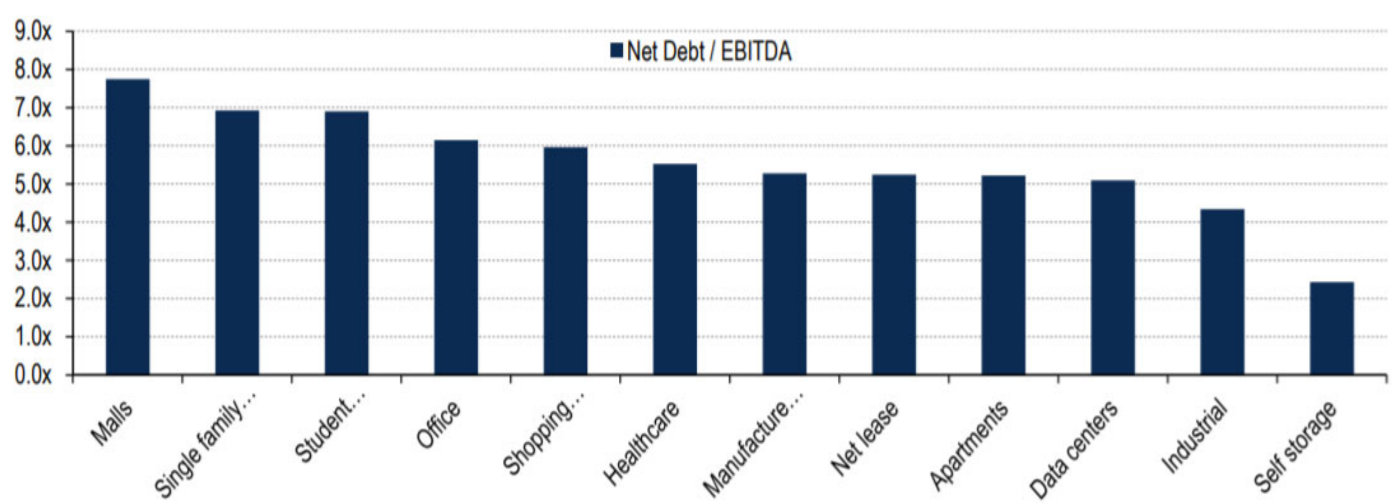
Real Estate Sector	Market Cap ($B)	% of US Listed Market	Economic Drivers	Key Tenants	Lease Duration
Office	98.2	9.8	Corporate Profits, Business Segment Growth, GDP	Corporations, Professional Service Industries	5–10 yrs
Industrial	58.4	5.8	Consumer Spending, Retail Sales	Logistics, Manufacturing, Retailers	3–5 yrs
Regional Malls	117.1	11.7	Disposable Income, Consumer Sentiment	Soft Good Retailers, Jewelry, Department Stores	7–10 yrs (in-line)
Shopping Centers	79.3	7.9	Consumer Spending, CPI, Population	Grocery and Drug, Local Necessity Retail	3–5 yrs (in-line)
Single Tenant Retail	37.7	3.8	Consumer Spending, CPI, Population	Restaurants, Banks, Gas/Convenience	10–15 yrs
Multi-Family	113.4	11.3	Age Cohort Growth, Interest Rates	21–35 yrs and 65+ Age Cohorts	9–12 months
Manufacturing Housing	12.0	1.2	Interest Rates, Population, Age Cohort Growth	55+ Age Cohort, Lower Middle Class Families	Various
Diversified	54.2	5.4	Various	Various	Various
Lodging	41.8	4.2	Business Spending, Disposable Income, Consumer Sentiment	Business and Leisure Travel	Daily (consumer); 10–15 yrs (management contract)
Health Care	104.9	10.5	Aging Population, Government	65+ Age Cohort	9–12 months (resident); 10–15 yrs (management contract)
Self Storage	66.4	6.6	Population	Adults	Monthly
Timber	27.3	2.7	Construction, New Home Sales	Construction Industry	Various
Mortgage REITs	55.9	5.3	Interest Rates, Health of the Financial System	Real Estate Owners	3–10 yrs[a]

Cap-Ex by Real Estate Sector *(as % of NOI)*



Nominal & Economic Cap Rates by REIT Sector[1]





Diversified Components: ALEX, ALX, AAT, CLNY, GNL, JBGS, LXP, CLI, MDRI, VER, VNO, WPC, WRE, KW

Apartment & Single Family Components: ACC, AIV, AVB, CPT, EQR, ESS, IRT, IRET, MAA, NXRT, UDR, ELS, SUI, AMH, INVH, JOE, BNL

The residential sector includes apartments, student housing, manufactured housing and single-family rental REITs.

The multi-family sector includes apartments, student housing, manufactured housing and single-family rental REITs. The main driver for apartment REITs is employment, as it directly impacts rental revenues. Another main driver for apartment REITs is new supply of apartment inventory. Other factors affecting apartment REITs are interest rates, condominium supply, and rental housing supply. Student housing is non-university-owned properties targeted to university students, primarily at large, public, four-year universities. This subsector is viewed as more defensive than other multi-family property types, as college enrollment tends to be less sensitive to macroeconomic conditions and even increases when unemployment rises.

The overall residential sector has benefited from the shift to renting, especially from historically low levels of supply coming out of the global financial crisis. However, construction has ramped up in the last few years. Nationally, occupancy is near peak levels and rent growth has slowed. Positively, Apartment REIT revenue and occupancy metrics continue to outperform the national average given strong operating platforms and technological investments, like SmartHome tech.

Health-Care Components: CTRE, CHCT, HR, HTA, LTC, MPW, NHI, OHI, DOC, SBRA, UHT, VTR, WELL

The key types of healthcare facilities that REITs invest in include: senior housing communities (independent living, assisted living, and CCRCs), skilled nursing facilities (SNFs), hospitals, medical office buildings (MOBs), and life science properties. Unlike other REIT sectors that typically only have one type of business, the healthcare REITs are able to diversify their investments by business and payor mix. For example, the four types of healthcare facilities have varying pay mechanisms: senior housing (private pay), skilled nursing (public pay), hospitals (public pay), and medical office buildings/life science (private pay).

Healthcare REITs generally employ two types of lease structures across their portfolios: triple net (NNN) and RIDEA. Triple-net is the most common lease structure across healthcare real estate and are used in senior housing, skilled nursing and hospitals. These leases are characterized by their relative stability, which can be especially attractive to investors during periods of macroeconomic uncertainty. In an NNN lease, landlords do not have direct exposure to the underlying performance of the property. Instead, rents typically increase at fixed amounts over the life of the lease. Meanwhile, tenants pay all property operating expenses (the hallmark of an NNN lease), allowing for NOI margins at or near 100%. Landlords also pass through all property capital expenditures, which encourages longer leases and low turnover as tenants want to reap the benefits of their investments as long as possible. A typical triple-net lease will run 10-15 years with multiple five-year extension options.

In a RIDEA structure, by contrast, the REIT is directly exposed to the underlying operating performance of their properties. Healthcare REITs pay a fee to a healthcare operator to run a community. If margins improve, healthcare REITs benefit. On the flip side, this structure adds risk to healthcare REITs' cash flows because if margins shrink, the healthcare REITs' cash flows decline. RIDEA structures are used primarily in senior housing.

The key drivers of healthcare REIT property fundamentals include aging demographics, proximity to the oldest daughter (often the caregiver for aging parents), and proximity to the nearest hospital. Healthcare REITs are generally thought of as relatively defensive, given that the industry is necessity based (there are always people getting older who need care) and the predominance of the triple net lease structure, assuming current rent levels are sustainable.

Industrial Components: COLD, DRE, EGP, FR, ILPT, IIPR, MNR, PLD, PSB, REXR, STAG, TRNO, GOOD

Assets owned by industrial REITs typically include: distribution centers, bulk warehouse space, light manufacturing facilities, research and development facilities, and "flex" office space for sales or administrative functions. Industrial assets may be freestanding, but are often located within industrial or warehouse parks. These buildings range in size from 25-50K square feet at the low end to over 1M sf at the high end. While the properties are often leased to a single user, landlords can easily subdivide them for multiple tenant use. This cycle saw a sharp increase in demand for infill assets close to population centers as warehouse tenants have been laser focused on reducing delivery times to both business and consumer customers.

When compared to other real estate types, industrial assets tend to require lower levels of maintenance capital expenditures given they consist largely of large concrete slab floors surrounded by four walls and a roof with large parking lots and truck courts. Modern warehouses include design traits such as dock doors on multiple sides of the building to promote the efficient flow of goods, large truck courts and 30 foot or higher clear ceiling height. Tenants increasingly desire large parking lots as e-commerce uses require significantly more warehouse employees to fill orders than traditional distribution.

The biggest driver of demand for space is consumer spending on goods. Construction and trade are also key drivers of warehouse demand. The high correlation between warehouse demand and consumer spending on goods makes sense given that higher consumer spending will translate into a larger volume of goods flowing through the economy. In addition, firms need a greater cushion of inventory to keep up with sales when times are good. The bottom line is that warehouse demand benefits from inventory storage, or the flow of goods through the supply chain either in the manufacturing process or during distribution.

Prologis (PLD) estimates that e-commerce requires more than 2.5 times more warehouse space than the traditional distribution model. E-commerce requires more logistics space since as retail activities are consolidated from stores due to online retailers 1) carrying more stock keeping units (SKUs), 2) carrying greater levels of inventory buffers, 3) requiring more space and employees to pick, pack and ship to customers (also individual boxes take up more space than pallets) and 4) accommodating space for returns.

A recent focus among tenants on growing profitability through improved supply chain design created demand for new and larger distribution center developments. As part of this process, third party logistics providers (3PLs) became a larger part of REIT tenant rosters. Typical industrial REIT leases last 5 years with 3PL leases at the shorter end. It is worth noting a recent trend of lengthening lease durations for 3PL leases as well since they can serve multiple clients from a single building. The global nature of trade and tenant warehouse needs uniquely provides industrial REITs with opportunities to grow outside the US.

Lodging & Entertainment Components: APLE, DRH, HST, PK, PEB, RLJ, RHP, SVC, INN, SHO, XHR, EPR, VICI, GLPI, MGP

Lodging REITs consist of a portfolio of hotel properties with no unifying brand that are managed by a third party operator. This is the direct result of a legal restriction placed on REITs – in addition to complying with the restrictions placed on other REITs, lodging REITs are neither able to receive income from hotel operations, nor operate owned hotels. Lodging REITs historically have proven to be highly cyclical as the extremely short-term nature of their leases (nightly) can lead to highly volatile room rates and occupancy levels. Many operating expenses cannot be easily pared back, which can lead to volatile earnings cycles.

Office Components: ARE, BXP, BDN, CXP, OFC, CUZ, DEI, DEA, ESRT, EQC, HIW, HPP, KRC, OPI, PGRE, PDM, SLG

Office REIT assets have traditionally fallen into two primary categories: central business district (CBD) or suburban. CBD typically means high-rise buildings in urban infill submarkets. Suburban typically means stand-alone office buildings or corporate office parks outside the urban core. Development costs, operating costs and rents are usually lower for suburban assets than CBD assets. However, these assets also face greater supply risk given their location in lower barrier-to-entry submarkets. Job growth remains the key driver of office space demand while the move to Work-from-Home is presenting a real challenge.

The average lease duration for office REITs is 5-7 years for suburban leases and 10-12 years for CBD. Some large CBD leases may last up to 20 years. In down markets, this locks in a stable income stream of above market rents with downside risk to in-place rents when leases mature. In improving markets, this could lock in below-market rents for an extended period, with the prospect of material rent increases when in-place leases mature. Office development projects typically take 18 months to three years to complete, depending on building size and location. Including the time it takes to assemble land sites and obtain project approval from the local municipality, projects typically take much longer in most CBD markets.

A noteworthy aspect of the office sector, and office REIT earnings models, comes from the capital expenditures necessary for landlords to maintain office buildings. Office REITs have the widest gap between FFO and AFFO of any REIT sector due to the heavy capital expenditure load required to maintain their buildings and lease space to tenants. Office capital expenditures take the form of leasing costs (broker commissions and tenant improvements on new leases and renewals) and property maintenance expenses. When office market conditions weaken and office landlord lease negotiating power deteriorates, tenant improvement capital expenditures tend to rise. However, when office market conditions improve, tenant improvement capital expenditures tend to decline. Property maintenance expenses tend to rise with inflation and are much less cyclical than leasing costs. That said, landlords often hold off on major capital improvement projects during more challenging market conditions to conserve capital.

Shopping Center & Mall Components: AKR, BRX, FRT, KIM, KRG, REG, ROIC, RPAI, BFS, SITC, SKT, UE, WRI, MAC, SPG, TCO, ADC, EPRT, FCPT, NNN, GTY, O, SRG, SRC, STOR

Malls REITs are very much tied to consumer spending, as a weakened consumer can impact REITs through both increased vacancy (stemming from tenant bankruptcies or reduced store openings) and less robust leasing spreads (on both new leases and renewals).

Malls typically are characterized by larger, inward facing, enclosed centers (400,000 sf or more), with two or more anchors (traditionally department stores) and a number of inline specialty tenants. Malls typically draw from a radius of 7-25 miles and focus on general merchandise/fashion tenants. Of all the various real estate sectors, malls have the highest ownership percentage by REITs. About 33% of the 1,028 malls in the nation are owned by REITs, and over 57% of the stronger malls are held within REIT portfolios. It should be noted that there is disproportionate amount of NOI that comes from top tier malls. Mall REITs high level of ownership is a double-edged sword, as it provides the existing landlords with strong pricing power but limited external growth prospects via acquisitions.

Malls REIT revenues are related to consumer spending, but not tied to directly. Retailers typically base their ability to pay rent increases on the cost of occupancy relative to retail sales. If sales have not significantly grown over the term of the lease, then rents will not aggressively grow or could even decline. A weakened consumer can affect REITs through increased vacancy from tenant bankruptcies or reduced store openings and less robust leasing spreads on new leases and renewal leases. One misperception is that mall revenues are made up of percentage rent (rent paid by a tenant if the tenant achieves sales above a pre-determined level). In fact, very little of REIT revenue is tied to sales, less than 3% on average, and the majority of revenue comes from fixed, annualized base rents.

By ICSC's count, there are nearly 114,740 shopping centers in the U.S. (excluding malls and outlet centers). When focusing on the shopping centers that are 30,000 square feet or larger, that number drops to 45,490. Similar to malls, shopping center REITs are dependent on consumer spending. Vacancies in shopping centers are affected by net store closings. Historically, shopping center recoveries lag the end of recessions by one or two years. In addition, shopping centers are affected by a weak consumer through less robust leasing spreads (on both new leases and renewals), as retailers are less confident to agree to higher rents. Factory outlet centers occupy a niche within the retail real estate industry, with over a 50-year history. The outlet center industry, at 50 million square feet, is one of the retail center formats that are still developing ground-up projects at a consistent pace. Previously built on the outskirts of town, outlet centers now are being located closer to major cities.

Self-Storage Components: CUBE, EXR, LSI, PSA, NSA

Self storage facilities offer rental units on a month-to-month basis where tenants supply their own locks and have direct access to units. While many types of self storage structures have been converted from warehouses and other building types, the majority of facilities that are being developed today are specifically designed for consumer/business storage.

The industry is fragmented, with the top six largest owners (CUBE, EXR, NSA, PSA, LSI, and U-Haul) owning about 16% of the self storage industry's facilities. Self Storage Almanac, an independent research firm, estimates the total number of self-storage facilities in the United States to be over 41,000 (and other estimates range 50,000- 60,000).

Demand for storage is resilient through good times and bad and sometimes driven by diverse life changes including death, divorce and dislocation. Moderately increasing lengths of stay corroborate the stickiness of the storage customer. Peak leasing season typically starts in late April/early May and extends through late August/early September. Self-storage renters fall into four key categories: residential/retail, commercial, student and military. Despite current elevated new supply, zoning restrictions are generally making the construction of new storage facilities more difficult with local governments hesitant to allow new development given limited job and tax creation.

Timber Components: PCH, RYN, WY

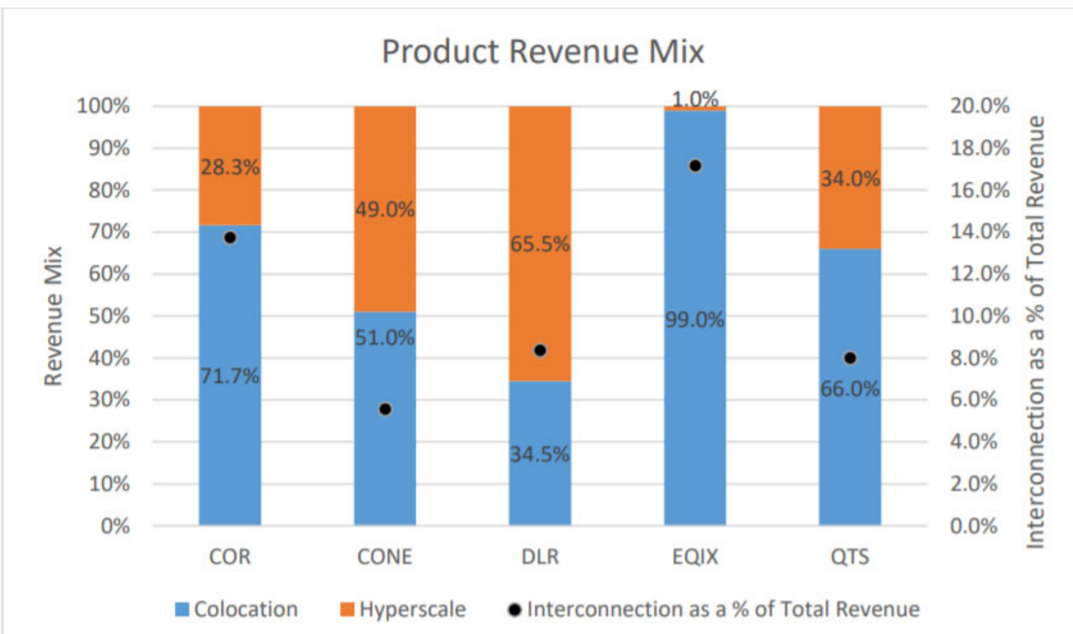
Infrastructure/Tower Components: AMT, CCI, SBAC, UNIT

REITs of this non-traditional real estate sector own and operate various types of infrastructure.

Data-Center Components: COR, CONE, DLR, EQIX, CD, GDS, QTS

Data center REITs own and operate buildings that house networking, data storage and communications technology infrastructure. This infrastructure includes servers, storage gear, switches, routers and fiber optic communications equipment. The unique design of data centers satisfies the specialized needs of tenants for power, cooling capacity, building security and network connectivity. Data center companies provide the infrastructure, but typically do not own any of the server, storage or networking gear that customers install in the facility. Typical tenants are those that require large amounts of computing capacity, data storage or network connectivity, and include corporations, governments, telecommunications carriers, digital media and content providers, cloud providers, and financial and educational institutions. Data center REITs develop, own and operate data centers. Most are converting their non-data center real estate assets into data center space through redevelopment. Acquisitions serve as another key driver of data center REIT portfolio growth. Data center REIT portfolios span North America, Europe and Asia, with the largest concentration in the US. Given similarities for data center demand and design across continents, we expect overseas expansion for this sector to continue. Unique to this REIT sector, data center REITs typically price their space to tenants based on power capacity usage ($/kW) rather than rentable square feet. However, data center REITs convert their rent and operating metrics to per square foot numbers when they report earnings and operating metrics to the street for consistency with REIT sector peers.

Secular drivers, including IT outsourcing, IP traffic growth and cloud adoption are driving demand for data center capacity. Enterprise IT outsourcing is still in its early stages with only 30% of capacity in multi-tenant data centers (MTDC). Bandwidth-intensive applications, such as gaming and video, and the shift in content consumption through over-the-top (OTT) platforms are similarly expected to remain positive contributors to demand for the foreseeable future.



Specialty Components: CXW, GEO, IRM, LAMR, OUT, SAFE

Home Financing Components: AGNC, NLY, ARR, CIM, EFC, MFA, NRZ, NYMT, PMT, RC, RWT, TWO

Commercial Financing Components: ARI, ABR, BXMT, CLNC, STAR, KREF, LADR, STWD, TRTX, BPY

Management Commentary:

Equity Residential (EQR) on market drivers: "We believe that the knowledge-based economy will continue to drive growth in the U.S., and that our markets with their massive installed base of universities, innovative companies, venture capital firms and the many other things that make a knowledge economy grow, not to mention renowned entertainment and cultural amenities, will keep them at the center of this activity. The cities in which we do business, and in which many of you live and work, will, again, be attractive places for affluent long-term renters to live, work and play once the pandemic wanes."

Essex (ESS) on its property portfolio: "Essex owns about 60,000 apartment units in 8 major coastal metros along the West Coast, from Seattle to San Diego. Keep in mind, California and Washington together comprise the fifth largest economy in the world. So this is not a small geographic area by any means. There are several unique things about these markets, which is what draws Essex to them, including the concentrations of tech companies that are driving the economy. And there's frequent housing shortages, supply constraints, and relatively expensive single-family housing. So the transition from a renter to a homeowner is a pretty onerous one. Our portfolio skews toward suburban properties and we like the major job centers, certainly, the technology industries, but places where people want to live, which means good schools, low crime rates, et cetera. We use a data-driven research approach to capital allocation, which relies on housing, demand and supply research, trying to quantify supply and demand for housing in each of our metros and then using our -- using a ranking process to try to determine which metros are most likely to generate rent growth and invest ahead of that."

Sun (SUI) on its benefits from the RV boom: "Strong demand on the RV side, as people want to get outdoors and camp, we're getting a whole fresh new set of guests in our RV communities. And obviously, the RV sales are booming, especially to the younger demographic. And we're seeing, as I said, a 30% pickup in September for transient. What happens moving forward post COVID, obviously, there will be people returning to using aircraft, going other forms of vacationing, perhaps cruising again, we will lose some of that strong demand, but we will maintain a stronger demand that existed before because of the qualities of what they're experiencing in the RV world. Another interesting factor is a number of companies that are mimicking the Airbnb aspect of residential housing are now offering that concept in over 13 million registered RVs across the country."

Life Storage (LSI) on the Warehouse Anywhere program: "Warehouse Anywhere has different products, right? We have the 11,000 store network. We provide just storage management for customers who just need storage and they don't need technology. That's probably been our more mature business. In that case, we provide convenience for larger companies like pharmaceuticals, who need spaces all over the country, and they can come to us and we can provide them 1 invoice. Even if we don't have a store in a certain location, we have a partner in our network who may have it. And then we'll add our enterprise solution, which is the inventory tracking piece where we charge customers for our RFID chandelier that we put into the unit. And that's really done well, very well. That's really supports like medical device companies, field service technicians, companies that need to service ATMs, they need to have parts nearby the ATMs and get access to them within an hour or so. That business has been growing as well. Actually, we had a very good quarter for that. I think one of the best ever in terms of new customers. We had 4 or 5 new customers that finish their pilot. So that's very encouraging because that, again, is premium rent and then we get the fee income because they're using our chandelier technology to manage their inventory. And then we also provide courier services. And actually, we had a record year -- a record quarter for courier services, where the medical parts need to be delivered to the hospitals. We can provide that. So that business has been going very well for us. In fact, I think we're creating demand in all of this business for the storage business. We're creating new demand for businesses who probably never would have thought of using a self-storage unit to support their last mile and field service needs. The Deliverr piece is the newer piece. That's our Lightspeed product. It's still somewhat in development. And that really is playing into the growing e-commerce on demand delivery. That is very exciting. That's where I feel e-commerce, last mile and self-storage are really in the right spot to be -- to play a part in this growing business. There's a lot of companies that are focused on it, tech-enabled fulfillment companies and Deliverr is one of the leaders in that space. And in fact, they called us."

CubeSmart (CUBE) on self-storage's differentiated asset class: "The operating platform distinguishes self-storage from many other asset classes in that it is a very intense customer service business. We invest heavily across our platform in our marketing efforts, attracting the customer; in our revenue management efforts, maximizing the lifetime value of that customer; in our technology, providing our customers with a way of using our product that is safe, effective, meets their needs and meets how they wish to be served; and in the core value of customer service, where we are focused in on folks who generally are in some form of move, and some form of move usually creates some form of stress, and we go out of our way to try to relieve that stress by making the use of our product as simple and easy as possible."

Rexford (REXR) on market dynamics: "Meanwhile, tenant demand continues to expand, driven by growth across a range of sectors from consumer staples and food distribution, healthcare and medical products, renewable energy and electric vehicles, space exploration and aerospace technology among many other growth sectors. Further, the dramatic growth in e-commerce, which has been accelerated by the pandemic, continues to drive unprecedented new demand for space within our target infill markets as we are positioned within the largest first mile as well as the nation's largest last mile of goods distribution and consumption in the United States."

Duke (DRE) on positive trends for Industrial REITS: "In particular, the expansion of online direct-to-consumer shopping has seen elevated user penetration rate and expanding categories of goods being ordered. The penetration rate has risen from about 10% in 2019 to 15% year-to-date and expected to reach 20% sometime in 2021 and continue to rise thereafter. Several other long-term trends also bode well for our sector. The continued trend of onshoring will require more high-quality industrial space in the U.S., safety stock is becoming more prevalent, where major distributors feel the need to have more critical inventory on hand to avoid future supply chain disruptions. In fact, we've heard some major retailers are now aiming for a 30- to 60-day supply of onshore inventory compared to about 15 days previously. This is what is driving the projected 400 million to 500 million square feet of incremental demand from safety stock acronym. This enormous amount of demand is somewhat mutually exclusive from the growth from our e-commerce business."

Medical Properties (MPW) on acquisitions: "Nevertheless, we're not done, not even close. As the buyer of hospitals -- as the largest buyer of hospitals in the world, we see materially every potential opportunity, underwrite the more promising transactions over the course of multiple years. And as you know, we are willing to execute when deals both meet our standards and generate immediate earnings accretion. It is this logic that drove 24% normalized FFO per share growth in the third quarter and ranks us #1 among U.S. REITs exceeding $3 billion in equity market cap and 2020 FFO growth. Though it is still too early to announce any specific acquisition goals for 2021, we are confident in our ability to continue to grow and to do it prudently. But let me remind you again. If we do nothing else, we just stop acquiring as of today, we are tracking at the high end of our guidance range."

SBA Communication (SBAC) on domestic growth strengthening: "We believe that there are opportunities to see growing levels of new bookings on a quarter-to-quarter basis for the next several quarters. There are several drivers behind this anticipated trend. First, we expect T-Mobile to continue to accelerate their focus toward meeting their stated 5G coverage goals, including upgrading the majority of their sites in either 2.5 gigahertz or 600 megahertz spectrum or both. Second, the upcoming C-band auction should see significant participation and we expect will be a driver of increased activity starting sometime next year with both Verizon and AT&T, as the deployment of this spectrum will require new equipment at many of their existing macro sites. And third, we continue our constructive discussions with DISH, and we anticipate that they will be actively engaged in building out a nationwide 5G network over a multiyear period. All these factors should create an increasing domestic leasing environment as we move through next year, which will bode well for domestic organic growth for the following several years."

OptionsHawk Executive Summary and Top Picks

This is not a very exciting group for the most part, outside of the Data Center and Tower names and some niche Industrial plays. We are looking at very different metrics and want names that can sustain their payouts and hopefully see some FFO, NOI growth. It's not a group I spend a lot of time investing due to the limited growth and capital gains, more of a group for those with an income driven strategy.

In the Diversified group **WP Carey (WPC)** is solid and limited retail exposure while pursuing opportunities in Industrial, so it is the only standout in that group. For the Single Family & Apartment group **Sun (SUI)** continues to screen much better than all peers and did an intriguing deal for Safe Harbors, while **Camden (CPT)** looks attractive on valuation and **ESS, AVB** more Neutral ratings. **Invitation Homes (INVH)** is another favored name in this group. **NexPoint Residential (NXRT)** is worth a closer look in the small cap segment, screening favorably. In Commercial Financing **Arbor Realty (ABR)**, a small cap, is the only one worth a look, but overall not a very attractive group. The entire Home Financing group got crushed in 2020 with the two largest **NLY, AGNC** the top performers, and overall not a group of interest. **PotlatchDeltic (PCH)**, a small cap, is the favored Timber REIT.

The Specialty REIT group has some interesting names, no interest in being long the Prison names (CXW, GEO), but **Safehold (SAFE)** an awesome growth story I have written on extensively and still like the long-term potential. **Lamar (LAMR)** in the advertising market does have solid financials. It's difficult for me to be positive the Shopping Center REITS considering the structural decline with ecommerce increasing penetration and prefer to own warehouse names. We can quickly eliminate most names and come to a few showing better growth metrics and dig into the stories. **Agree Realty (ADC)** screened the best the last few years and continues to be the preferred name with a healthier portfolio of properties. The other two are **STORE Capital (STOR)** which has a more ecommerce-immune tenant base and **Four Corners (FCPT)**, a small cap name involved in the restaurant industry.

The Self-Storage names have always seemed to perform better than most of the other sub-groups with better tailwinds from structural shifts in real estate. **Extra Space Storage (EXR)** stands out as best-in-class while **National Storage**

(NSA) a nice growth small cap. The Industrial REIT space has some of the highest quality names and benefitting from the ecommerce boom, **Prologis (PLD)** the clear leader and one of my favorites across the entire REIT class while **Rexford (REXR)** is an impressive growth play and **Eastgroup (EGP)** has become another favorite. **Stag (STAG)** and **Terreno (TRNO)** are small cap growth standouts while **Innovative (IIPR)** has been my favorite play on the Cannabis industry growth. **Industrial Logistics (ILPT)** a very small $1.45B name with impressive growth and a 6% yield has Amazon has a 16% tenant.

Moving onto Office REITS there are clear structural headwinds from the work-from-home trend and the group was mostly hit hard in 2020 though the best performer was our top fundamental pick from last year's report, **Alexandria (ARE)** which gives me further confidence in my screening process and it remains the preferred own. **Kilroy's (KRC)** solid growth and life sciences portfolio looks to be underappreciated. **Easterly (DEA)** is the best looking small cap play here with its Government tenants. In Healthcare REITS I want to avoid senior living and focus on some better, though limited opportunities, **Medical Properties (MPW)** screening the most favorably with its Hospital exposure. Elsewhere, two small caps stand out with **CareTrust (CTRE)** and **Community Health (CHCT)**.

Saving the best for last, the Data Center and Tower names once again outperformed other REIT classes which makes perfect sense considering the growth in Tech and 5G should be a continued growth driver. The big three Tower names trade at similar valuation and favor **SBA (SBAC)** for the growth and margin profile. In Data Centers, **GDS Holding (GDS)** is a high growth Chinese play with a major opportunity to keep growing. **Equinix (EQIX)** has long been the leader but into 2021 **Digital Realty (DLR)** is cheaper and offers similar, if not better, metrics. **CoreSite (COR)** stands out among the remining names as a mid-cap growth leader.

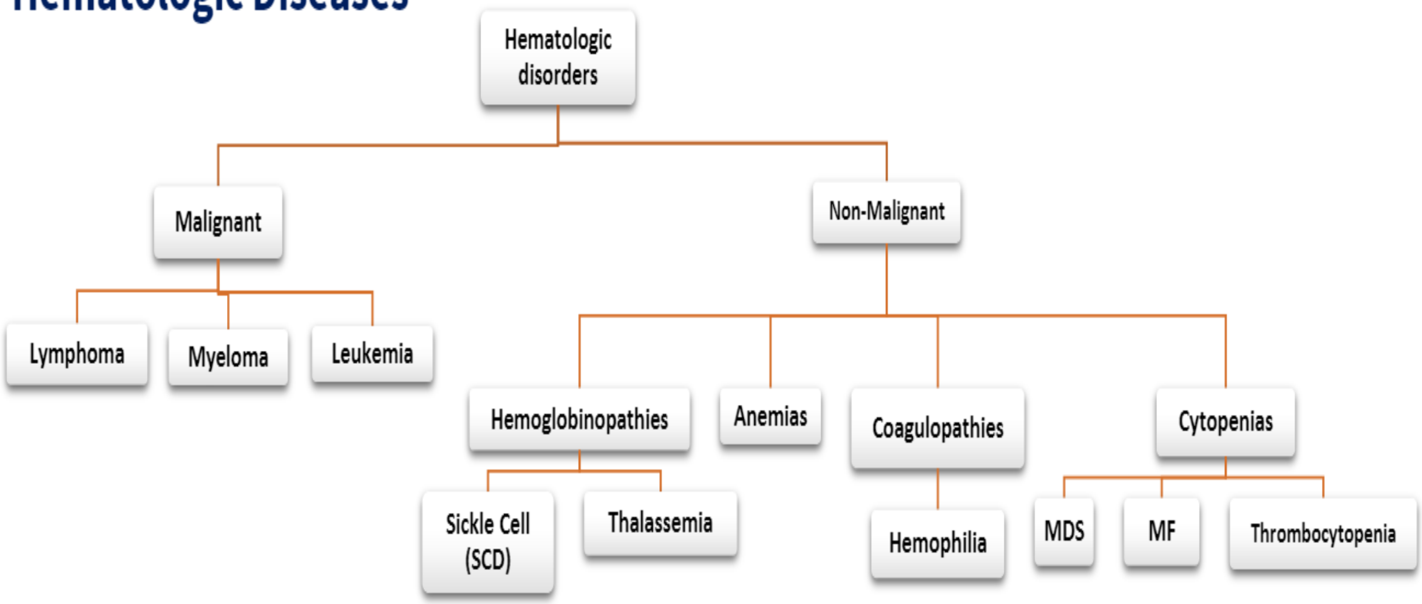
Healthcare: *The broader Healthcare sector as represented by ETFs like XLV/VHT have performed roughly in-line with markets in 2020. The Biotech group as represented by IBB/XBI have been strong performers boosted by pipeline advancements, vaccine names targeting a solution to the pandemic, and further M&A. The Managed Care group has outperformed once again and saw further consolidation while Medical Equipment has also seen broader gains driven by demand driven by a surge of hospitalizations from COVID while the more elective surgery exposed names have lagged due to lockdowns and closures. Diagnostics & Genomics remain a very strong theme across Healthcare seeing the strongest growth. The Healthcare sector generally is more defensive during times of market volatility while the group spent much of 2020 waiting for clarity on the Election outcome and potential changes to healthcare policy. Biotech/Pharma stock have seen multiple contraction and are set to outperform in a more favorable policy environment while medical technology & devices continues to have stronger secular growth tailwinds driven by aging population and technological advancements in medicine. Life Science Tools (LST) continue to see increased spending from medical research and are more immune from policy issues. Over the last 25 years, earnings per share for the sector have increased nearly 10% annually compared to 6.6% annual growth for the S&P 500.*

Biotech

Cardiovascular/Metabolic/Endocrine/Hematologic/Nephrology Components: RETA, AMRN, CBAY, ESPR, UTHR, MDGL, MCRB, MYOV, ZEAL, KROS, NGM, PHAT, AKRO, ALBO, ALGS, AMTI, CYTK, ENTA, ICPT, INVA, KROS, MYOV, PHAT, RDUS, SPRB, XLRN, VKTX

We've seen numerous novel therapeutics for hematological diseases like sickle cell disease (SCD), B-thalassemia, anemia, and hemophilia emerge. XLRN's drug Reblozyl (partnered with BMY) recently launched for anemia related to B-thalassemia and MDS. The drug is also entering Phase 3 development for Myelofibrosis (MF). In late 2019, GBT received accelerated approval of their drug Oxbryta for SCD, a space that until recently has had very little in the pipeline. Now multiple SCD therapeutics are in development including gene therapy approaches, and novel agents targeting symptoms of anemia and pain. Finally, there have been multiple recent advancements for hemophilia, with potentially curative gene-therapies now nearing market entry. QURE's hemophilia-B gene therapy is in Phase 3 development with topline data expected by YE20. ARGX, IMVT, and MNTA, have assets in development for immune mediated hematologic disorders (thrombocytopeniapurpura (ITP)/ warm autoimmune hemolytic anemia (WAIHA)).

Hematologic Diseases



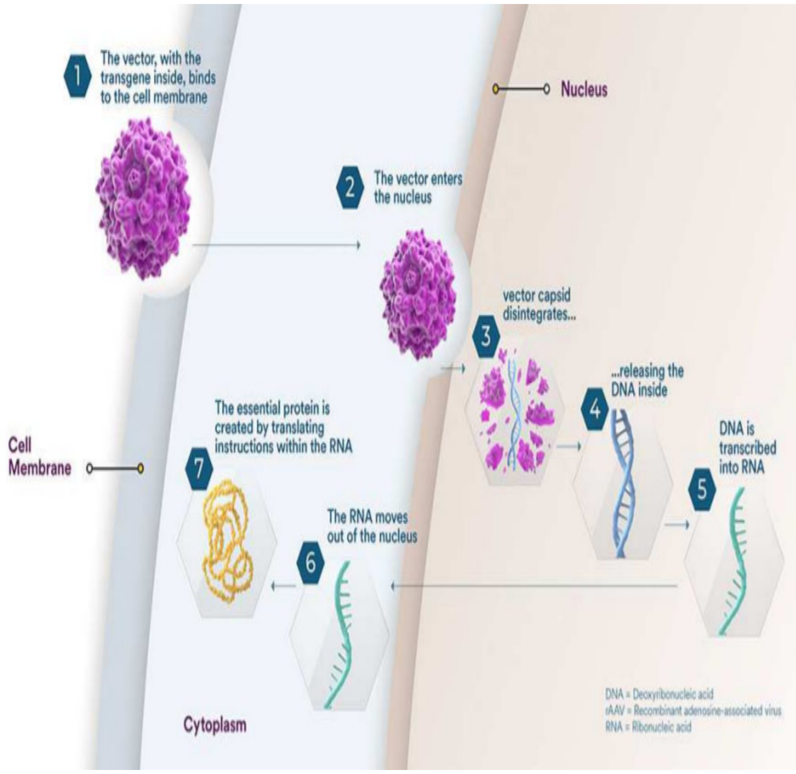
Gene Precision Therapy Components: ADVM, BLUE, BPMC, CRSP, DTIL, EDIT, FIXX, GBT, MGTX, NTLA, ORTX, QURE, RCKT, RGNX, SGMO, VYGR, WVE, CBPO, KRYS, SRPT, PTCT, RLAY, RPTX

Gene therapy is a type of nucleic acid-based medicine that inserts a healthy gene into cells to replace a mutated, disease-causing variant. Gene therapy can be used to modify cells inside (in vivo) or outside (ex vivo) the body. In ex vivo gene therapy, target cells are first extracted from the patient as opposed to in vivo gene therapy, which relies on the direct administration of the genetic drug to the patient. After the desired gene is inserted into the cells, the cells are returned to the patient. In in vivo gene therapy, the vector delivers the selected gene directly into the target cells within the whole organism. Ex vivo approaches of therapeutic gene transfer provide a more controlled laboratory environment for the gene transfer step and reduced safety concerns due to their autologous nature. However, the ability to expand the ex vivo approach to more disease areas is limited, especially for diseases due to cellautonomous defects and the current inability to transplant and functionally graft many cell types and tissues of the nervous system.

Unmet medical needs and gene therapy's capability create an unprecedented trillion-dollar market opportunity. According to the World Health Organization, there are between 5,000 and 8,000 rare diseases and the majority of them have a genetic origin. There are 400m people worldwide, 30m in Europe, and 25m in the United States who are affected by a rare disease. Since rare diseases are often difficult to diagnose, it can take years to obtain an accurate diagnosis. Even after a proper diagnosis, only a few hundred have any treatment. Most rare diseases put substantial medical and financial burdens on patients and their families because they are serious, chronic, and even life threatening. With two approved gene therapies – Luxturna and Zolgensma – in the United States, expect more FDA approvals in the coming years, and continued innovations in viral vectors and manufacturing technology should improve treatment outcomes further.

SCD, SMA, HD and hemophilia all encompass rare genetic disorders, and there are hundreds of others which are often fatal. Duchenne Muscular Dystrophy (DMD) for example, is a genetic neuromuscular disease which is characterized by progressive loss-of muscle function, leading to loss of ambulation and death (by mid-20s). SRPT has topline data from their Phase 2 micro dystrophin gene therapy trial approaching in early-21. If successful, it would be transformative for DMD. QURE's gene therapy platform includes assets for hemophilia, andHD among others. PTCT has a gene therapy in late stage development for the ultra-rare AADC deficiency, and will be submitting an IND with their Freidreich's Ataxia (FA) gene therapy in 4Q20.

Company	Ticker	EV ($M)
AAV Gene Therapy		
Abeona Therapeutics	ABEO-US	$9.6
Adverum Biotechnologies	ADVM-US	$863.4
Applied Genetic Technologies	**AGTC-US**	**$80.5**
Axovant Gene Therapies	AXGT-US	$45.2
Homology Medicines	FIXX-US	$272.6
IVERIC Bio	ISEE-US	$353.9
LogicBio Therapeutics	LOGC-US	$184.6
MeiraGTx Holdings plc	MGTX-US	$421.9
Solid Biosciences	SLDB-US	$173.1
Sangamo Therapeutics	SGMO-US	$1,070.4
RegenxBio	RGNX-US	$1,076.4
uniQure	**QURE-US**	**$1,749.7**
PassageBio	PASG-US	$435.8
Taysha	TSHA-US	$608.4
Voyager Therapeutics	VYGR-US	$153.7
Prevail Therapeutics	PRVL-US	$232.5
Lentiviral Gene Therapy		
AVROBIO	**AVRO-US**	**$370.6**
Bluebird Bio	**BLUE-US**	**$2,058.7**
Rocket Pharma	RCKT-US	$1,554.6
Orchard Therapeutics	ORTX-US	$293.9
Gene Editing		
CRISPR Therapeutics	CRSP-US	$5,656.6
EDITAS Medicine	EDIT-US	$1,394.0
Intellia Therapeutics	NTLA-US	$1,357.7
Precision Biosciences	DTIL-US	$344.9
HSV Gene Therapy		
krystal Biotech	KRYS-US	$538.1
Companies with Gene Therapy Program		
Amicus Therapeutics	**FOLD-US**	**$5,742.6**
BioMarin	BMRN-US	$13,828.0
PTC Therapeutics	PTCT-US	$3,980.6
Sarepta Therapeutics	**SRPT-US**	**$9,083.5**
Selecta Biosciences	SELB-US	$216.4
Ultragenyx	RARE-US	$7,302.8



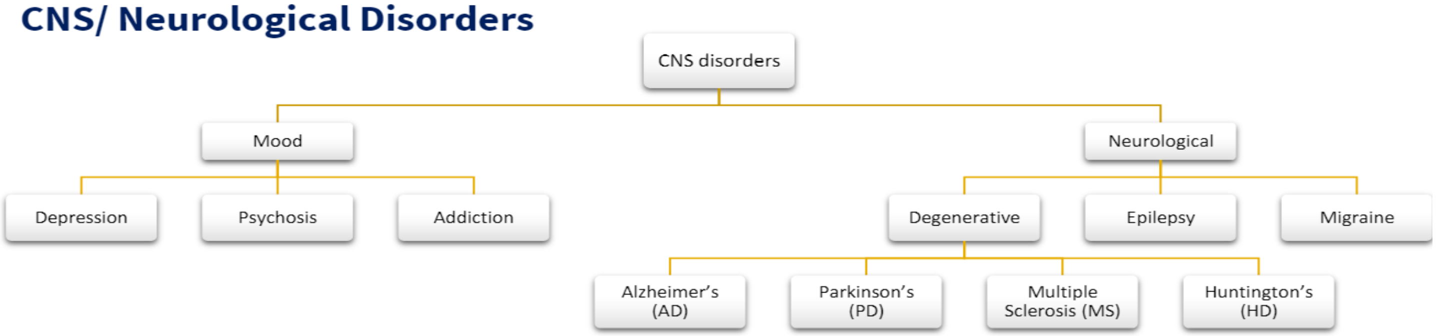
Oncology Components: ALLO, BGNE, FATE, IOVA, AGIO, ARGX, ATNX, CLVS, DCPH, EPZM, EXEL, GTHX, HALO, HRTX, INCY, KURA, MGNX, MRTX, PBYI, RUBY, SGEN, SPPI, TPTX, ZYME, ZIOP, BNTX, MOR, SWTX, NXTC, KPTI, BNTX, IGMS, GMAB, LEGN, TGTX, ADCT, RVMD, SRNE, FMTX, YMAB, ARVN, ZNTL, KRON, PMVP, PRLD, RCUS, ALXO, MRSN, TRIL, IMGN, CGEN, BDTX, CCCC, CLDX, CNST, OLMA, CRDF, FHTX, HARP, NKTX, NRIX, RVMD, STRO, STTK, SURF, KNTE, TCRR

Auto-Immune Components: APLS, ARNA, CCXI, FGEN, GLPG, GOSS, GWPH, IRWD, MGTA, OMER, SRRK, TBPH, XNCR, CHRS, PRVB, VIE, VIR, IMVT, IMAB, KYMR, MESO, ANNX, IMUX, RAPT

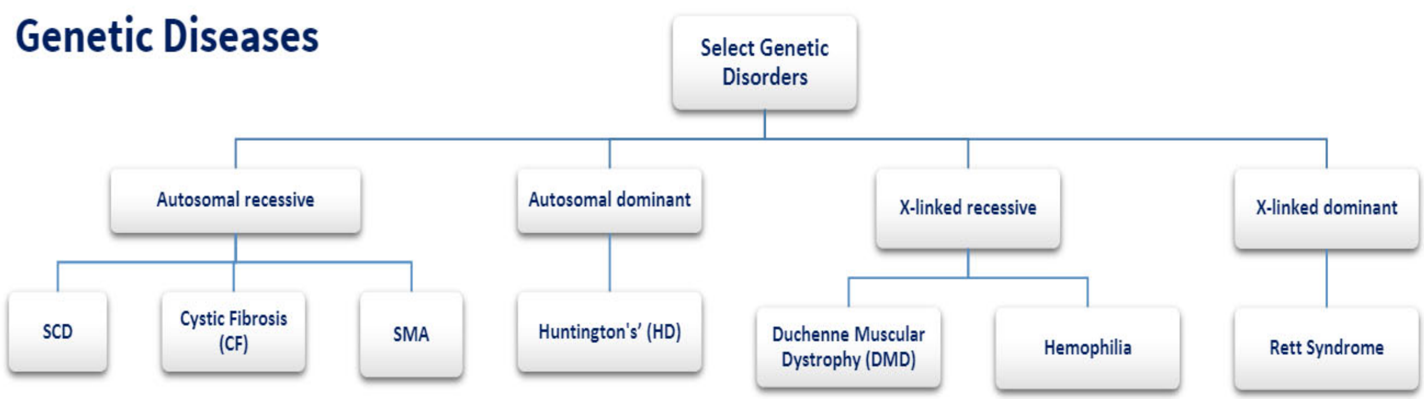
Neurological Components: ACAD, ALEC, ALKS, AXSM, BIIB, BHVN, CARA, CRTX, DNLI, ITCI, NBIX, SAGE, SUPN, ZGNX, HRMY, KRTX, RVNC, PRAX, BTAI, MRNS, PRAX, TSHA, CMPS

The high unmet need for therapeutics targeting neurological/ CNS diseases has driven a significant amount of innovation in the field. ACAD's Nuplazid is the first approved therapy for Parkinson's Disease Psychosis (PDP), and is on-track to become the first drug for Dementia Related Psychosis (DRP). In late 2018, GWPH's Epidiolex was approved for seizures of Lennox-Gastaut Syndrome(LGS) and Dravet Syndrome (DS) and its label was expanded for Tuberous Sclerosis Complex (TSC) in July 2020. The drug generated >$300Min its first full-year on the market, highlighting the significant need for these patients. In June 2020, ZGNX's drug Fintepla was also approved for seizures of DS. The next wave of innovation in the neurological field appears to be in Huntington's Disease (HD) and other autoimmune neurological diseases (like MG, and CIDP). Preliminary safety data with QURE's HD gene therapy are expected by YE20 and initial biomarker findings are expected next-year. PTCT's oral splicing HD therapy is entering the clinic in 4Q20. BLA filing of ARGX's efgartigimod for MG is expected by YE20. MNTA and IMVT also have MG programs, with data readouts this year. ARGX also has a trial for CIDP underway.

CNS/ Neurological Disorders



Rare & Genetic Disease Components: ALXN, ANAB, ASND, ATRA, BMRN, CORT, EIDX, FOLD, HZNP, INSM, JAZZ, NKTR, RARE, RTRX, VNDA, ZLAB, VRTX, NVAX, BBIO, STOK, GBIO, KNSA, TBIO



RNA Therapeutic, Infectious Disease and Vaccine Components: ALNY, ARWR, DRNA, IONS, MRNA, ANIP, URGN, ALLK, BCRX, EBS, CVAC, PCVX, INO, ALVR, ARCT

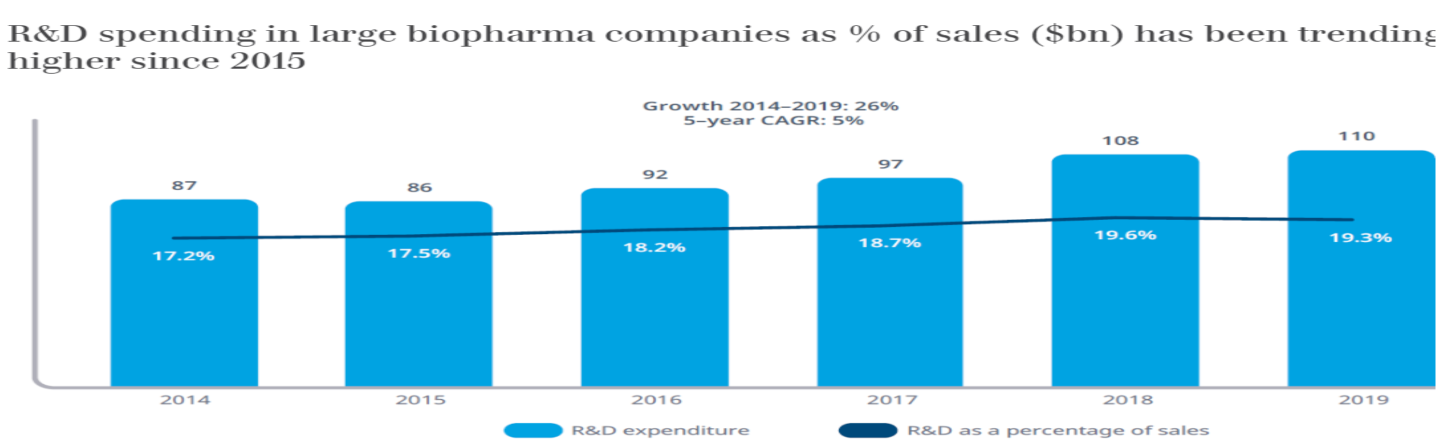
Regenerative Medicine Components: ANIK, DYN, FLXN, RNA, VCEL

Ophthalmology, Dermatology Components: REGN, KOD, AUPH, TARS, OPT, AERI, GRAY, FBRC

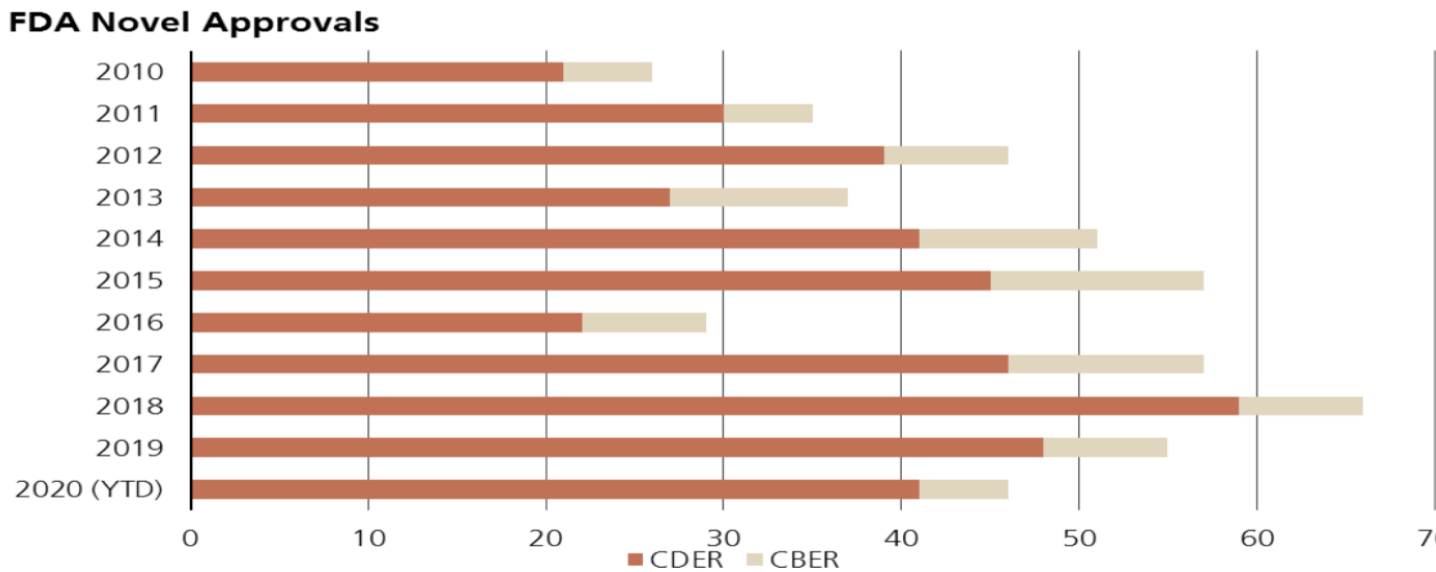
With over $650B in sales, the biotechnology sector accounts for nearly two percent of total output across all industries in the U.S. The Drugs and Pharmaceuticals category is responsible for the largest portion of biotechnology's sales, at 45 percent. Biotech drugs can be classified as biologics (drugs manufactured using biological processes, i.e. cellular therapies, gene editing, gene therapies, antibodies, RNA, peptides – more complex and expensive) or as small molecules (synthetic chemical compounds that are usually easier and cheaper to manufacture).

The Biotech group is massive with over 600 total companies before narrowing it down and it seems every week there are multiple new ones coming public. For the purpose of this breakdown we are looking mainly at $500M and above market caps and broke them down into the indication the lead asset/candidate is targeting. From there the best way to compare Biotech companies is separating into clinical stage and commercial stage and also utilizing market cap brackets. It is often a tough group to value as much of the valuation is weighted on future expected revenues that rely on an approval process and many of the names lack earnings until later in the growth cycle. EV/Revenues is one approach for companies with $500M+ in revenues while risk-adjusted-value is often used to value early-stage companies looking at market potential, market share, and likelihood of approval. Funding is also a key metric to observe by looking at the cash on hand and expected expenses so the companies can stay funded until an eventual commercial stage.

M&A remains fairly active in the group with Oncology names seeing the largest and highest premium deals and large ca Biotech and Pharma companies still have plenty of cash to put to work. Notable deals in 2020 included acquisitions of Eidos Therapeutics, Myokardia, Immunomedics, Akcea, Aimmune, Momenta, Principia, Portola, Forty-Seven, and Dermira. A strong innovation cycle and amenable regulatory backdrop are also positive trends supporting momentum for the sector.



In terms of innovations the number of early stage deals is at an all-time high with a 5-year deal value CAGR at 12%, IPOs in 2020 are surpassing prior years, R&D spending at large biopharma is strong, and there is an appetite for next-gen modalities with cell, gene, and nucleotide therapies. Other themes and disruptive technologies in oncology include cancer cellular therapy, tyrosine kinase inhibitors, cytokines, genetically targeted medicines, drugs targeting tumor escape mechanisms, and engineered antibodies.



It is a very company-specific group without a lot of generic analysis that can be applied. Immuno-Oncology remains a hot theme along with Gene & Cell Therapy, Biosimilars and Precision/Personalized-Medicine. Vaccine development took center-stage in 2020 due to the pandemic. Drug development is notoriously capital intensive and, with more biotechs in existence than ever before, the industry requires a steady flow of investment to keep laboratories churning out new medicines.

A few other performance indicators I will screen include revenue CAGR, Inventory Turnover, Asset Turnover, ROE, R&D as a % of Sales, and Return on Research Capital. Risk-adjusted net present value (rNPV) accounts for risk associated with an asset's cash flows. This method is particularly relevant in assessing the value of drug assets in development given their inherent risk. This method factors in product probability of success at each stage of clinical development and regulatory approval. Comparable Deals is another relative-method of valuation where previous comparable market transactions (e.g., asset sales and partnerships) are used as a benchmark for asset value. In pharma and biotech, this method is particularly useful in valuing an early stage drug asset — such as preclinical assets — where data is limited to support a more robust rNPV. While early stage assets may only contribute nominal value, these assets may be of particular interest to a potential partner and a valuation will lack credibility if these assets are not appropriately considered.

In Biotech, more than any other industry, it is important to really understand the individual companies in order to pick the best stocks as pipelines are a key driver of valuation and unable to be measured by any financial ratios. I prefer to look for names nearing a commercial launch where revenues will start to accelerate and provide ample cash flows and more flexibility to management to pursue expansion. Biotech companies are top-line driven, with increasing focus on the bottom-line as they grow. Pre-revenue biotechs must spend a significant amount of R&D to advance their products to approval – which may be met with failure. This requires significant capital – primarily obtained from public equity raises, but also investment from VCs or pharma companies, and/or unique debt arrangements.

With much of the Biotech analysis qualitative and time-consuming I spend a lot of time reading sell-side research and incorporating institutional options flow positioning to find the top plays. It is also a group where I tend to invest on much shorter timeframes and utilize options to avoid event-risk, and a group not to be overly concentrated in a single name due to blow-up risk. I highlight 67 names below, which may seem like a lot, but considering there are more than 600 Biotech stocks, aligns with our approach of finding the top 10% of stocks.

Established Biotech Top Picks

The first real standout for established names comes in Oncology with **Seattle Genetics (SGEN)**, a fantastic sales growth story while **Incyte (INCY)** continues to look cheap and underappreciated. **Regeneron (REGN)** has been a laggard in 2H20 but trades at attractive valuation with Eylea and Dupi sales continuing momentum. In Vaccines I continue to like **Emergent Bio (EBS)** as more of a pick and shovel play on the group. **Alnylam (ALNY)** has an impressive growth outlook though trades rich on valuation, a name to own on weakness. **Moderna (MRNA)** has clearly established itself as a leader with its COVID-19 success. **Horizon (HZNP)** is a top name with its immense success and rapid sales growth. **Jazz (JAZZ)** screens cheap versus peers and strong key metrics while **Vertex (VRTX)** despite a set-back in late 2020 continues to be an attractive name for its Cystic Fibrosis franchise and pipeline upside.

Early Commercial Stage Growth Biotech Picks

Acceleron (XLRN) is a top early stage pick with two de-risked blockbuster assets. **Albireo (ALBO)** a small cap play of interest showing strong data and well-funded with its PFIC lead candidate set for potential 2H21 commercial launch. **GW Pharma (GWPH)** is generating revenues as a leader in cannabinoid medicines that screens attractive. **Arena (ARNA)** pulled back late in 2020 but still screens attractive with multiple readouts in 2021 and potential to be a leader in UC and Crohn's. **CRISPR (CRSP)** a preferred larger cap name in gene therapy with best-in-class data and seen a good amount of consistent bullish options action. **PTC Therapeutic (PTCT)** a revenue making play that trades at cheap valuation and continues to deliver strong sales numbers.

Acadia (ACAD) a top pick in Neurological with commercial launch strong for Nuplazid and further readout catalysts due in 2021. **BioHaven (BHVN)** also a top neurological play with strong options positioning into key data for Alzheimer's while its migraine treatment was recently approved.

Halozyme (HALO) a smaller Oncology name with a strong commercial growth cycle that is undervalued and continues to be a favorite of option traders. **Ascendis (ASND)** a favorite once again with the expansion of its TransCon pipeline. **Zai-Lab (ZLAB)** another top name with de-risked lead assets and plenty of readouts and launches over the next 12-24 months. **UltraGenyx (RARE)** shares gained 200% in 2020 and a quality name but appear fairly valued and more of the wait for a pullback list.

Clinical Stage (Speculative) Biotech Picks

Reata (RETA) is a favorite speculative name as a likely M&A target with its two key franchises in Chronic Kidney Disease and Neurology. **Zealand (ZEAL)** an attractive growth story with two key products set to develop into a commercial stage play. **Myovant (MYOV)** a name with potential to disrupt the standard of care in prostate cancer. **Applied Molecular (AMTI)** has a unique protein carrier technology that could disrupt gastrointestinal markets. **Spruce (SPRB)** is building a nice portfolio in hormone-related diseases with potential best-in-class candidate. **Aligos (ALGS)** a potential blockbuster in Hepatitis B. **Akero (AKRS)** a new player in NASH that has shown some strong data to date.

Immunovant (IMVT) a hot name in inflammatory/auto-immune with a lot of read-outs in 2021 that could de-risk the portfolio and make it a M&A target. **Apellis (APLS)** sets up for late 2021 approval for its lead PNH drug that could be a major sales driver. **Kymera (KYMR)** an intriguing protein degradation play where Vertex Pharma owns a 7% stake. **UniQure (QURE)** a top small cap gene therapy play considering the bullish January 2022 open interest and overall solid portfolio. **Repare Therapeutics (RPTX)** would be the speculative small cap play in precision therapy with its SNIPRx platform in precision oncology.

Harmony (HRMY) an interesting small cap looking to capture share of the $1B Narcolepsy market. **Karuna (KRTX)** has a lot of potential with its KarXT being developed as a novel antipsychotic treatment for schizophrenia and dementia-related psychosis. **Compass (CMPS)** a recent IPO with a big opportunity for psilocybin therapy as a treatment for mental health disorders. **Praxis Precision (PRAX)** is another new issue with a big opportunity for its lead asset in major depressive disorder that should show key differentiation with 2021 readouts to SAGE's treatment.

Argenx (ARGX) has one of the most promising pipelines in Oncology and continue to favor it. **Iovance (IOVA) and Mirati (MRTX)** two hot Oncology names with largely de-risked assets in high-value indications that could become M&A targets after the large **IMMU** deal in 2020. **Fate (FATE)** another top name with a strong pipeline and regulatory successes. **Allogene (ALLO)** a smaller CAR T name with key readouts due late 2020 and in 2021 for advanced programs in multiple myeloma and non-Hodgkin Lymphoma. **Turning Point (TPTX)** another small cap Oncology name that has shown robust efficacy with its data and **Targa (TGTX)** a favorite of option bulls and a strong commercial pipeline nearing. **Springworks (SWTX)** another small cap favorite utilizing precision medicine while **Alexo (ALXO)** is many years from revenues but a potential best-in-class name in the hot field of CD47 targeting. **ZymeWorks (ZYME)** yet another in Oncology that as a great find in 2020 and continues to post strong clinical data. **PMV Pharma (PMVP)**

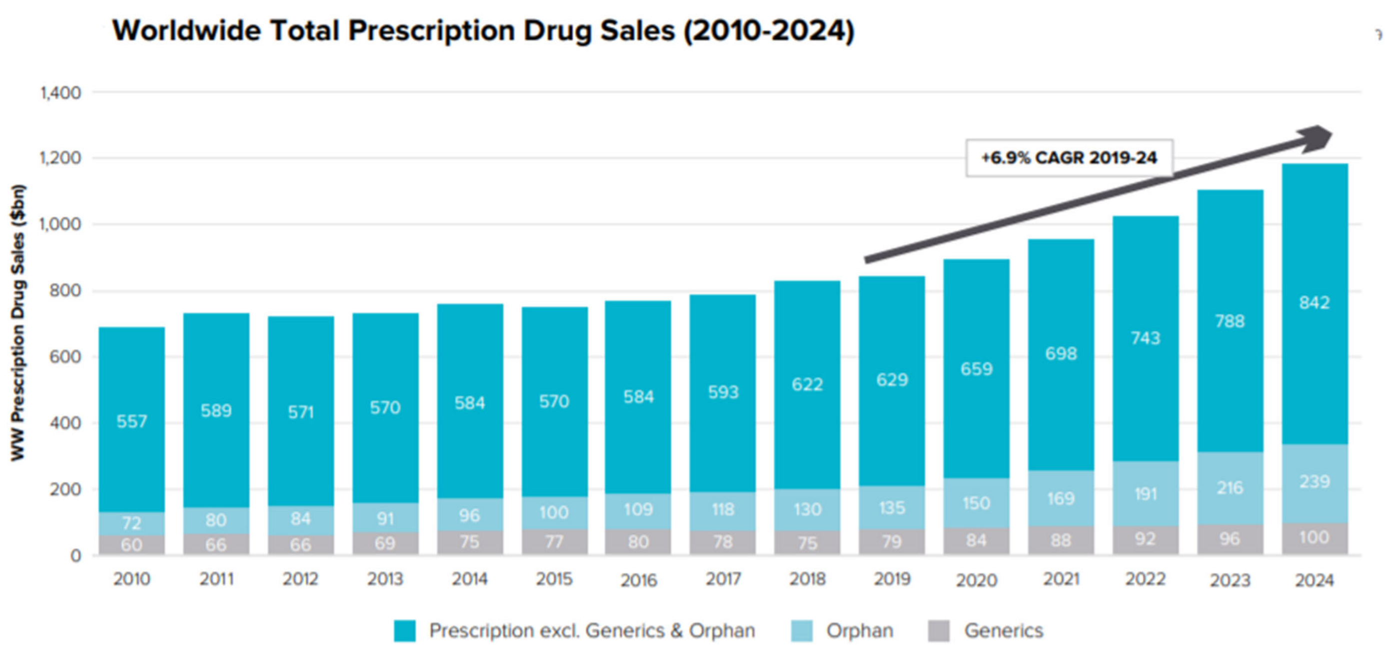
another newer name with two key products looking at p53 small molecules with potential to drive $4.5B in sales. There are a ton of small caps in this group, **Nurix (NRIX)** & **C4 (CCCC)** two more plays in the hot protein degradation group. It is a diverse group so there are a lot of intriguing names, **Mersana (MRSN)** a clear leader in the ADC space, **Kronos (KRON)** in small-molecule high-value indications, **Shattuck (STTK)** in checkpoint inhibition, **Black Diamond (BDTX)** in allosteric mutations, **TCR2 (TCRR)** in a new TRuC approach to cell therapy in cancer, **Sutro (STRO)** targeting the unmet need of ovarian cancer, **Foghorn's (FHTX)** gene traffic control platform, and **Celldex (CLDX)** a transformation story with three lead assets now in clinic for potential major catalyst drivers.

In Ophthalmology, **Graybug (GRAY)** a very small but intriguing name with opportunities for long-acting therapies in vision diseases and **Tarsus (TARS)** with strong efficacy results and potential in both skin and eye markets. **Dyne (DYN)** a long-term type name in regenerative with its FORCE platform for muscle tissue-specific delivery of therapies with proof of concept data not expected until 2022. **Vericel (VCEL)** is a revenue-generating name with a long runway for continued growth. **Vaxcyte (PCVX)** an interesting new name in Vaccines with major potential for a pneumococcal vaccine. **AlloVir (ALVR)** is in the field of hematopoietic stem cell transplant and its Viralym-M could see commercial launch in 2023. **Arrowhead (ARWR)** has ten clinical program by mid-2021 and a de-risked late-stage pipeline with a strong balance sheet. **ArcTurus (ARCT)** was in focus for COVID-19 vaccines in 2020 and continues to look attractive in the hot mRNA space. **Generation Bio (GBIO)** has a non-viral gene therapy platform and strong management team with proof of concept seen by the end of 2022, a potentially transformative platform. **Stoke Therapeutics (STOK)** a favorite with its platform recently de-risked, TANGO having a broad product pipeline across unmet needs. **Translate Bio (TBIO)** another interesting small cap with strong early data in Cystic Fibrosis and a collaboration with Sanofi (SNY) validating its mRNA approach.

Pharma, Drugs, and Generic

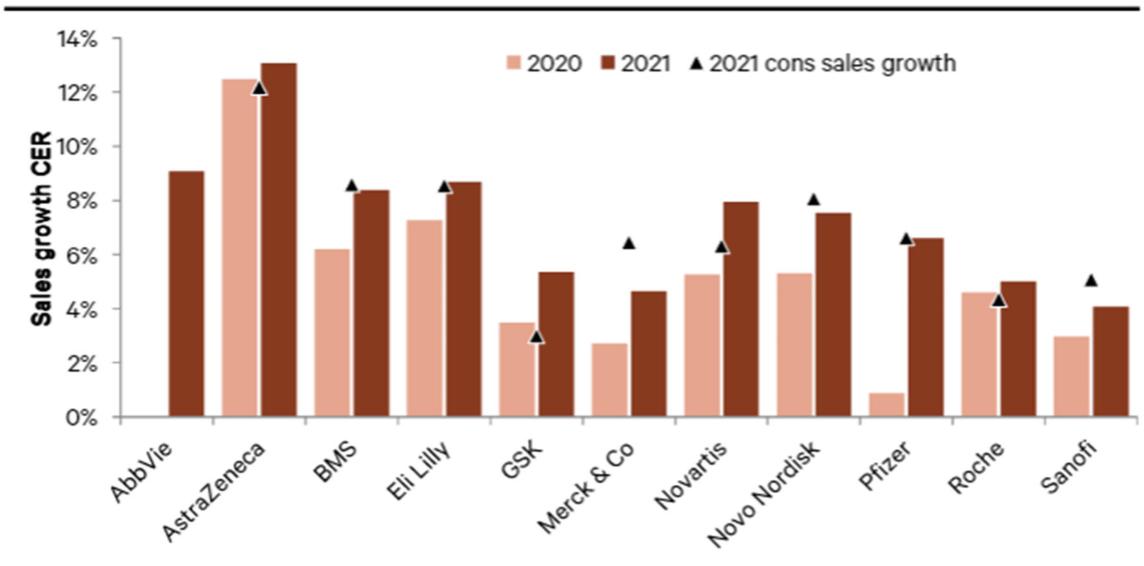
Large Diversified Pharma Components: ABBV, AMGN, AZN, BMY, GILD, GSK, JNJ, LLY, MRK, NVS, PFE, SNY, TAK, NVO, HCM

The pharmaceutical industry produces prescription and over-the-counter drugs as well as biologic products primarily intended to treat human illnesses. Biologic products are created through the use of living systems and include vaccines, blood and blood components, gene therapy and tissues. A brand name drug is an innovator drug which has undergone an extensive research and development (R&D) process and is initially protected by patents. A generic drug is chemically equivalent to a brand name drug that has lost patent protection and is sold at significantly discounted prices. The worldwide Pharmaceutical industry had revenues of $1.25 trillion in 2019.

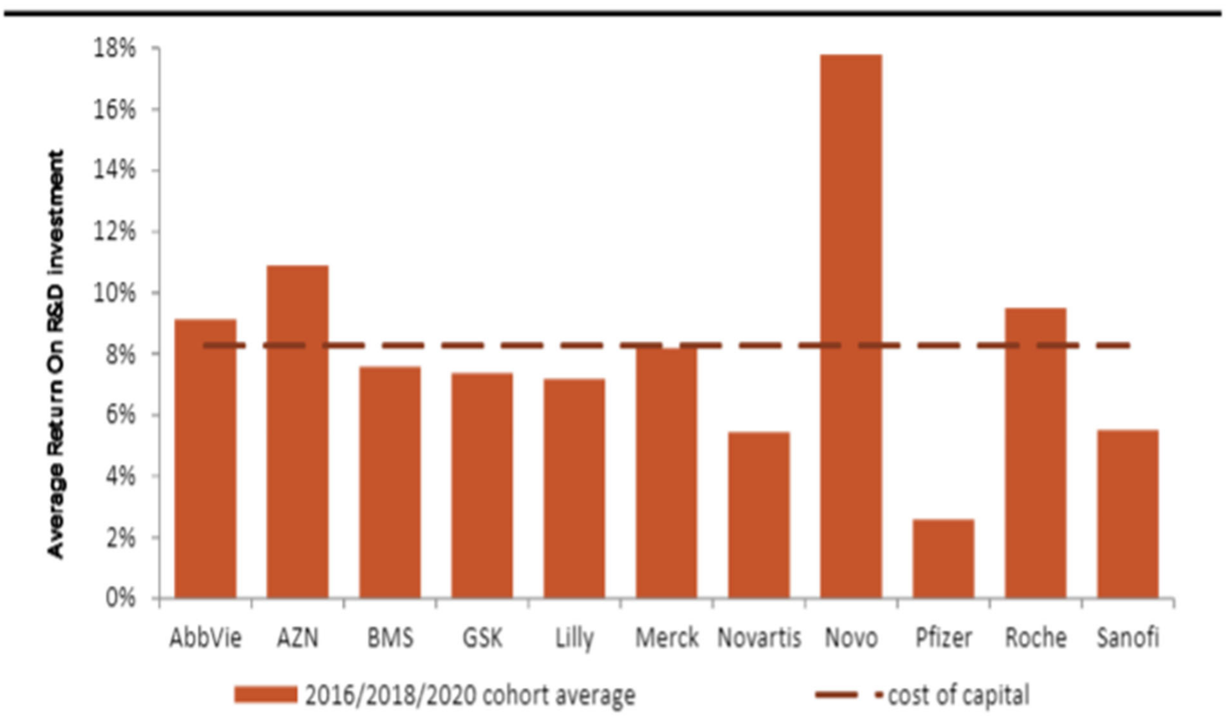


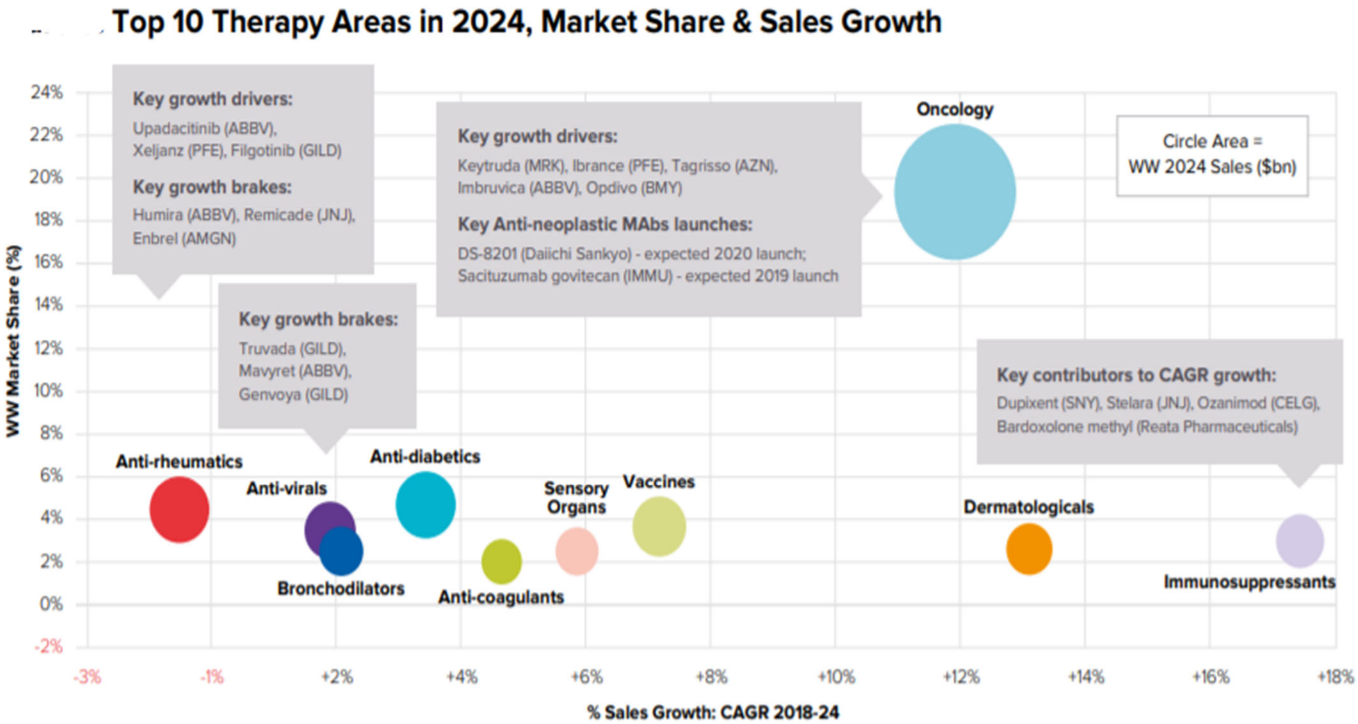
The Pharma sector is estimated to have solid fundamentals with 6% sales CAGR and 10% earnings CAGR for 2020-2024, generating stable amounts of cash with 46% of that seen returned through dividends and 10% utilized in buybacks. This would leave more than $300B excess cash flow for external R&D and acquisitions. Pharma reform presents near-term headwinds with pricing in focus though any major reform is likely a 2022 issue at the earliest. R&D spend remains crucial to the industry with patents inevitably set to expire for many companies and the need to replace lost revenues. Oncology is the area with the largest proportion of clinical development spending with 40% of total pipeline expenditure, with close to 20% market share of pharma sales in 2024. R&D spend is forecast to grow at a CAGR of 3.0% to 2024, lower than the CAGR of 4.2% between 2010 and 2018, partially driven by companies focusing on smaller indications with lower clinical development cost burden.

Large pharma group sales growth 2020 and 2021 versus consensus 2021



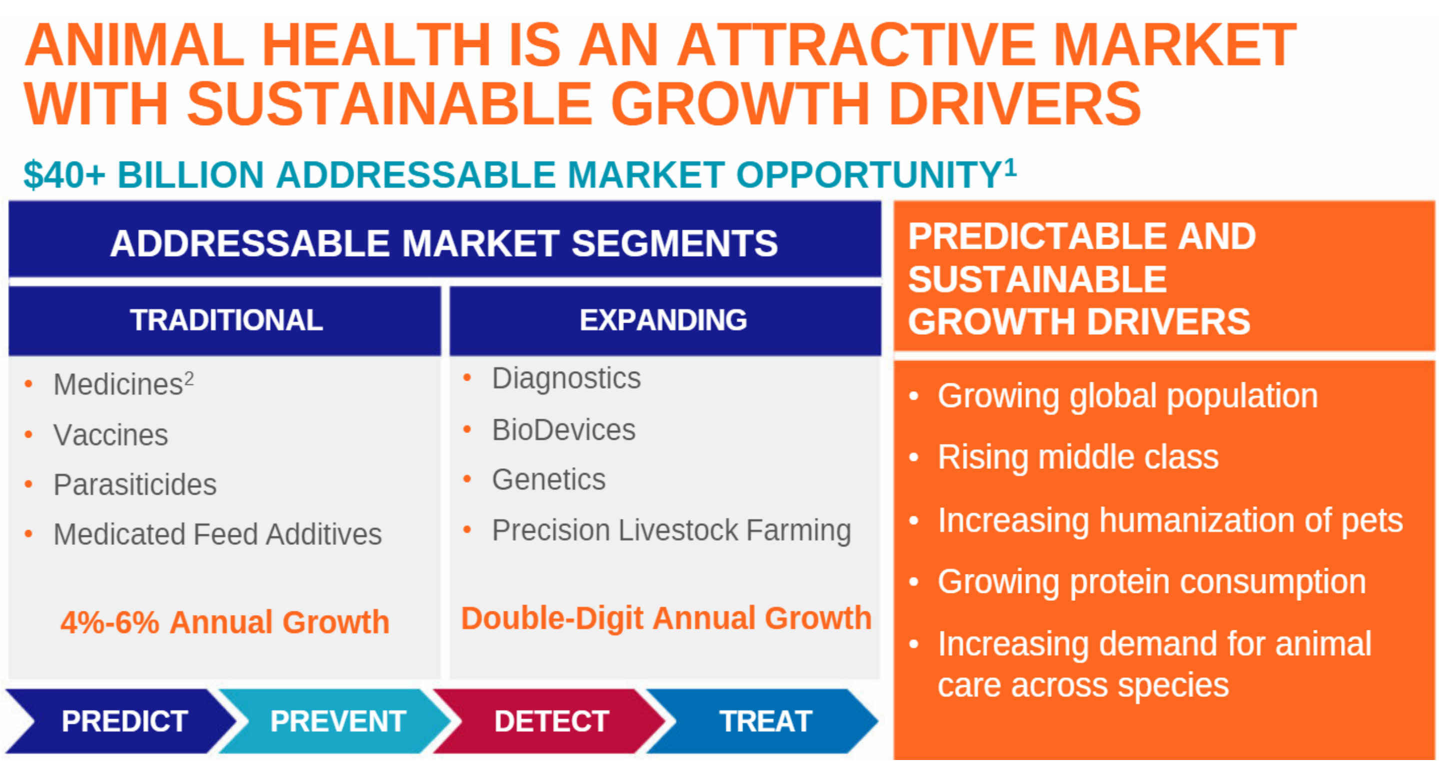
Large pharma average RORI





Animal Health Components: CVET, ELAN, PETQ, ZTS, PETS, HSKA, PAHC, IDXX

The U.S. animal health industry is a global leader in developing and producing medicines for companion and food-producing animals. In the U.S., the industry's products improve the health of nearly 10 billion companion and food-producing animals, resulting in significant economic and social benefits for Americans. Animal health manufacturers are biopharmaceutical companies that invest in research and development (R&D) and create innovative medicines for food-producing and companion animals. These products range from cancer therapies to vaccines and medicines that prevent and treat diseases such as foot and mouth disease (FMD), rabies, and Lyme disease. The animal health industry collaborates with farmers and ranchers, government agencies, veterinarians and other groups to ensure the health and safety of food-producing and companion animals.



The global animal health market size stood at $47B in 2019 and is projected to reach $67.5B billion by 2026, a CAGR of 6.3% during the forecast period. Key trends for growth include increasing adoption of pets by people for companionship and an increase of zoonotic diseases. The pet industry has been resilient through all economic cycles.

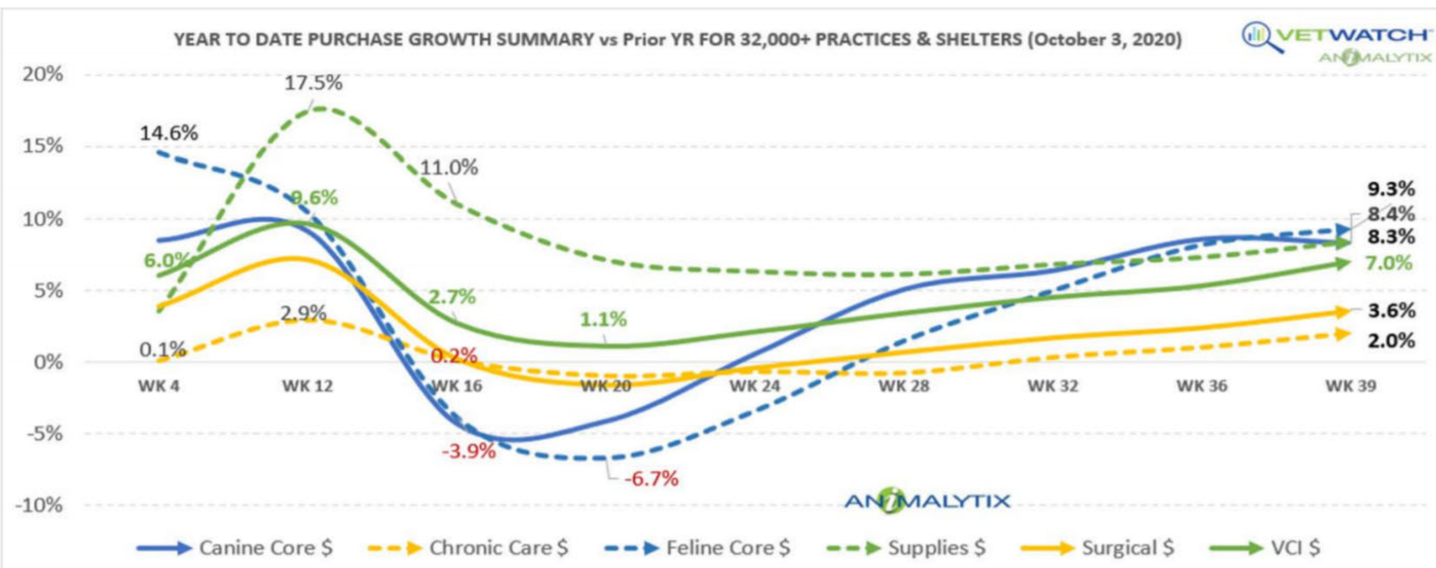
KEY TRENDS SHAPING THE FUTURE OF ANIMAL HEALTH

LIVESTOCK

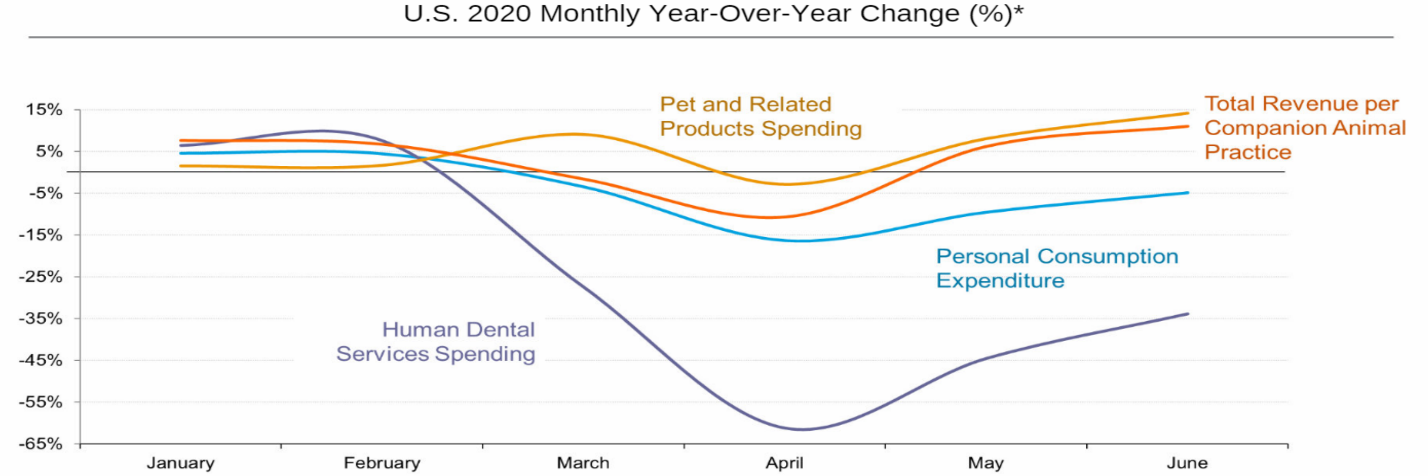
- Productivity and efficiency needs
- Labor shortages
- Precision livestock farming
- Emerging infectious diseases
- Environmental sustainability
- Food safety and animal welfare

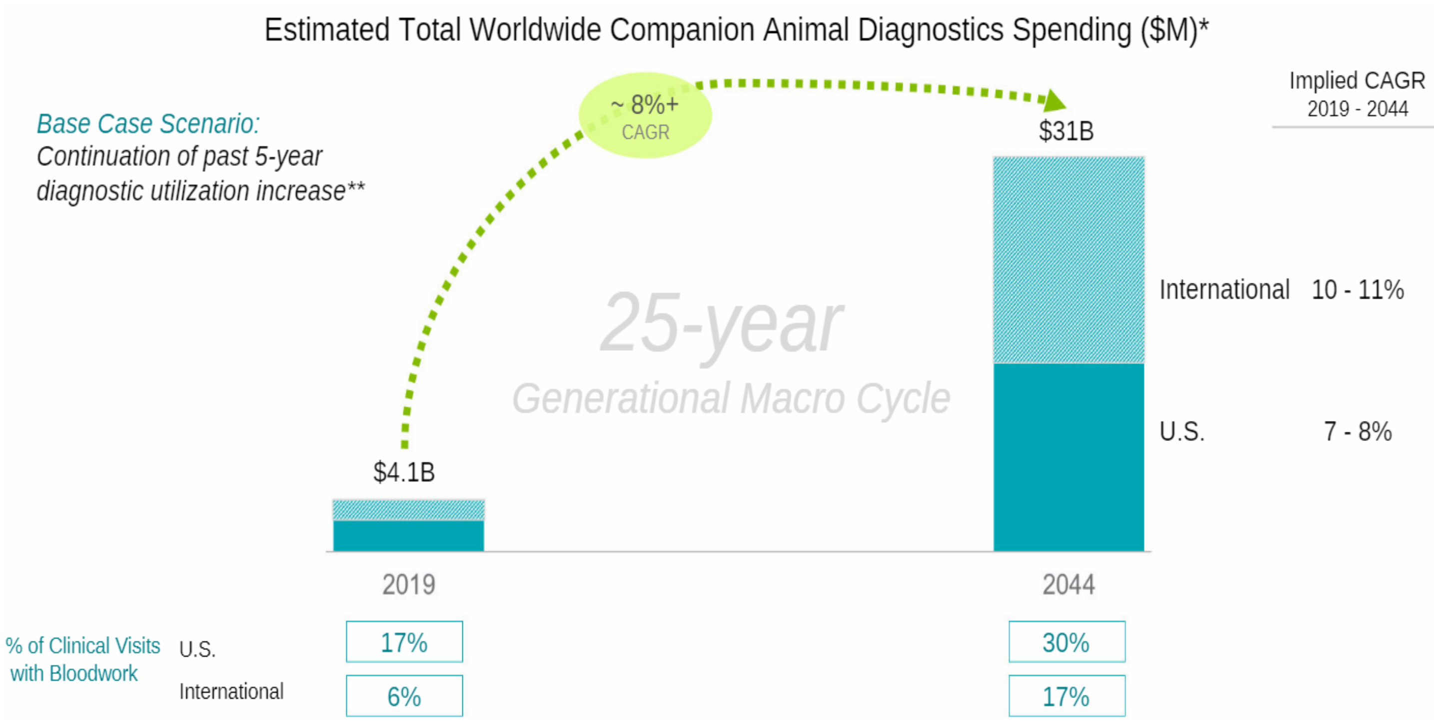
COMPANION ANIMALS

- Humanization of pets
- Specialty care
- Pet owner engagement
- New care delivery models
- Innovative sales channels
- Vet practice consolidation



U.S. 2020 Monthly Year-Over-Year Change (%)*



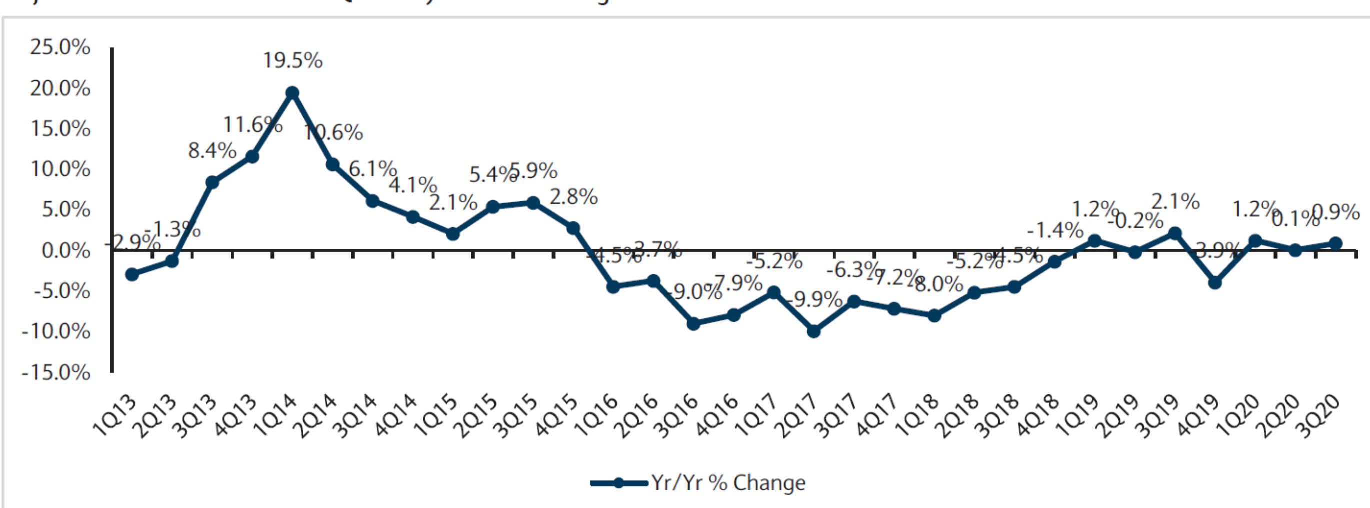


Generic & Specialty Drug Components: AMRX, BHC, MYL, VTRS, RDY, TEVA, AMPH, EGRX, COLL, PCRX, OPTN

Drug Distributors and Royalty: ABC, CAH, MCK, LGND, RPRX

The US drug distribution names is looking more constructive with generic drug price deflation stabilizing throughout 2020, nearing removal of the opioid litigation overhand, biosimilar contributions starting to move the needle, improve Rx volume trends, and attractive valuation. There are still $45B worth of branded biologics in the US alone facing new biosimilar competition between now and 2024 with approximately $28B distributed to patients through mail-order/specialty pharmacy which is best captured by the US drug distributors.

Adjusted Generic Price Per Rx Quarterly Yr/Yr % Change



OptionsHawk Executive Summary and Top Picks

In Diversified Pharma, among the mega caps **AbbVie (ABBV)** is the most attractive name, the strongest returns on capital, margins, and growth outlook. **Bristol Myers (BMY)** is the other preferred large cap as it continues to integrate the transformational deal for Celgene. Lastly, **Novo Nordisk (NVO)** screens well despite premium valuation with its stronger sales outlook, high margins, and superior returns on capital.

For Animal Health, **Zoetis (ZTS)** is a phenomenal company that continues to be positioned well for further growth while **IDEXX Labs (IDXX)** is rich on valuation but keeps on delivering revenue growth and margin expansion and expanding its available opportunity. **PetIQ (PETQ)** is an intriguing small cap growth name with a massive growth opportunity that I can see as a long-term own.

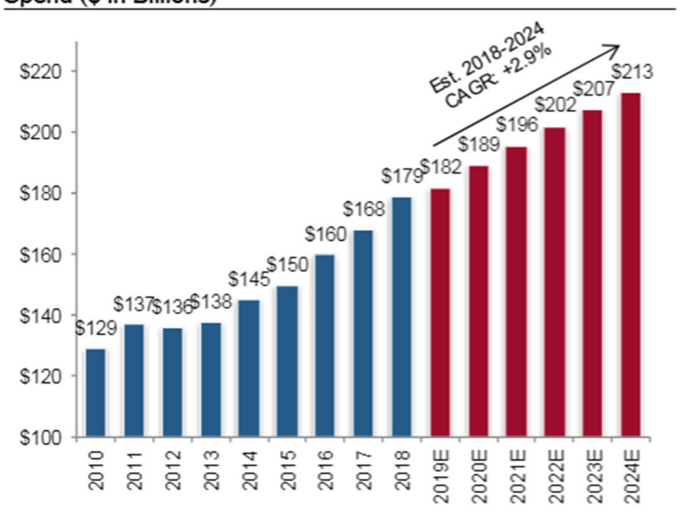
In Drug Distribution I included **Royalty Pharma (RPRX)** as a newer name that is an interesting high margin royalty-driven business and worth a deeper look. **McKesson (MCK)** is the best-in-class operator among the three main plays in this group. In Generics, not a group I have ever been very interested, but **Viatris (VTRS)**, the merger of Mylan & Upjohn is an interesting investment. **Pacira (PCRX)** is the attractive small cap name while **Dr. Reddy's (RDY)** out of India screens well across most metrics compared to US peers.

Labs & Diagnostics

This is one of the more exciting groups for growth especially on the small cap side with diagnostics gaining a greater role in preventative healthcare in the genomic revolution. This group includes contract research organizations (CROs) which assist in the research, development, and commercialization of new products for sponsor companies, primarily in the pharmaceutical, biotechnology, and medical device industries. It also includes the Life Science Tools (LST) group which is benefitting from global growth drivers such as the evolution in research like genomics, a shift in medicine to a proliferation of biologics including cell & gene therapy, and HGM investments in basic and applied research capacity. A number of positive trends are working in favor of these names including rising Biopharma R&D Spend, Prescription Drug Sales Growth, Biotech Growth, Biotech Financing Strength, Increasing Drug Pipelines, Increased Novel Drug Approvals, and Increasing Clinical Trials. DGX/LH should benefit from the lab consolidation trend and grab more shares in the fragmented US clinical lab market. The diagnostics/labs group really came into focus in 2020 with a surge in testing volumes due to the global pandemic.

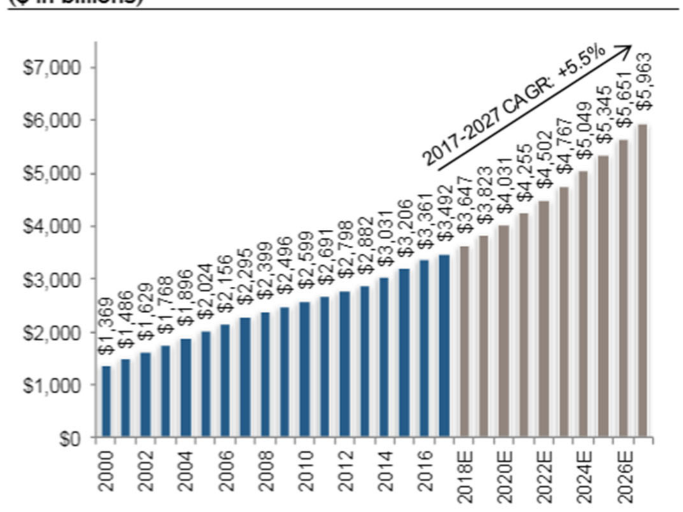
Life Science Tools and CROs have demonstrated ability to drive margin expansion through cost reductions, pricing power, sourcing initiatives, and most significantly via strong operating leverage. These stable organic growth trends coupled with improving profit margins has resulted in solid FCF generation, which has allowed industry players to advance research, clinical, and drug development technology, expand their breadth of product offerings, catalyze industry consolidation through M&A, and return cash to shareholders. Life Science Tools, Diagnostics, and CROs largely avoid scrutiny for the rising cost of healthcare given their relatively small proportion of overall healthcare spending, coupled with the dynamic that they help to reduce healthcare expenses over time (i.e. diagnostics preventing cancer treatment through early-stage testing, CROs reducing the cost of drug development and clinical trials, etc.). Over the long run, we view organic growth trends as the best gauge of a company's operational performance and ability to create a competitive moat, invest internally, and integrate/drive synergies through acquisitions.

Historical & Projected Global Pharmaceutical R&D Spend ($ in Billions)



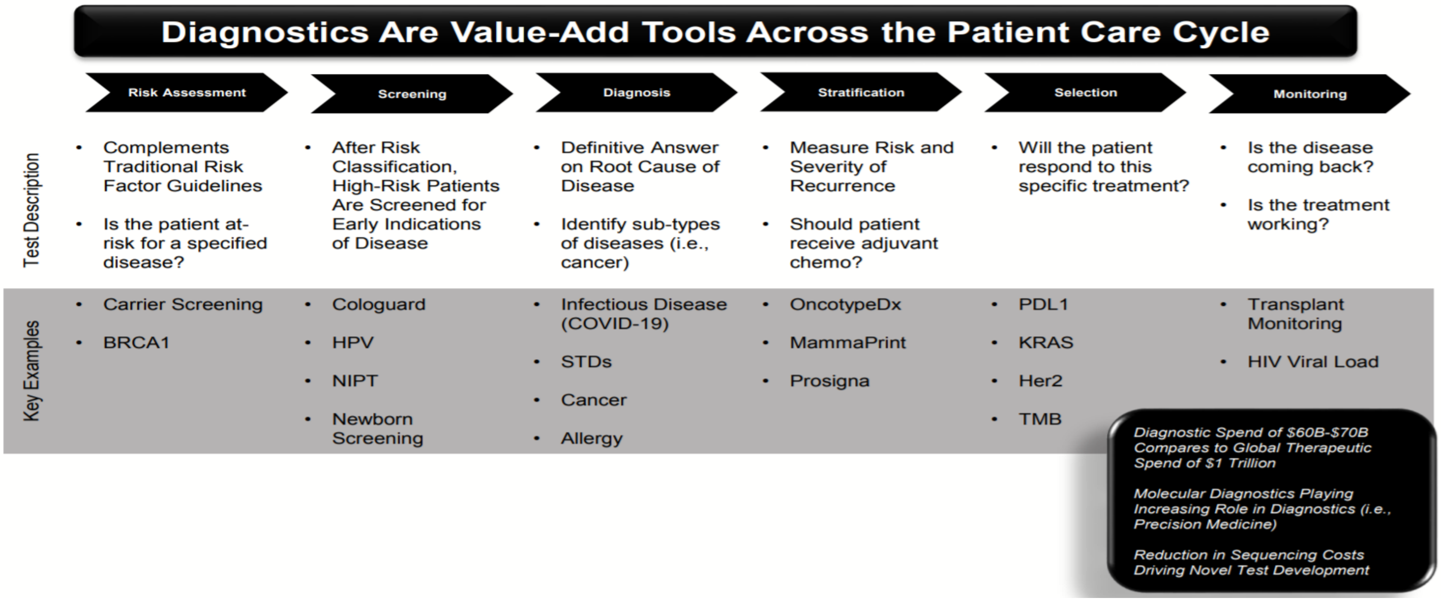
Source: EvaluatePharma: World Preview 2018, Outlook 2024, Credit Suisse

Increasing US National Healthcare Expenditures ($ in billions)

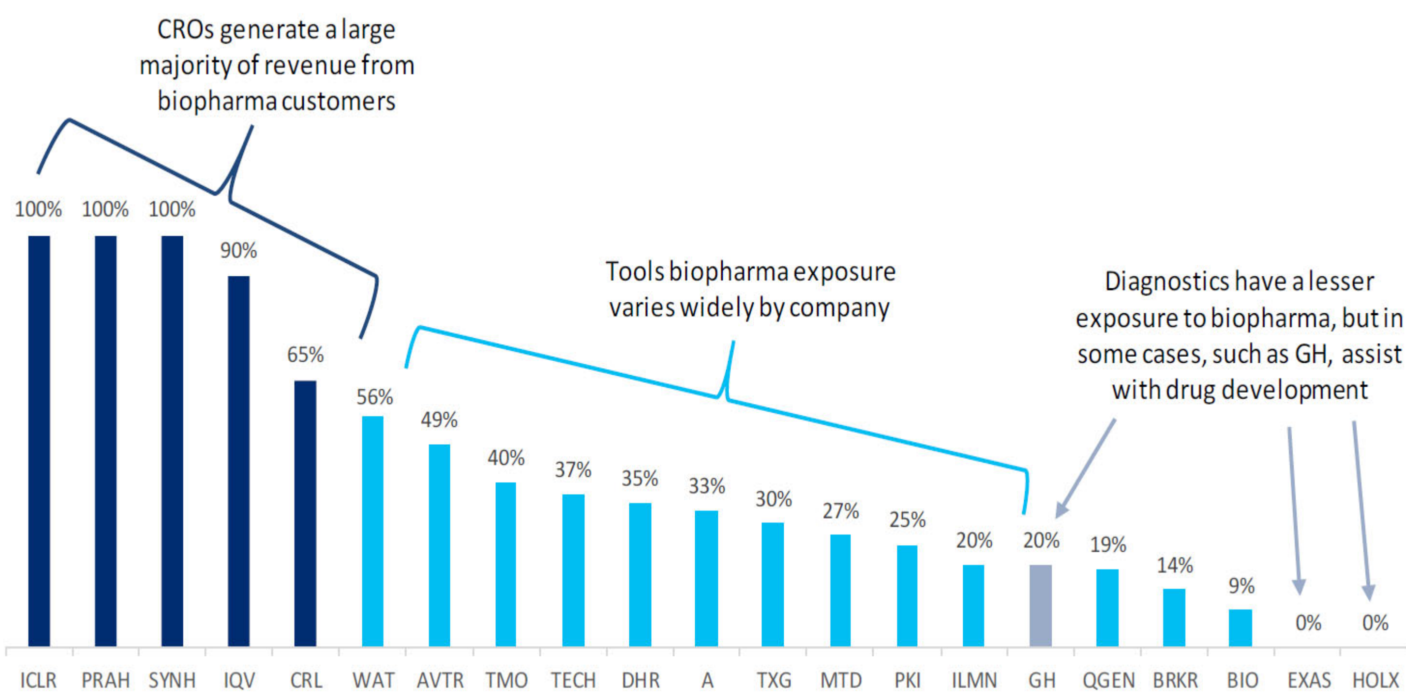


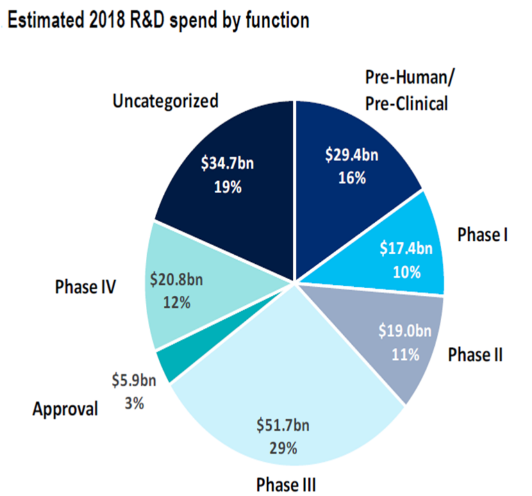
Source: Center for Medicare and Medicaid Services, Credit Suisse

Book to Bill Ratios is one key performance indicator used for this group. R&D spend in the Biopharma industry continues to be a positive tailwind for the group. Accounts receivable is a key balance sheet metric for CROs, and high days sales outstanding may be attributable to late payment collection or early revenue recognition. Some companies report gross bookings and cancellations, while others report only net bookings (gross bookings, less cancellations). Backlog is also an important indicator and backlog conversion measures the rate at which a company converts its backlog into recognized revenue, and is calculated by taking the current period's net service revenue as a percentage of backlog at the beginning of the period. There is a strong documented correlation between ROIC and valuation for CROs, suggesting investors are focused more on true economic returns. We also want to look at SG&A as a % of Sales, and R&D metrics.



According to EvaluatePharma, worldwide R&D spend totaled ~$179B in 2018, representing ~7% growth over 2017, the second highest growth rate in over 10 years. Over the last 5 years, we have seen biopharma R&D spend inflect to a CAGR of +5.3%, nearly +400 bps higher than the 5-year CAGR of +1.4% from 2008-2013. This trend is the result of several factors including an influx of VC funding for biotech which has driven strong growth in biotech R&D spending, a larger focus on development of biologics and other complex therapies (i.e. oncology, cell and gene therapy, etc.), which have required greater R&D spending due to their early-stage nature, an increased focus on drug development in emerging markets (particularly China), and a stronger overall economic backdrop which has been favorable for growth investment such as R&D. With worldwide R&D totaling ~$180B, this represents a large, albeit fragmented, opportunity for the Tools and CRO industries who provide very different services across the R&D value chain.



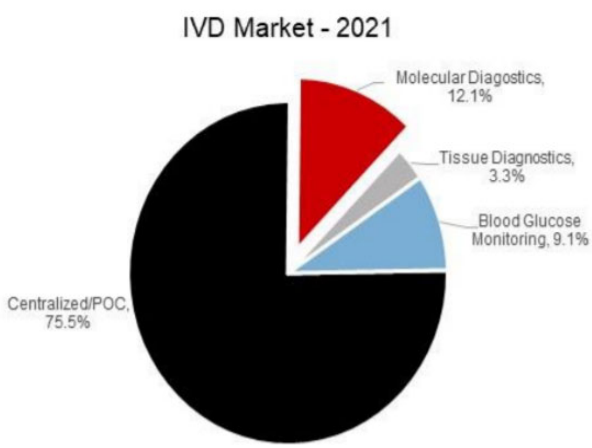


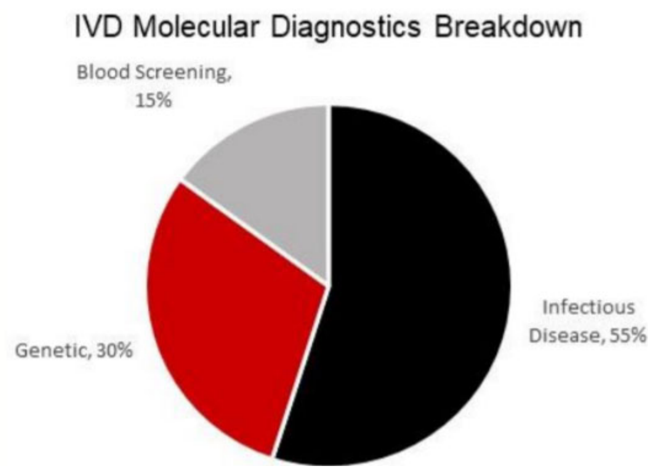
Total IVD Market → ~$60B-$70B

- Annual growth of 4-6%
- Centralized/POC includes "Traditional Diagnostics" → $50B
  - 3-5% growth y/y
  - Immunoassays, Clinical Chemistry, Hematology, etc.

Molecular Diagnostics → ~$8B

- Focus on DNA, RNA, or protein to drive understanding of disease
- Fastest growing segment within IVD
- Market growth of ~10%

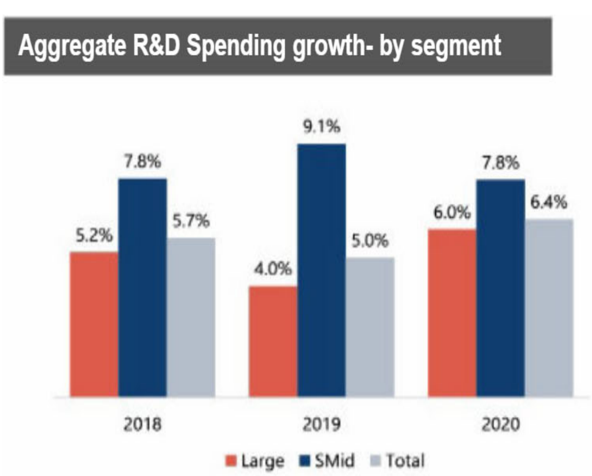


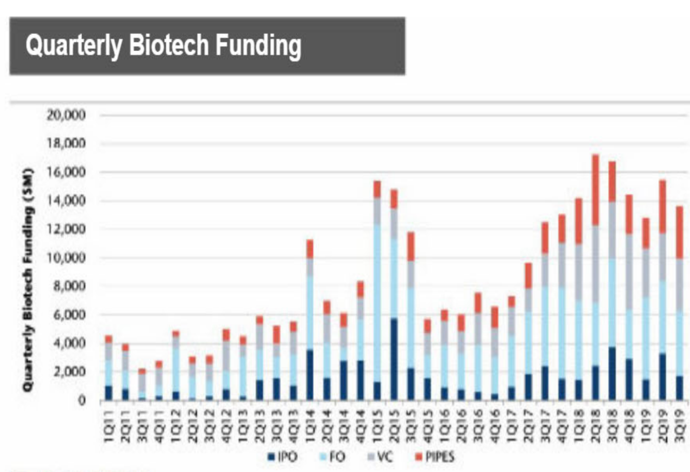


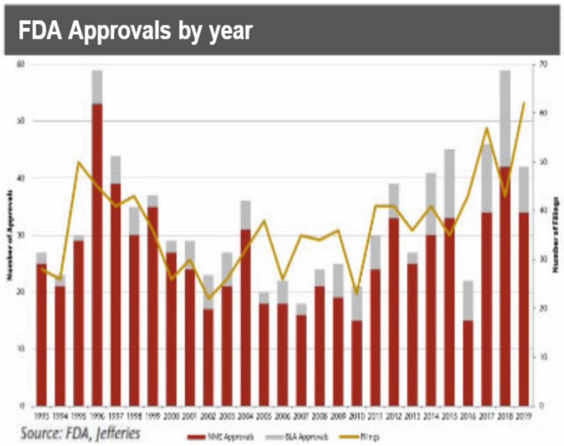
CROs, Pharma Services and Labs: IQV, PRAH, ICLR, CRL, MEDP, SYNH, DGX, LH, SHC, PPD

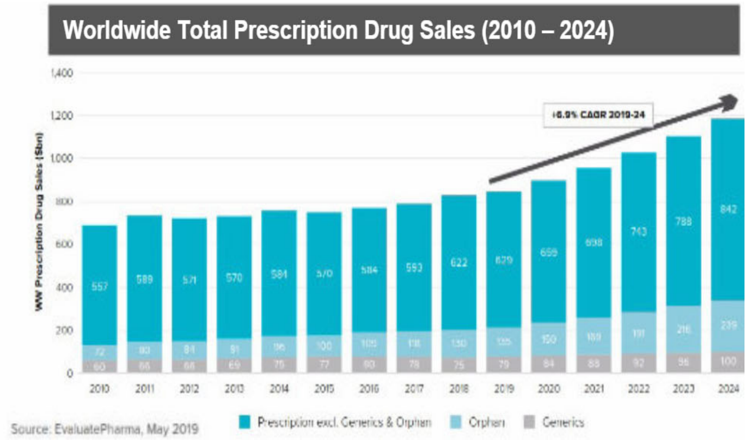
Clinical diagnostics laboratories analyze biological samples from patients and a group divided into clinical reference labs, specialty/esoteric test labs, and suppliers to these labs. The US clinical reference lab testing market is $80B with $30B for hospital inpatients and the remaining outside the hospital. Quest (DGX) and Lab Corp (LH) combine for around a 50% market share with the rest independent and regional players.

Contract Research Organizations (CROs) provide outsourced research and development services, specialized products, regulatory and scientific support, and infrastructure and staffing support to the life sciences industry. CROs have evolved over many decades from limited outsourced clinical trial services providers to fully outsourced providers of drug development products and services from preclinical and discovery services, to clinical (often referred to as Phase I-III), to Phase IV/post approval monitoring and commercialization.





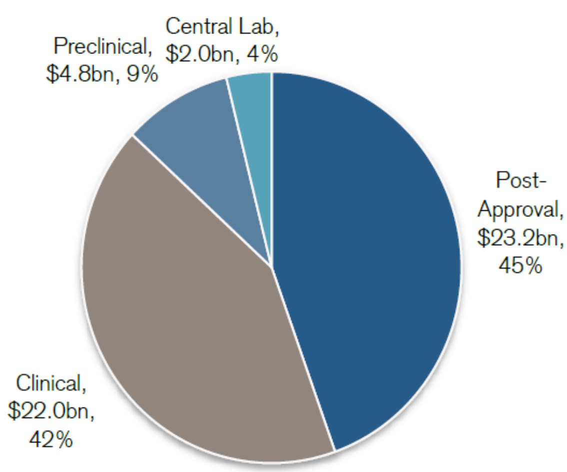


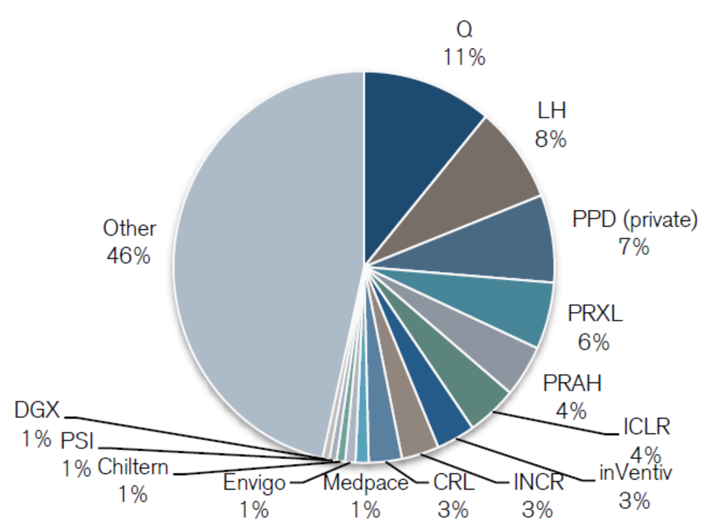


The CRO industry is estimated to be $45B and highly fragmented with over 1,000 entities globally, though relatively few of full scale and breadth of service. The CRO market is estimated to reach $62B by 2027 according to Grandview Research at a 6.6% CAGR. Consolidation in the space is relatively common and recent M&A among CROs has been around building out capabilities either in data analytics (Quintiles / IMS Health, PRAH / Symphony), key CRO functions such as patient recruitment (PPD / Acurian), site management (Parexel / Fomativ, PPD / Synexus) or preclinical services (Charles River). The CRO industry is expected to grow ~6%, driven by ~2%-3% from increasing R&D spending by the biopharma industry and ~3% from increased penetration of drug development budgets.

	Phase I-III Clinical Services	**Phase IV / Peri-& Post-Approval Services**	**Site and Patient Access Services**	**Laboratory Services**
	Trials involving the testing of drug safety and efficacy in both small and large patient populations	Trials and real-world evidence studies to evaluate effectiveness, safety and value	Investigator grants and patient recruitment services	Specialized testing services for pre-clinical and clinical development
Market Size	$20.4 billion	$10.0 billion	$10.4 billion	$10.4 billion
Estimated Market Growth	*6.0-9.0%*	*6.0-7.0%*	*5.0-6.0%*	*7.0-8.0%*

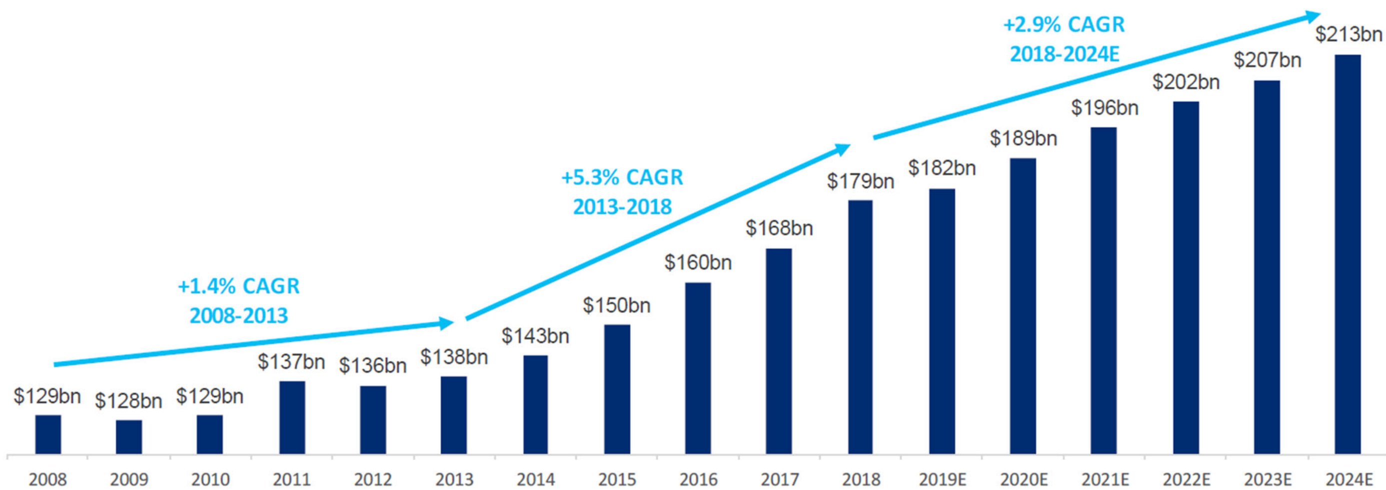
Source: Jefferies equity research, Grand View Research. Market size based on current estimates, estimated market growth based on forward market growth estimates. Estimated market size for site and patient access services based on estimated investigator and patient recruitment services spend in chronic condition and vaccine trials.

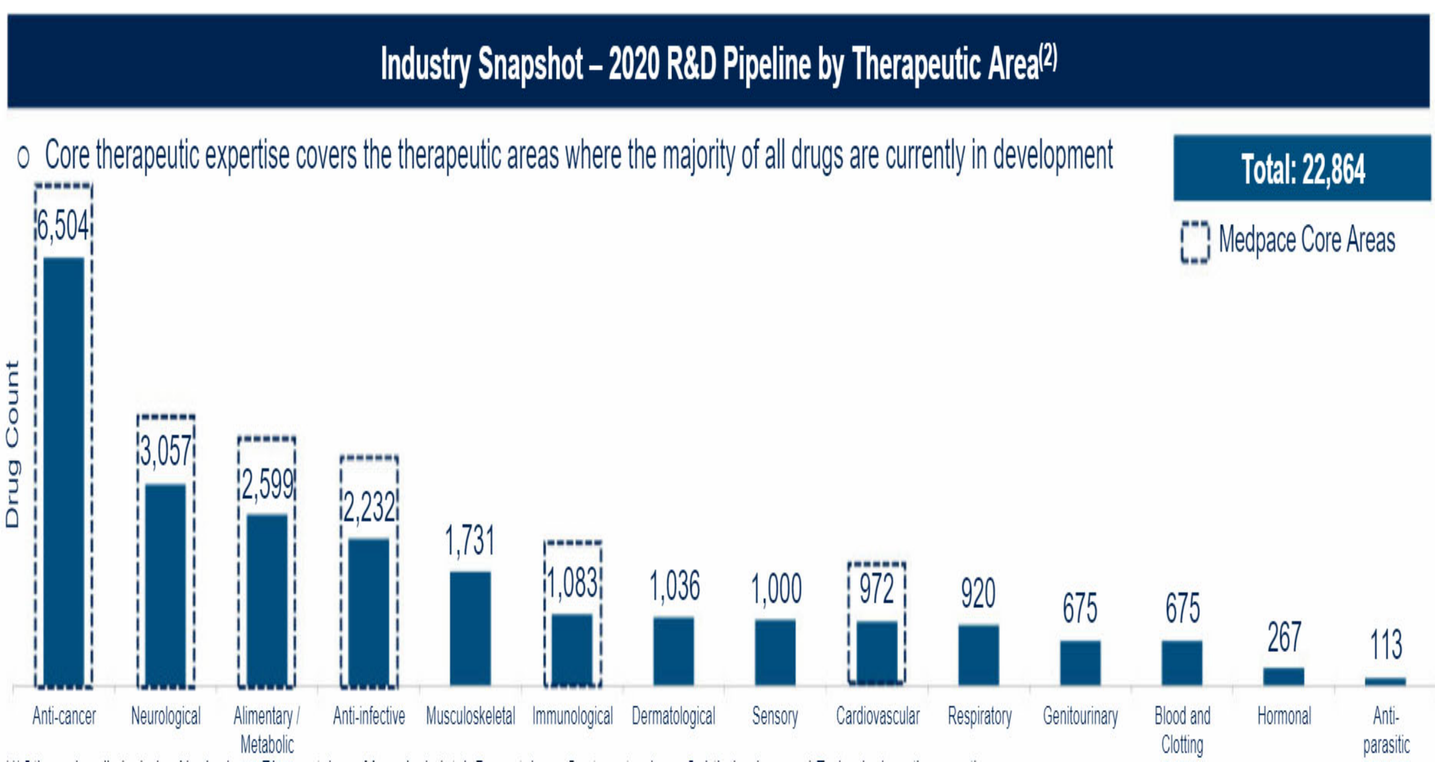




Several key trends that are driving positive CRO industry growth include robust R&D funding, accelerated drug approval rates, growing number of pipelines in preclinical and clinical development, and the proliferation of biopharmaceutical companies without internal research and clinical capabilities. R&D outsourcing penetration to CROs will continue to grow as a % of overall R&D spending as CROs demonstrate their value proposition to its biopharma counterparts. CROs have the ability to reduce time to market for a drug via expedited patient recruitment for clinical trials, regulatory expertise, and network selection criteria, all while reducing the cost of clinical trials for biopharma companies. Current outsourcing penetration is between 45-50%, with potential to reach 70-75% long-term.

Worldwide biopharma R&D spending



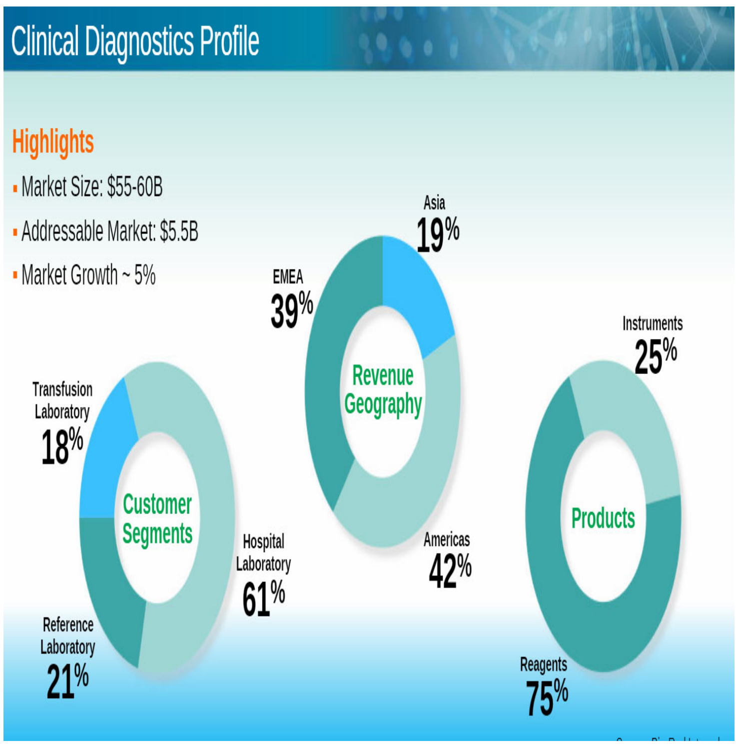


Life Science Tools: TMO, BIO, PKI, ILMN, A, BRKR, WAT, DHR, TECH, AVTR, TXG, HAE, NSTG, RGEN, MTD, CYRX, BLFS, FLDM, SLP

The life science tools segment consists of a few large players and then some small niche growth names. The group covers technologies such as genomic, cell biology, proteomics, lab supplies and analytical technology. The end-users generally consist of Biopharmaceutical companies ($25B), Government/Academic ($23B), Industrial ($14B), & Clinical/Labs ($27B). Thermo Fisher is one of the largest players and estimates a $165B addressable market across these four groups growing at 3-5% annually. The companies often break up products into Instruments/Software, Consumables, and Services.

The group is characterized by broad end market exposure, diversified geographically, and a high mix of recurring revenues via a razor / razor blade model. Overall, it is a strong business and with growth drivers including genomics and the proliferation of personalized medicine, regulatory trends with increased food and environmental testing, innovation and spending in China, and consolidation. The primary motivations for tools use are research, making better products and quality control to identify contaminants. Life science tools are considered the "picks and shovels" for the new gold rush, being therapeutic research and development.

	Pharma	Materials Science	Food & Environment	Clinical	Biomedical Research
Total Market Size	$21B	$14B	$14B	$8B	$8B

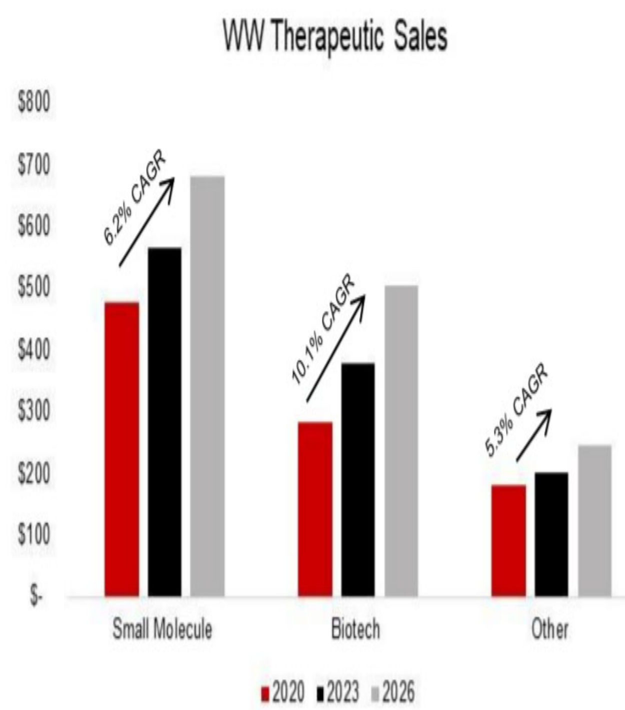


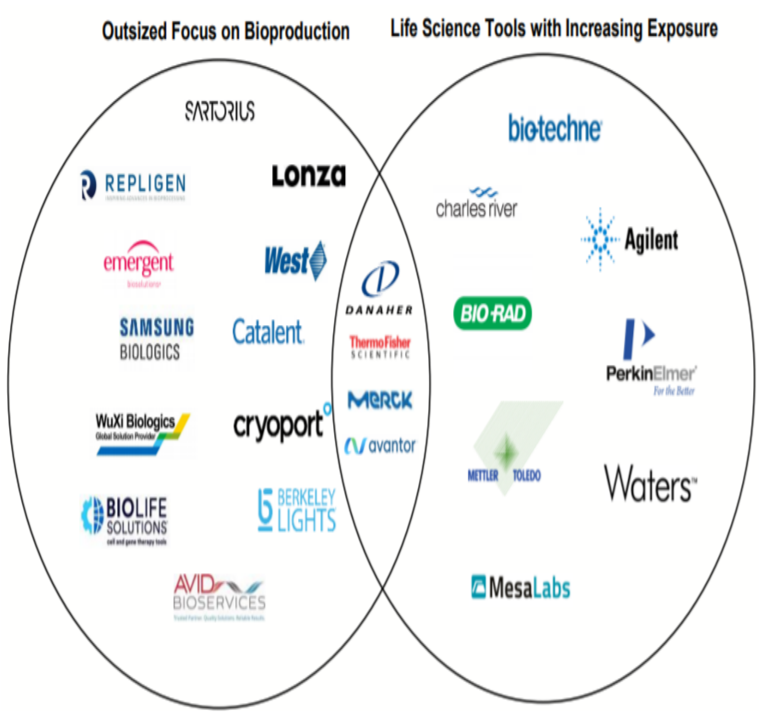
End-markets(2)	TAM	LT market growth
Chemical & Energy	$4B	2-4%
Environment & Forensics	$5B	2-4%
Food	$5B	3-5%
Pharma	$16B	4-6%
Academia & Government	$11B	3-5%
Clinical & Diagnostics	$11B	5-7%
	$52B	3-5%

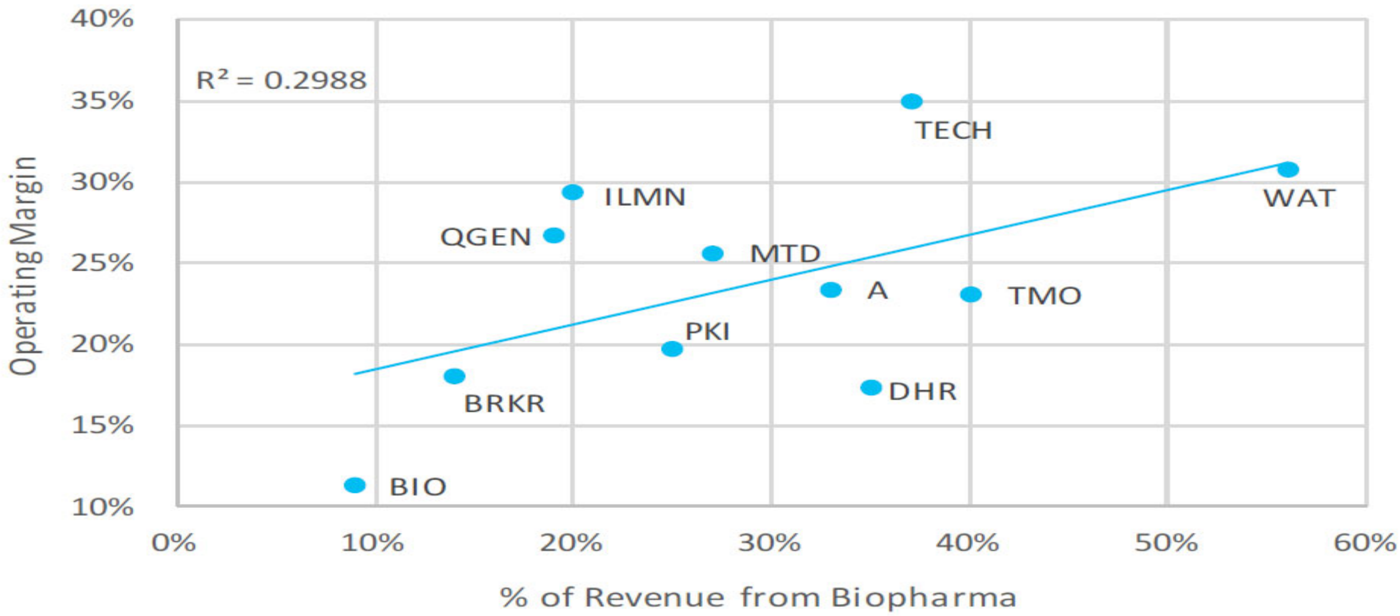
If we look more specifically at markets with the List Science Tools group there are many and important o pay attention to which companies have exposure to each market. Chromatography is the science of separation, a where Agilent (A) and Waters (WAT) are leaders and Thermo (TMO) and Danaher (DHR) also involved. Liquid Chromatography is an $8B market, while gas chromatography is a $2B market. Mass spectrometry is an analytical chemistry tool used to qualitate and quantitate matter and used across nearly every chemistry field. Danaher is the leader here followed by Thermo Fisher, an estimated $4.5B market. Nuclear Magnetic Resonance Spectroscopy (NMR) enables scientists to determine molecular structure of a sample with Bruker (BRKR) the leader in this $1B+ market. Flow Cytometry is analyzing and sorting cells, a $2B+ market where Becton Dickinson (BDX) is the leader while Danaher has a growing presence. Spectroscopy evaluates samples and is a larger $9B+ market and fragmented with TMO, PKI, A, BRKR key players. Microscopy analyzes at the nano-scale and is an area with DHR, TMO exposure while ZEISS Group is the market leader.

	ANALYTICAL TECHNOLOGY & EQUIPMENT									OMICS TECHNOLOGIES			
	LC	GC	Mass Spec	NMR	Flow Cytometry	Spectroscopy/ Microscopy*	Biopharma manufacturing/ processing	Research Reagents	General lab equip & supplies	DNA Sequencing	NGS workflow (sample prep/ informatics)	MicroArrays	PCR/ qPCR/ dPCR
Market size	~$7 bln	~$1.5-$2 bln	~$4 bln	~$1 bln	~$1.5-$2 bln	~$8 bln			~$8-10 bln	$2-$2.5 bln	~$1-$2 bln	~$1-$1.5 bln	~$2.5-$3 bln
Annual market growth	MSD+	LSD+	MSD+ to HSD+	LSD+	MSD+ to HSD+	LSD+ to MSD+	HSD+ to LDD+	MSD+	LSD+	LDD+	LDD+	LDD+	LSD+ to MSD+
Abcam (ABC-GB)	○	○	○	○	○	○	○	◑	○	○	○	○	○
Agilent (A)	●	●	◕	○	○	◔	◔	◔	◔	○	◕	◔	◔
Becton Dickinson (BDX)	○	○	○	○	●	○	○	◔	◔	○	◔	○	○
Bio-Rad (BIO)	○	○	○	○	◔	○	◔	◔	◔	○	◔	○	◕
Bio-Techne (TECH)	○	○	○	○	○	○	◔	◑	○	○	○	○	○
Bruker (BRKR)	◔	◔	◑	●	○	◑	○	○	○	○	○	○	○
Danaher (DHR)	◑	◔	◕	○	◑	◑	◕	◔	◔	○	◔	○	◔
GE Healthcare	○	○	○	○	○	○	◕	◑	◔	○	○	○	○
Illumina (ILMN)	○	○	○	○	○	○	○	○	○	●	◕	●	○
Luminex (LMNX)	○	○	○	○	◔	○	○	○	○	○	○	○	○
Merck KGaA (MRK-DE)	◔	○	○	○	◔	○	◕	●	◑	○	◔	○	◔
Mettler-Toledo (MTD)	○	○	○	○	○	◔	◔	○	◑	○	○	○	○
PerkinElmer (PKI)	◔	◔	◔	○	○	◑	○	◔	◔	○	◔	○	○
Qiagen (QGEN)	○	○	○	○	○	○	○	◑	◔	◔	◕	○	◕
Repligen (RGEN)	○	○	○	○	○	○	◔	○	○	○	○	○	○
Roche (ROG-CH)	○	○	○	○	○	○	○	◔	◔	○	◑	○	◑
Sartorius (SRT-DE)	○	○	○	○	○	○	◕	○	◔	○	○	○	○
Shimadzu (7701-JP)	◔	◑	◔	○	○	◔	○	○	○	○	○	○	○
Thermo Fisher (TMO)	◑	◑	◕	○	◔	◕	◕	●	●	◕	◑	◕	●
Waters (WAT)	●	○	◕	○	○	○	○	○	○	○	○	○	○

One intriguing growth area is the bioprocess supply market at ~$15B growing in the low-to-mid teens, with leading players Danaher (DHR), Merck KGaA (MRK GY), Thermo Fisher Scientific (TMO), Sartorius (SRT3 GR), and Avantor (AVTR) comprising about ~80% of the market. There are a number of positive growth tailwinds that should drive growth at twice the rate of global GDP and above historical averages for the group the next six years including healthcare transforming to Biotech Therapeutics from Drugs, Asia research accelerating, academic spending reversing years of declines, COVID spending in the billions, and recovering industrial & technology demand.



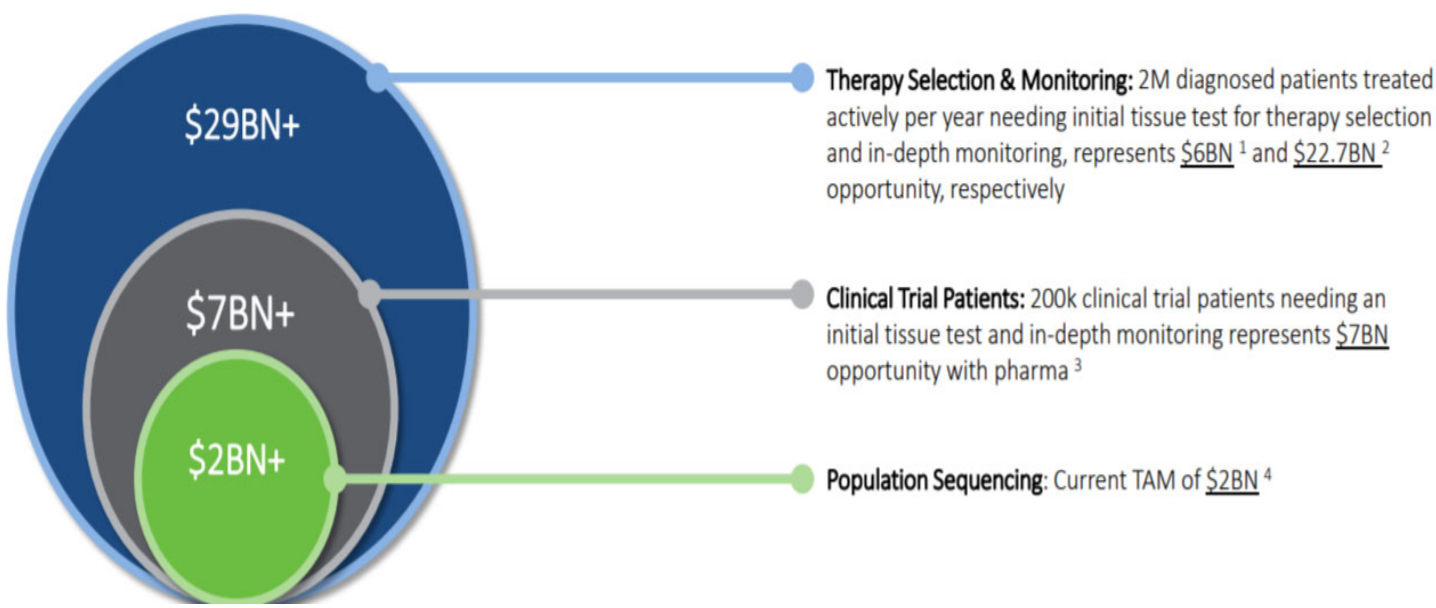


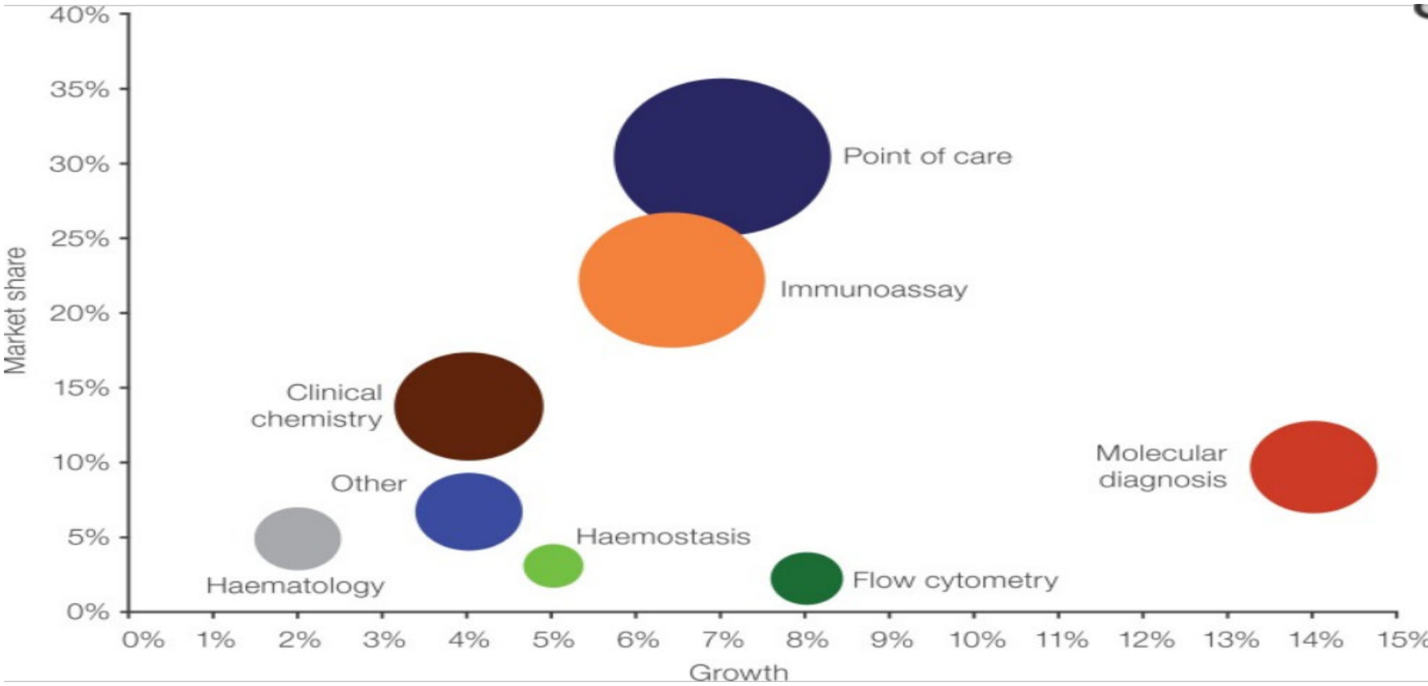


Diagnostics: QGEN, QDEL, EXAS, AXDX, OSUR, OXFD, MYGN, NEO, NTRA, NVTA, VIVO, LMNX, GNMK, ADPT, CDNA, GH, NEOG, PSNL, MRVI, TWST, QTNT, SRDX, VCYT, BLI, ABCM, BEAM, BNR, RDNT, NSTG, QTRX, CSTL, XGN, PROG

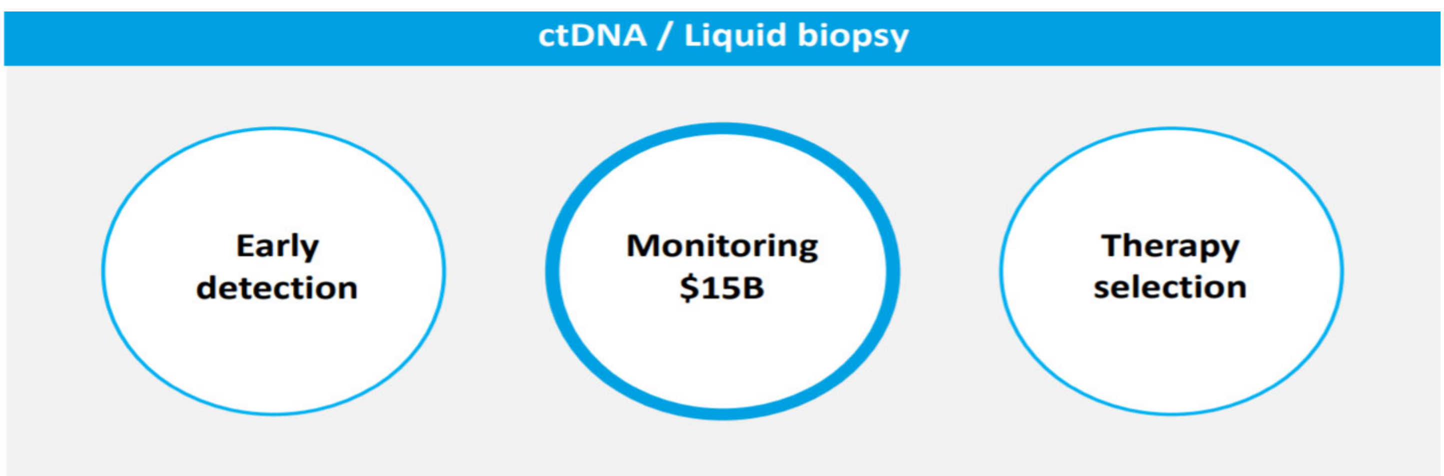
The notable testing markets include Immunodiagnostics, Blood-Glucose Monitoring, Clinical Chemistry, Point-of-Care, Molecular, Hematology, and Microbiology. Generally speaking, *in vitro* diagnostics (IVD) tests are considered medical devices. They may be reagents, techniques, instruments, or a combination of these used *in vitro* for the examination of specimens such as blood, urine or tissue with the goal of obtaining a diagnosis from assays in a controlled environment outside a living organism. Diagnostic tests are usually conducted in laboratories, private or public, equipped with appropriate and sometimes expensive instrumentation and staffed with trained and qualified personnel to perform the tests.

The overall global diagnostics market is estimated to be valued near $55B with POC diagnostics at $14-$15B.





Liquid biopsies have multiple applications and are a mega-trend for at least the next decade as precision diagnostics are booming. Diagnostics represents only 2-3% of US healthcare spending yet informs ~70-80% of all healthcare decision-making. Diagnostics is woefully under-utilized, and we are embarking on a paradigm shift as the US transitions from "chronic sick-care" to "preventive healthcare". More effective precision (or personalized) diagnostics and therapeutics are key to this transition.



Management Commentary

Quest (DGX) on new demand returning in 2021: "One is the demand. It feels like it will continue to grow through the early months now of the winter and then into next year. There will be new demand sources presenting themselves in '21. There will be return to field or court with sports teams. There's going to be renewed interest in returning to campus, whether that's colleges or universities as well as K-12. A lot of the return to office hasn't really started yet. There was hope that we would be going back in offices in the fall. Many have pushed that out to beginning of next year. Some are thinking about the summer. There's all sorts of other nonclinical COVID venues that we believe they're going to drive some demand. So we're going to continue to drive demand."

Danaher (DHR) on the Vaccine opportunity: "And the variation just in terms of the usage of various materials between the different vaccine modalities is significant. And so I think I would stay away from that and just say that we feel good that -- about 2 things. One, we think that both the diagnostic testing volumes as well as the vaccine volumes will be material and that we're very well positioned in them because we have diversified and are on all of these programs to one extent or another. And I think that's the best way to think about it. And as we go forward here in the next months, we start seeing what will be the most sort of dominant design in terms of vaccine that is best implemented, not just in the U.S. but globally, that will be important. So I think, actually, we are again thinking long term in the early days of biologic drug development and efficacy. And if you look at the pipeline, so the IND registrations, to see what's the health of the pipeline, does it continue to grow, the fact of the matter is that it's growing as fast and as robustly as it ever has. It hasn't slowed down, both in monoclonal antibody-type biologics, but as well as some of the newer modalities, which you're familiar with, gene and cell therapy but also oligonucleotide therapy and so forth. So we feel really comfortable that we are really on top of a strong secular growth driver here, where it's early days not just in the development of these drugs, but if you think about the penetration of these drugs globally, it's still quite low. And as we continue to drive forward in this industry, accessibility is going to continue to improve. So we feel comfortable that beyond COVID, which has driven a great deal of activity and volume, that the industry is in great place. In fact, I think the industry is achieving more notoriety, and its importance is recognized more clearly today than ever and it continues to attract a great deal of investment."

Thermo Fisher (TMO) on PCR's role on the pandemic: "On PCR testing, yes, it is stronger. Our outlook is stronger in this quarter than the last as is vaccine therapies. And so what's going on there with the second wave, if you will, we've seen very robust demand for PCR testing. And as I mentioned earlier, we're seeing very strong demand for instrumentation, which I think gives you a sense of longevity because customers aren't going to be buying instruments and going through the installation process and all of those things, if they weren't expecting to be running tests for the foreseeable future. So we're seeing very strong demand there. And our new product, which is Amplitude, which is our highest throughput system, we've seen very, very strong demand for that platform. And those are customers that are saying, "I want to be able to run 6,000 to 8,000 tests per 24-hour period on an automated platform," which is a lot of PCR tests, if you will, in a lab. And we're seeing very strong demand for that. So you're seeing the signs that testing will have strong demand into '21. And if you think about it, Vijay, testing is going to be the complement to a world with vaccines, right? Vaccines are not going to be across the whole population rapidly. It's going to take a while. So controlling the pandemic is still going to be based on information and PCR is going to play a major role in that."

Mettler Toledo (MTD) on China opportunities: "But right now, we feel very favorable about the trends in China as we kind of finish 2020 and as we kind of enter 2021. And as we look to next year, probably the bigger thing on our mind is the more challenging comparison we're going to have in Q3 of next year, especially on the industrial side. But as we kind of look beyond 2021, we're very favorable about China. But regardless of what we experience in 2021, as we look at the longer-term trends, we just feel very positive about China. I mean, we have a very well positioned, a very strong business. It's been very much pursuing the more attractive market segments now for several years. So the mix of business is very favorable. I think we're very much positioned for not only trends in life sciences, but also some of the trends in the country wanting to become more self-dependent in some of the different manufacturing sectors beyond life sciences, whether it be microelectronics or other subsectors of the economy. And as a reminder, not a lot of our customers in China are exporters. So I think we would benefit from a lot of these trends. And we also see the Chinese also focusing increasingly more on quality and automation. And this is not a new trend, but I just feel like a lot of trends in 2020, you've kind of seen an acceleration of different topics and I think like these are additional topics that make us well positioned for beyond 2021."

PerkinElmer (PKI) on next phase of growth: "The Diagnostics business, since I've been here, has gone from $450 million to $1.1 billion last year and $2 billion -- north of $2 billion this year, obviously, with COVID. But more importantly, I think a lot of it -- last year, for me was recognizing that there was a need to create a better organizational foundation to position ourself for the next phase of growth, and we consciously reduced the friction between DAS and DX. We were too complex an organization for the size of company we are. And we did that by combining the commercial teams by uniting R&D. And essentially, it has been a -- fundamentally a mechanical shift in the thought process and then the way we've functioned as a company. We are evolving about how we think about our competitive position and the opportunities that lie ahead of us. But fundamentally, we are a life sciences and diagnostics company, and that is where our focus would be. Now if you ask me to gaze into the future, what I would say is that you should see us 2 to 3 years from now to be 80% of our portfolio in the diagnostics and life sciences side of the business, which obviously, along with it now, has the repercussions of enhanced margins and higher growth."

Guardant (GH) on Liquid Biopsy market: "We have made incredible progress establishing liquid biopsy as a vital clinical tool for therapy selection in advanced cancer patients. Achievement of several key milestones, including securing reimbursement, have made the $6 billion addressable market attainable as comprehensive genomic profiling becomes standard of care. We've also made significant progress with our LUNAR programs, aggressively addressing the even larger opportunities in the recurrence monitoring and screening populations."

Exact Sciences (EXAS) on Cologuard ambitions: "Cologuard has been in the market 6 years, and we often talk of our longer-term ambitions of 40% market share. Well, there's a long ways for us to go to get from here to there. We're at about 5% share today. So 17 years on average. And it takes a significant investment. We've invested all told north of $3 billion in our infrastructure; things like our sales force, on a total basis, over $2.6 billion; our IT infrastructure, over $400 million; our labs, over $300 million. So it's a significant investment going forward. And I can go on, there's a lot more than that. And that's looking backwards in time, forwards in time with inflation and competition, the investments will likely be higher."

Natera (NTRA) on the NIPT market: "As a reminder, the U.S. market for NIPT consists of about 4 million to 5 million pregnancies per year and is very underpenetrated in the average-risk setting, which makes up 80% of those pregnancies. So we still have a significant room to run in the NIPT space. We think the ACOG statement is already having a positive impact on NIPT volumes, and we are seeing momentum with payers changing coverage policies for both average-risk and twin pregnancies. The SMART trial is a prospective 20,000-patient multisite clinical trial with newborn genetic outcomes, and that has taken 5 years to run. We think a study of this magnitude and scale will never be repeated, and therefore, could become the gold standard in NIPT for the foreseeable future. The data has been unblinded to us and to the investigators in the trial. And we believe the results have the potential to further drive market share in NIPT and may unlock guidelines on reimbursement for microdeletions, which is already more than 100,000 units per quarter for Natera. We expect the data to be presented at the SMFM conference early next year."

Berkeley Lights (BLI) on tailwinds for its addressable markets: "We see 2 key tailwinds driving growth in our addressable markets. First, at the macro level, there is an increasing demand for cell-based products. For these products, wherever there is a gene edit or a desired immune response, functional validation is required. Functional validation is at the core of our product offering. The growing requirement to drive design-build test learn cycles directly drives an increase in the number of workflows to discover, develop and manufacture cell-based products. And second, we are also seeing increasing complexity of the cell-based products. Today, pharma companies are working to discover antibodies against hard to hit targets or other complex therapeutic modalities, including buy, try or multi-specifics or cell-based therapies. The cell characterization is getting more complex as hard to hit targets require more precise assays at higher resolution. With a growing product complexity, manufacturing complexity is also increasing. This means workflows are executed at a higher frequency, thereby further increasing the demand for our products."

OptionsHawk Executive Summary and Top Picks

The CRO & Pharma Services group has long been a favorite though certainly will start to face tougher comps and could see some growth slowdown on a broader basis. **Quest (DGX)** screens modestly better than **Lab Corp (LH)** for the two big Lab testing names. **Charles River (CRL)** remains the preferred CRO name while newcomer **PPD (PPD)** also quality. **Medpace (MEDP)** remains a top small cap growth name to own in this group and **ICON PLC (ICLR)** at the mid-cap tier.

Life Science Tools is an absolute favorite for investing with so many growth opportunities, and the two mega cap names **Danaher (DHR)** and **Thermo Fisher (TMO)** both returning 50% in 2020 and remain high quality names with **TMO** the preferred own. In the next tier of market caps, **Agilent (A)** on valuation is fairly attractive but **Mettler-Toledo (MTD)** the preferred name with exciting China growth opportunities. In the next market cap tier, **10X Genomics (TXG)** a hyper growth name with amazing opportunities. There are then five names in the $10-$15B market cap range, **PerkinElmer (PKI)** the standout at attractive valuation with strong growth and returns on capital while **Bio-Techne (TECH)** another top name. **Repligen (RGEN)** another hyper growth story that has long been a favorite and rose more than 100% in 2020, continues to have strong business momentum. There are five small caps and each has seen strong gains in 2020, **BioLife Solutions (BLFS), Cryoport (CYRX),** and **Simulation Plus (SLP)** three favorites.

The Diagnostics is another group with a bright future and a ton of growth opportunities and features mostly smaller cap plays. **Guardant (GH)** remains a premium growth story though trades 42X EV/Revenues and prefer **Exact (EXAS)** which trades 16X and offers similar growth with better profitability metrics. **InVitae (NVTA)** is positioned well in the booming genetics space and a favorite name. **Quidel (QDEL)** is the highly profitable established play that saw a big surge from COVID and will face comps but remains a very high quality name. Then there are five high growth names in the $5-$7B market cap range which includes **NTRA, ADPT, TWST, NEO,** and **BLI**. **Neo Genomics (NEO)** stands out in that group as a fast grower that already has positive profitability metrics and trades just 12X EV/Sales. It's a hard choice between the hyper growth names but newcomer **Berkeley Lights (BLI)** does look very intriguing for a long-term multi-bagger. Lastly, there are four very attractive small cap growth stories in this group with **CareDx (CDNA), Quanterix (QTRX), Personalis (PSNL),** and **Castle Biosciences (CSTL)**.

<u>Managed Care, Specialty Care & Hospitals</u>

Managed Care Components: ANTM, CI, CVS, CNC, HUM, MGLN, MOH, UNH

Managed care organizations (MCOs) provide and administer health insurance through risk-based and administrative services only (ASO) products. Most of the publicly traded companies primarily focus on the U.S. managed care industry. There are multiple products in the managed care industry with fundamentally different characteristics. Accordingly, it is important to recognize the varying product mixes at the publicly traded companies when analyzing industry trends.

There are three main business categories:

Commercial. Health insurance for employees and individuals/families administered entirely by the private industry. Employees represent the majority of the approximately 82 million people with commercial risk insurance. Under employer-sponsored commercial risk insurance, the MCO negotiates a price with the employer for a monthly premium to cover its employees (typically runs at approximately $475 per month). The employer has historically contributed about 70%-75% of the premium and the employee contributes the rest plus out of pocket expenses (co-pays, co-insurance, deductibles). For the commercial risk product, the MCO collects a monthly premium from the customer (employers or individuals) and is responsible for paying for all medical care that the member receives during the month, net of out of pocket costs required to be paid the member. The MCO negotiates the unit costs for the medical care with providers (eg, hospitals, labs, physicians, drug costs). The product is called "risk" because the insurer is at risk of loss if costs exceed the premiums collected. An important ratio to watch is the medical loss ratio (MLR, also sometimes referred to as the medical cost ratio or MCR, or the Medical Benefits Ratio or MBR), which represents the percent of the premium that the company spends on medical costs. Plans must comply with a minimum MLR requirement (80% for individual/small group and 85% for large group). If the MLR falls below this level, the MCO rebates the difference back to the customer. Essentially, the minimum MLR acts as a gross profit margin cap.

Rank	Group/Company	Market share	Cumulative share	Health insurance premium
1	UnitedHealth	14.3%	14.3%	$100.8bn
2	Anthem Inc.	9.5%	23.8%	$67.2bn
3	Humana	7.9%	31.7%	$55.8bn
4	HealthCare Service	5.3%	37.0%	$37.6bn
5	Centene	4.9%	41.9%	$34.9bn
6	CVS	3.1%	45.0%	$21.7bn
7	Wellcare	2.8%	47.8%	$19.9bn
8	Kaiser Foundation	2.7%	50.5%	$19.3bn
9	Guidewell Mut Holding	2.5%	53.1%	$17.9bn
10	Molina Healthcare Inc.	2.3%	55.4%	$16.2bn
11	Independence Health Grp Inc.	2.3%	57.6%	$16.2bn
12	BCBS of MI	2.0%	59.6%	$14.2bn
13	Highmark	2.0%	61.6%	$14.0bn
14	BCBS of NJ	1.9%	63.5%	$13.2bn
15	Caresource	1.3%	64.8%	$9.5bn
16	BCBS of NC	1.3%	66.1%	$9.1bn
17	Carefirst Inc	1.3%	67.4%	$9.0bn
18	UPMC Health System	1.2%	68.6%	$8.4bn
19	Cigna Health	1.2%	69.7%	$8.3bn
20	BCBS of MA	1.2%	70.9%	$8.1bn

Medicare. Health insurance (Medicare Advantage) and drug coverage (Medicare Part D) for seniors (age 65+), administered by the federal government. Medicare is the federal reimbursement program created in 1965 that pays for health care services for the elderly. Since that time, Medicare spending has grown rapidly and now represents 20% of total health care spending. Those that qualify for Medicare are: 1) people 65 and older; 2) people under 65 with certain disabilities; and 3) people of any age with end-stage renal disease. There are four main components of Medicare: 1) Part A – inpatient care (inpatient hospital, rehab, psych, skilled nursing and hospice, 2) Part B – outpatient services (outpatient hospital, physicians, dialysis, surgery centers, and physician administered drugs), 3) Part C – Medicare Advantage plans, run by MCOs that are required to cover all services under Part A and Part B, and 4) Part D – outpatient drug benefit (eg covers filling a script at a pharmacy) run by MCOs.

Medicaid. Health insurance for low income individuals administered by states. Medicaid is the state-run health care program for the poor, covering roughly 71 million people (including the Children's Health Insurance Plan or CHIP). The federal government contributes about 62% of Medicaid funding and sets broad criteria for states to follow, but the program is run by the states, resulting in 50 different Medicaid programs. In addition to meeting certain low income thresholds, in order to be covered by Medicaid, you must also fall into one of the four coverage categories. There are three mandatory categories for coverage: 1) children/ pregnant women (aka TANF or Temporary Assistance for Needy Families), 2) the aged, blind, or disabled (ABD), and 3) people receiving long-term support services (LTSS). The ACA created a fourth category when it expanded the program to everyone under 138% of the federal poverty level, but states have to opt in to expansion.

	Commercial Risk	Commercial Non-risk	Medicare Advantage	Medicare - Part D	Managed Medicaid
Description	Health insurance for groups and individuals	Administrative services for employers with self funded plans	Health insurance for Seniors	Prescription drug plans for Seniors	Health insurance for poor people; administrative services for state Medicaid programs
Customer	Groups and individuals	Employers	Federal gov't/Seniors	Federal gov't/Seniors	States/poor people
Market size (est.)	$470bn	$30bn	$300bn	$40bn	$375bn
Total enrollment	82m	97m	25m	25m	54m
Revenue PMPM (est.)	$475	$25	$1,025	$120	$250-$2,000
Pre-tax margin (est.)	4-7%	15%	5%	3%	3%
Profit PMPM (est.)	$19-33	$4	$51	$4	$7-60

MCO	Commercial Risk	Commercial ASO	Medicare Advantage	Part D	Managed Medicaid	International	PBM	Services & Other
ANTM	34%	24%	12%	0%	16%	0%	10%	4%
CNC	25%	3%	13%	2%	38%	1%	0%	17%
CI	13%	21%	3%	1%	0%	8%	52%	2%
CVS	9%	7%	12%	1%	2%	0%	31%	38%
HUM	3%	2%	60%	1%	2%	0%	0%	32%
MOH	12%	0%	22%	0%	66%	0%	0%	0%
UNH	15%	5%	18%	1%	7%	4%	19%	32%
Average	**16%**	**9%**	**20%**	**1%**	**19%**	**2%**	**16%**	**18%**
Median	**13%**	**5%**	**13%**	**1%**	**7%**	**0%**	**10%**	**17%**

The Managed Care industry is valued at $1.2 trillion and a group of just a handful of companies with expectations for 10-13% annual EPS growth. The top line growth is seen at 6-9% driven by enrollment growth and net premium yields. Competitive advantages vary between products, but scale is a common denominator. Companies with large membership bases can generate lower overhead costs per member by leveraging technology investments and care management platforms. Meanwhile, given that much of the future membership growth is coming from government businesses where pricing is dictated to the MCOs, medical management capabilities increasingly are a differentiator. In addition, companies have diversified away from commercial, into faster growing government and ancillary programs (only ANTM gets more than 1/3 of its earnings from employer sponsored coverage). The main difference between MCOs and most other insurance lines is that health insurance tends to be a short-tail insurance product so companies make money on the underwriting and a modest amount on interest income (as compared to life insurance where underwriting margins are thin and most of the profit comes from investment returns over a long period of time).

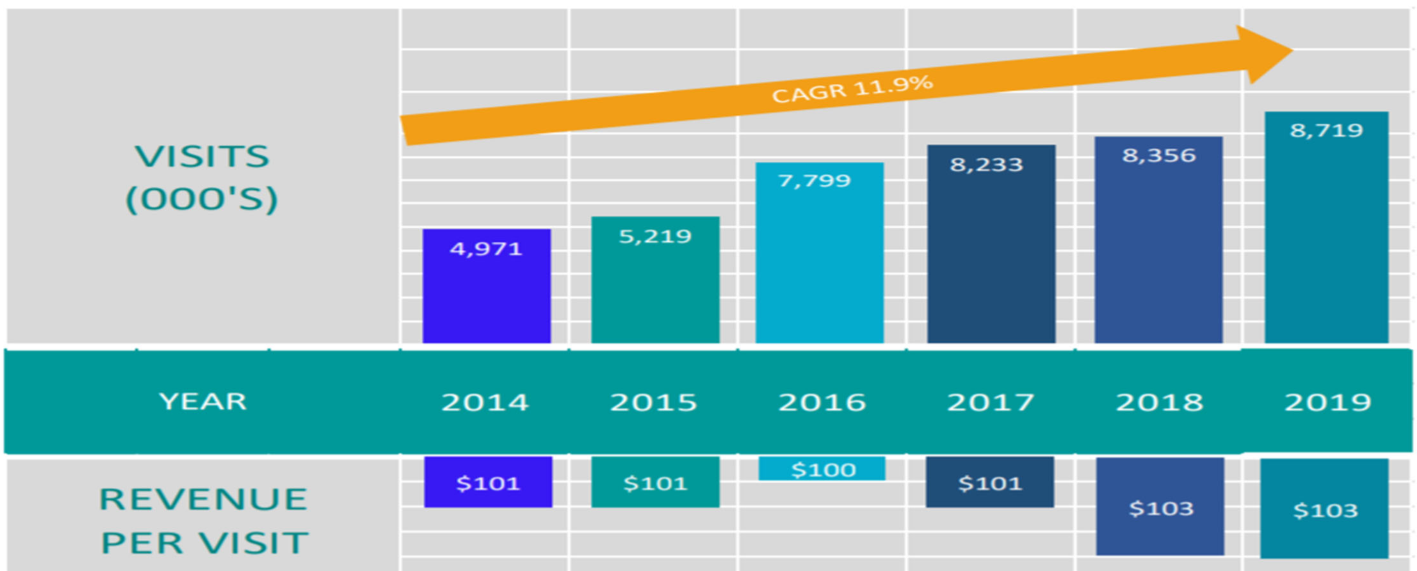
The most common metric used to value managed care sector is the P/E multiple. Historically, the group as a whole has traded between 12-18x with an average of 15.8x. The five years from 2008 through 2013 was a period of unusually depressed multiples as concerns around the ACA impacts weighed on stocks during a time period when most of the market was already trading at depressed multiples during the economic recession. The P/E multiple has since increased, accelerating throughout 2014 and the first half of 2015 until trading at a recent high of 21.3x during a period of M&A. After dropping in 2019 due to Medicare For All concerns, the group has rebounded and is now trading around 16.4x, roughly in-line with the 5-year average of 16.9x.

Hospital Components: HCA, CYH, THC, UHS, SEM, EHC, NFH, SGRY, MD

The Hospital industry includes operators licensed as general medical and surgical hospitals that provide surgical and nonsurgical diagnostic and medical treatment to inpatients. Hospitals maintain inpatient beds and usually provide other services, including outpatient, operating room and pharmacy services. The industry excludes psychiatric and other specialty hospitals. The Hospital industry is estimated at a size of $935B.

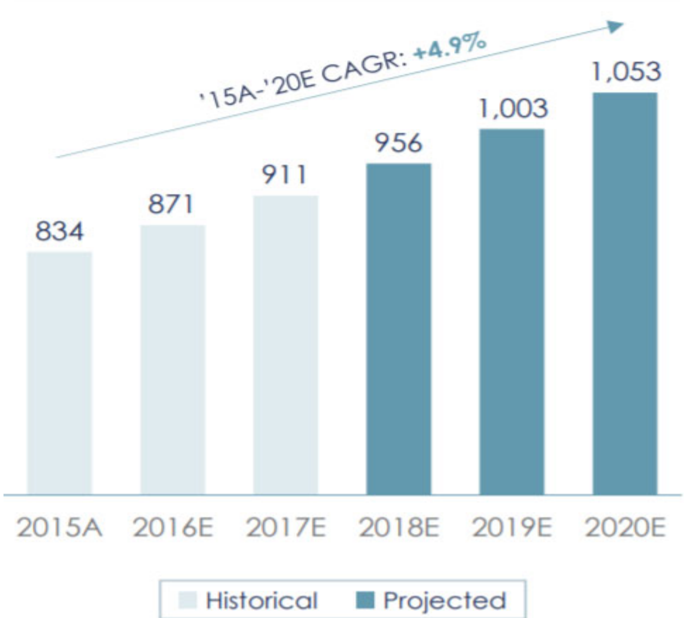
Despite being a primary provider of healthcare in the United States, revenue for the Hospitals industry has declined over the five years to 2020, as hospitals across the United States have struggled with the COVID-19 (coronavirus) pandemic. As the coronavirus pandemic spread in early 2020, hospitals have been crucial in the treatment and control of the virus. However, due to the highly contagious nature of the virus, people have avoided hospitals for nonessential and nonemergency care. While hospitals have experienced an influx of patients with coronavirus, and are, in many cases, operating at capacity, high value patients are staying away.

Outpatient Rehab Clinics

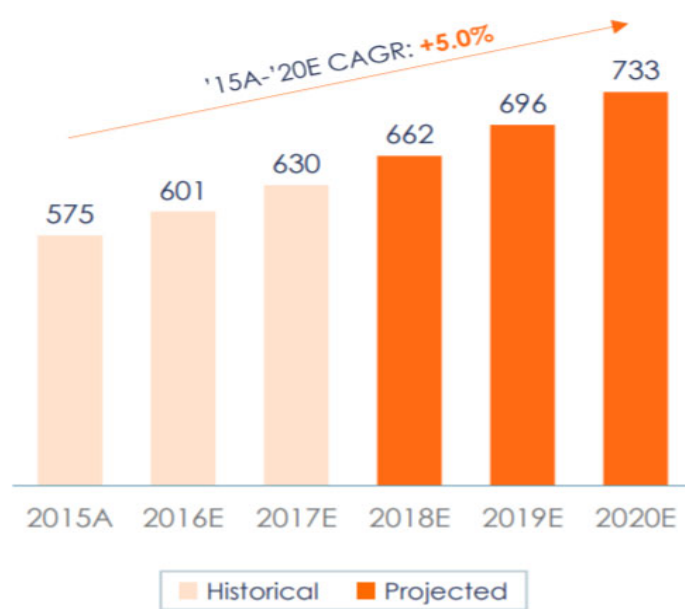


Number of Procedures in the U.S. (000s)

Knee Replacement



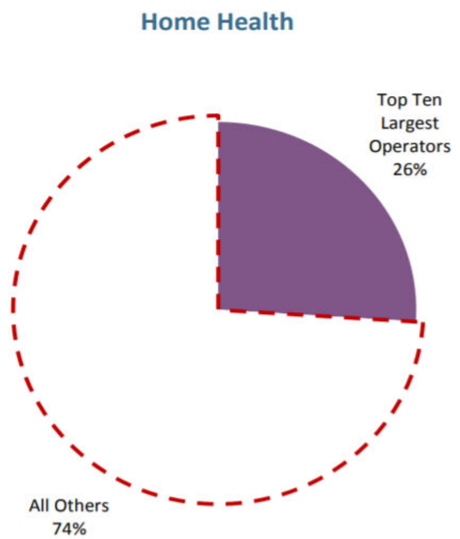
Hip Replacement

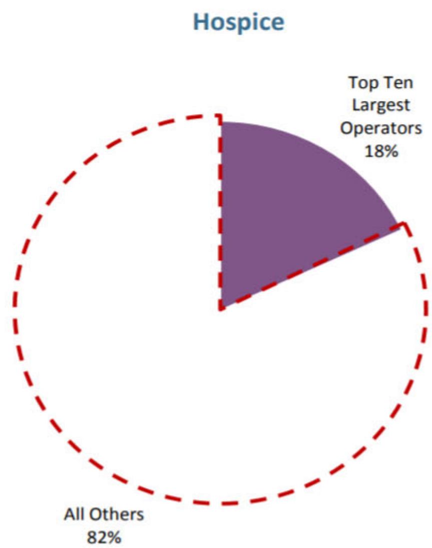


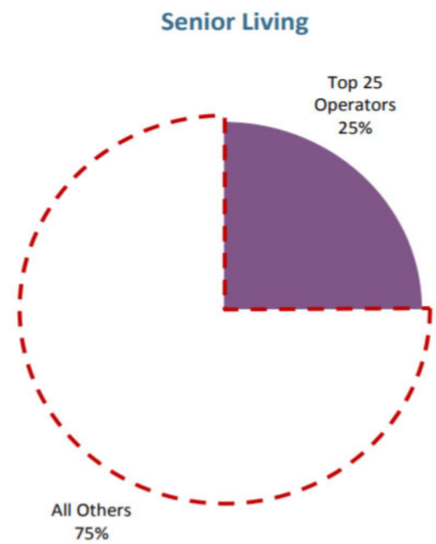
Specialty Care Components: OSH, FMS, DVA, CHE, ACHC, OPCH, PRSC, USPH, CMPS, JYNT

Long-Term Care Components: AMED, LHCG, ADUS, ENSG, PNTG

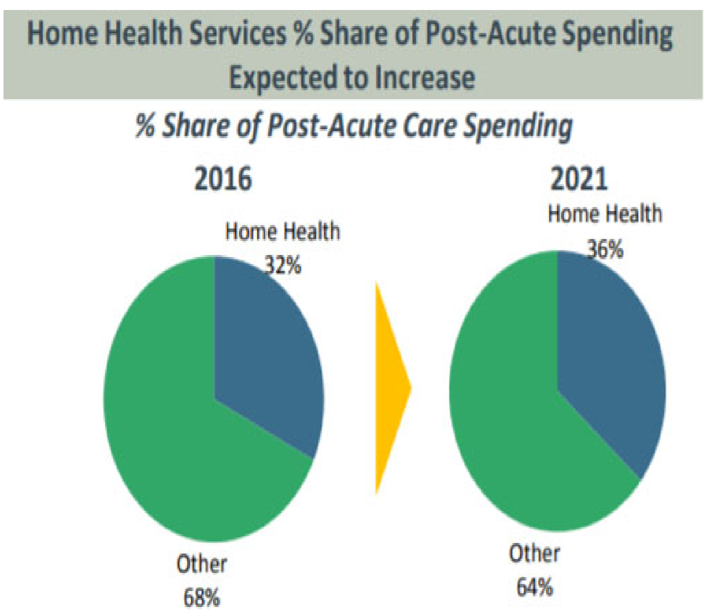
Long-term care refers to the services and support a person needs due to disability, illness, or decreased agility. LTC is involved mostly in custodial care or assistance needed in performing Activities of Daily Living (ADL) such as walking, dressing up, and transferring. This group consists of Nursing Facilities, Skilled Nursing Facilities, Home Health Agencies, Inpatient Rehab, and Long-Term Hospital Care. These are very fragmented markets that see a lot of consolidation. A combination of an ageing population, shift to value based care and healthy reimbursement environment has resulted in strong gains for many of these companies.

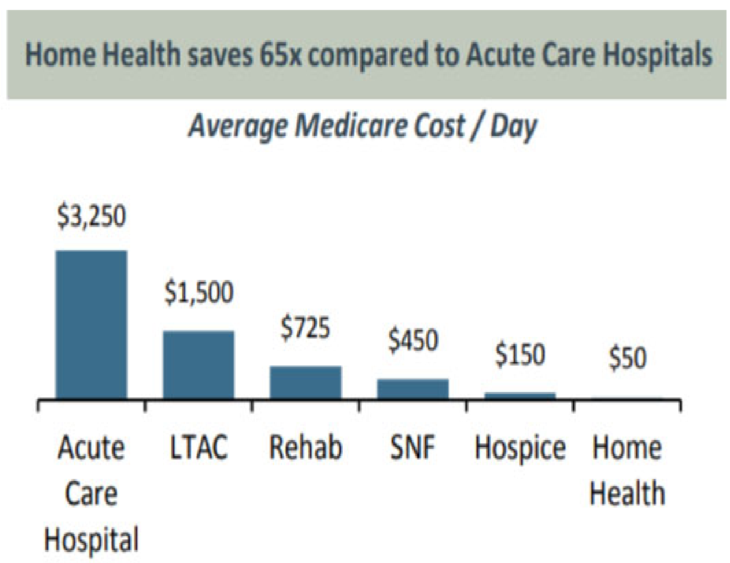


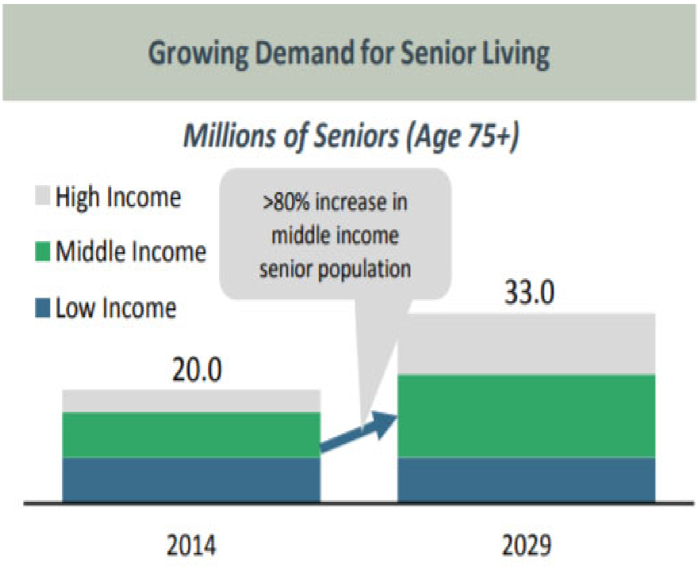


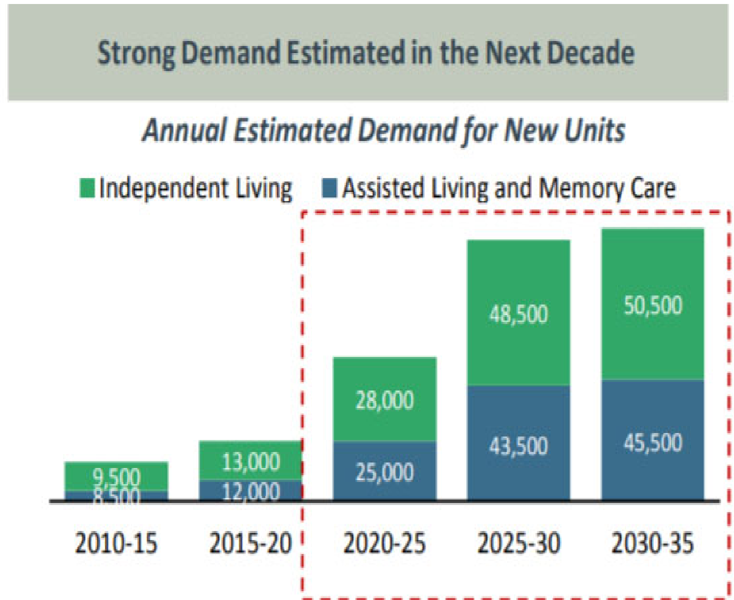


The U.S. long term care market size was valued at USD $445B in 2019 and is expected to register a CAGR of 6.8% the next five years. Demand for long term care (LTC) has increased owing to the recognition of unmet needs of the elderly, which are not fulfilled by hospital settings. According to estimates of the U.S. Department of Health and Human Services (HHS), around 69% of the U.S. population will require long term care services in their lives for an average of about three years, thus impelling the demand for long term care services in the region.

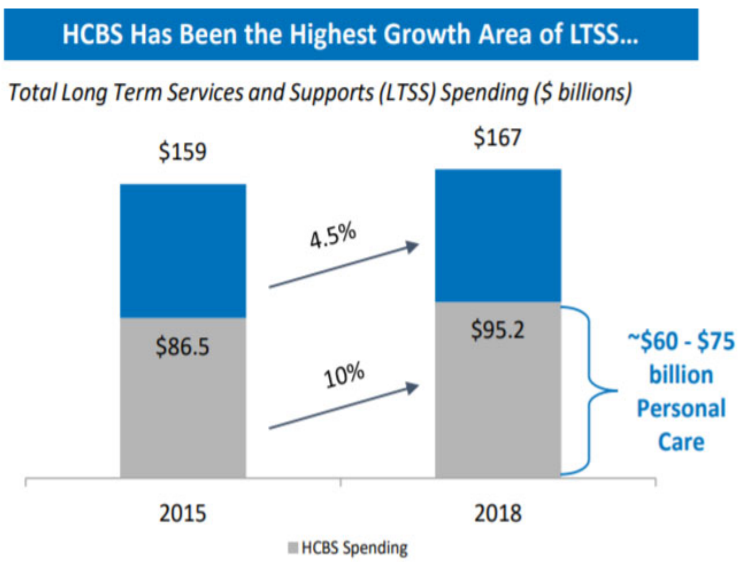


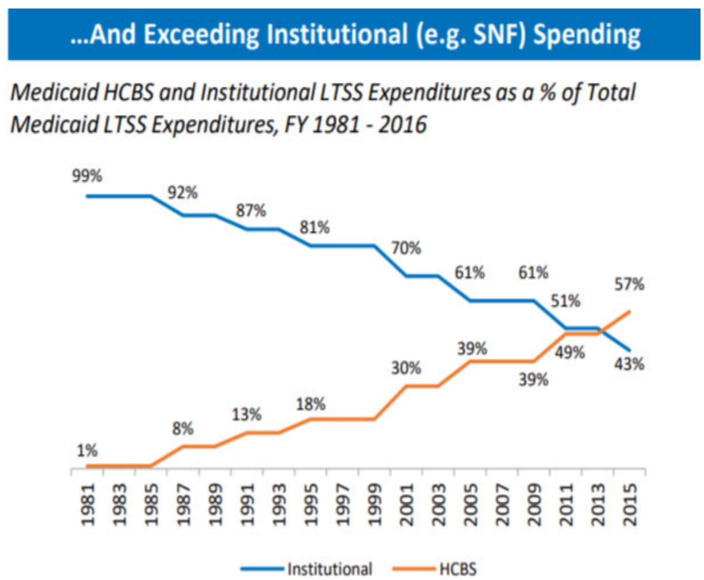


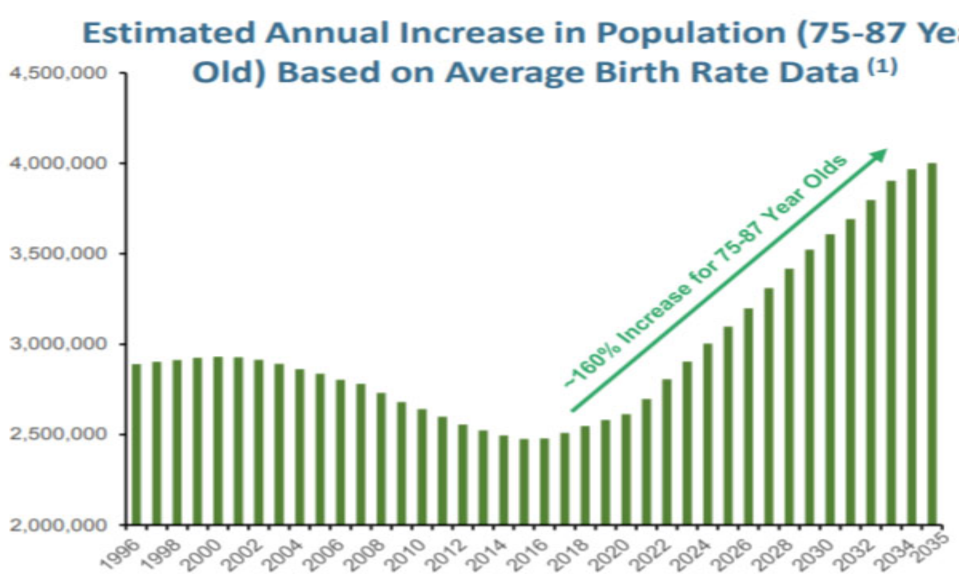




The US home healthcare market is projected to grow about 7% annually from $103B in 2018 to $173B by 2026 — outpacing growth in all other care types, including hospital care (+5.3% annually) and physician services (+5.6% annually). The Nursing Facility industry is estimated at $130B in 2020.





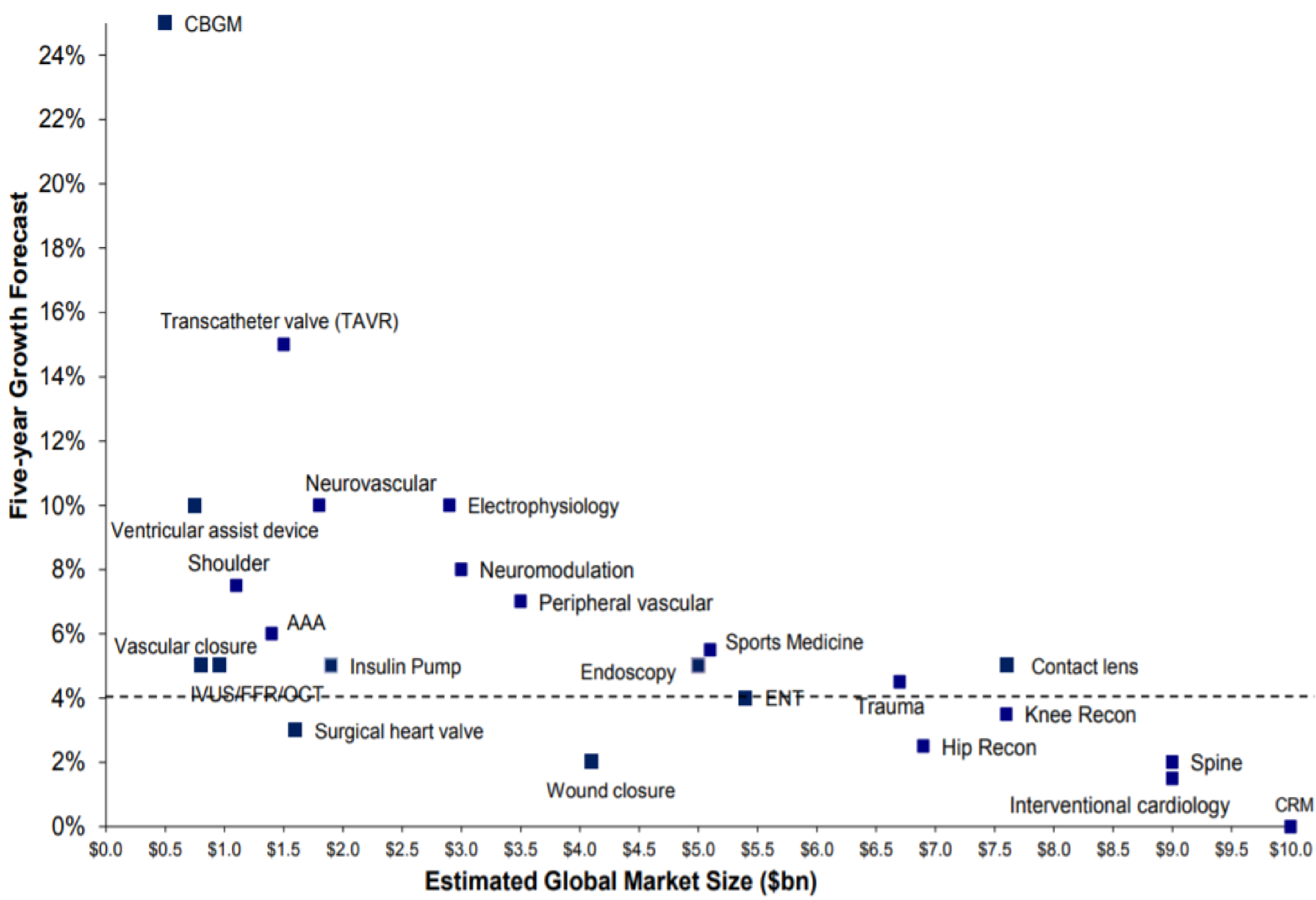


OptionsHawk Executive Summary and Top Picks

In the Managed Care group **United Health (UNH)** remains on top as the best-in-class operator with **Anthem (ANTM)** the next favorite. In Specialty Care **Chemed (CHE)** has screened as a top name each of the past few years and continues to be an impressive company while **DaVita (DVA)** could see an uptick for dialysis from COVID-caused kidney issues and trades cheap at 8.5X EBITDA. **Oak Street (OSH)** is a newcomer that needs to be watched as a provider of primary care centers to Medicare participants. **Joint Corp. (JYNT)**, an operator of chiropractor clinics, remains an intriguing small cap in this group. In the Hospitals group **HCA (HCA)** typically screens as the leader but **Encompass (EHC)** is looking more attractive and with the recent JANA stake may be an event-driven value unlock story in 2021. **Select Medical (SEM)** was a good small cap find last year and continues to screen favorably. The Long-Term Care group performed well in 2020 and **Amedisys (AMED)** is best-in-class while **Ensign (ENSG)** the small cap favorite.

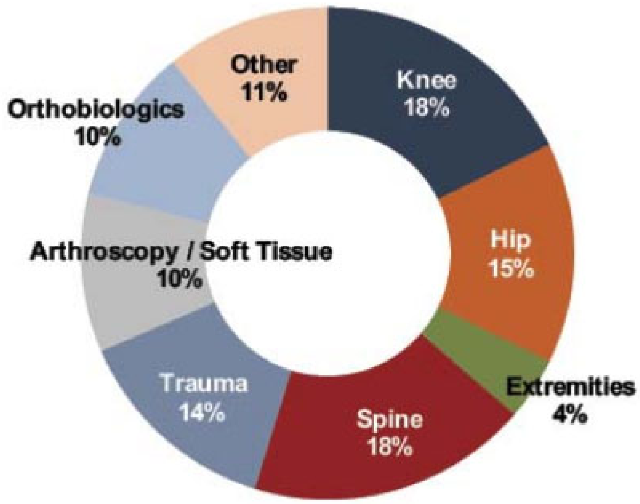
Medical Devices, Equipment, & Supplies

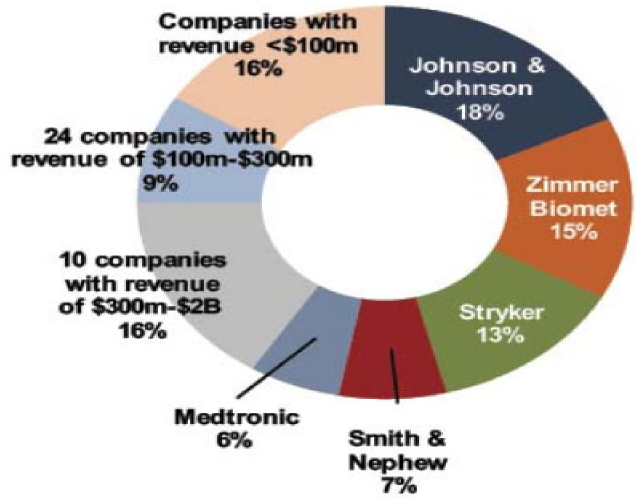
The medical device/technology group contains more than 80 stocks and is always one of the more exciting areas for investing, especially in smaller cap names with great products. The big three important factors for these names are product pipeline, operating leverage, and execution. Med-Tech fundamentals have been improving the last few years with higher operating margins and access to cash, and cash repatriation could drive further consolidation in the space. Revenue growth is generally driven by product introductions and hospital patient enrollments. The aging population and growth of the over-65 age group will create more opportunities for companies selling medical products and devices. Other drivers of the medical device industry include better penetration in emerging markets due to improved infrastructure, new innovative treatments, increased affordability due to rising per-capita GDP, and a growing prevalence of "lifestyle diseases" like obesity due to urbanization. The primary driver of growth in the medical devices market is the aging of the global population. Global life expectancy has continued rising and is expected to reach 76 years by 2050. The number of people aged 65 or over, who account for the majority of medical device use, will rise by over 60% in the next 15 years, from just over 600 million in 2015 to nearly 1 billion by 2030. A few key growth drivers across the device markets include Diabetes Care, Robotic Surgery, and Structural Heart – TAVR.



Orthopedic: ZBH, SYK, SNN, GMED, CNMD, OFIX, IART, NUVA, KIDS, ATEC, SIBN

The global orthopedic devices market is expected to grow at a 5% CAGR through 2027 to a value of $81B. According to World Health Organization (WHO), the geriatric population is expected to reach 2 billion by 2050. The rising population base is likely to generate substantial demands for different implants and devices for orthopedic use. Increased diabetes and obesity rates, a lack of physical exercise, poor diet and rising smoking and alcohol intake will boost consumer demand during forecast period. The production of cost-effective devices will be supported by recent developments in osteology. 3D printing, robot-assisted operations and smart devices would have greatly affected the driving forces behind worldwide market revenues in technical advancements. Spine, knees, hips, and trauma products make up more than 65% of the total orthopedic products market.



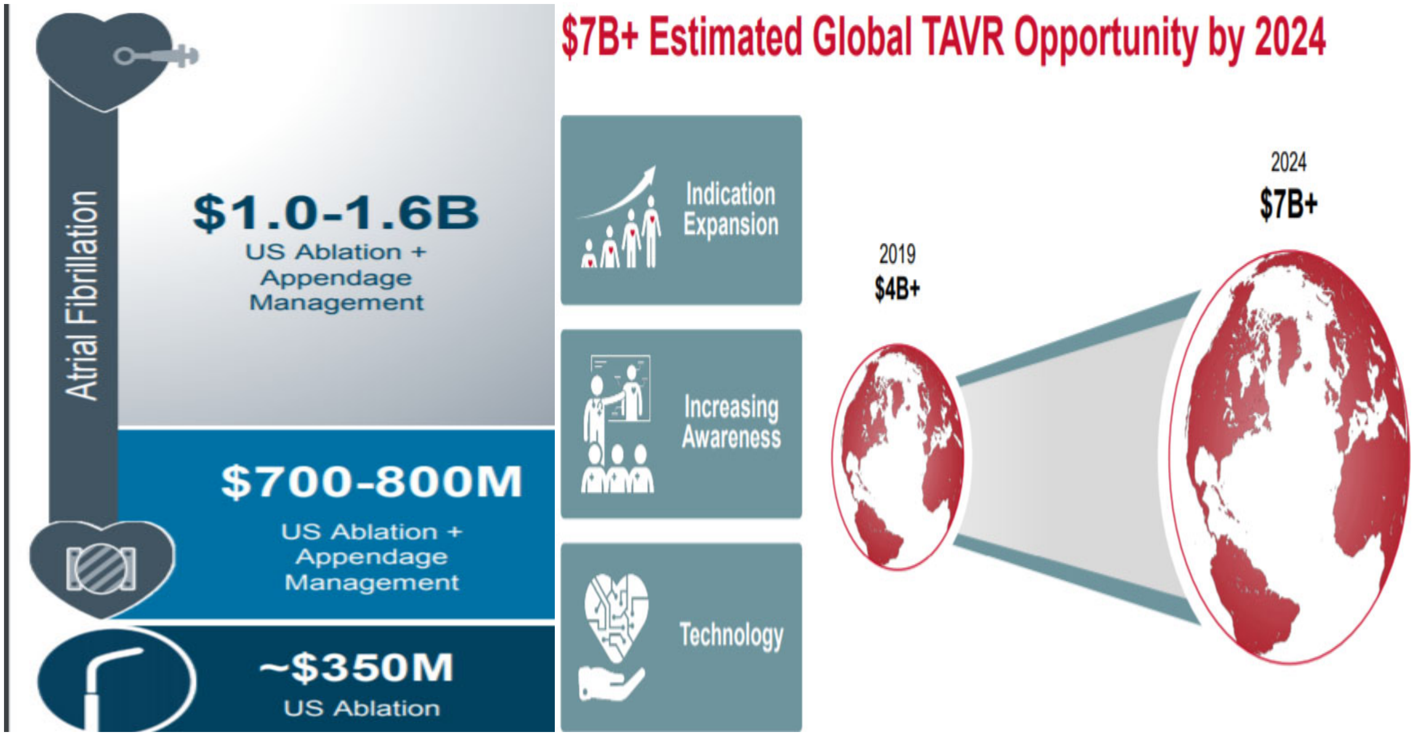


Category	Description	Market Size and Competitors
Sports Medicine	Devices for repair of soft tissue injuries in joints	$4.4 to $4.6 Billion ▪ Arthrex ▪ DePuy Mitek (J&J) ▪ Smith & Nephew ▪ Stryker ▪ Zimmer Biomet
Allograft Tissue	Exclusive commercial rights to MTF allograft tissue	$375 to $425 Million ▪ Allosource ▪ LifeNet ▪ RTI
Powered Instruments	Surgical drills and saws with related single-use accessories	$1.4 to $1.6 Billion ▪ Stryker ▪ DePuy Synthes (J&J) ▪ Medtronic (Midas Rex / Xomed) ▪ Zimmer Biomet
Surgical Visualization	High-definition surgical visualization systems to enable minimally invasive arthroscopic surgery	$1.8 to $2.0 Billion ▪ Stryker ▪ Arthrex ▪ Karl Storz ▪ Olympus ▪ Richard Wolf ▪ Smith & Nephew

Cardiovascular Components: MDT, BSX, EW, ABMD, PEN, ANGO, ATRC, LMAT, CSII, IRTC, SWAV, SILK, ATRI, NARI, CRY, AFIB

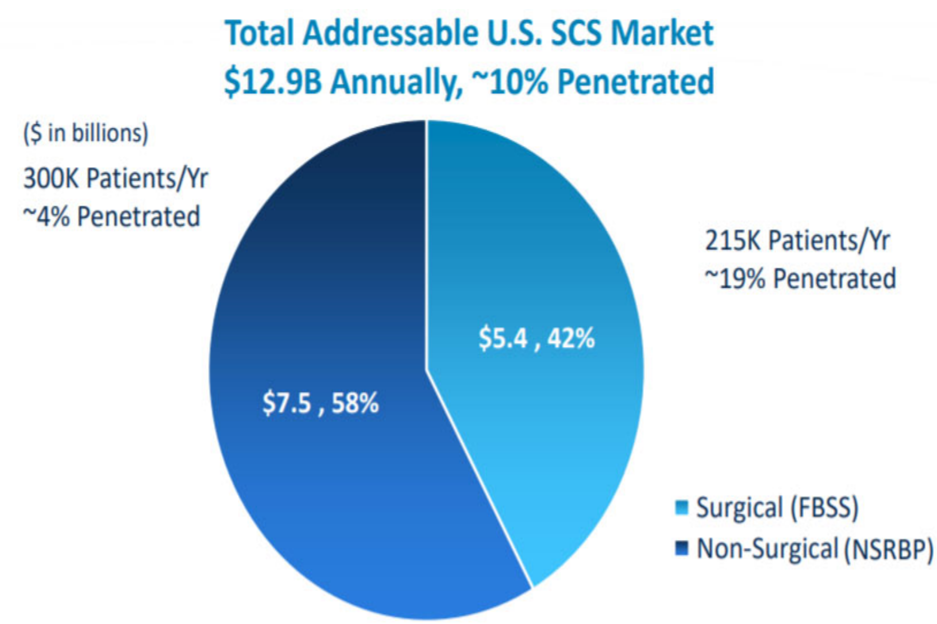
Cardiovascular devices are used to diagnose and treat various heart diseases and related health problems. With the medical needs of patients at an all-time high, any increase in incidences will only lead to a significant growth of cardiovascular market. The products address cardiovascular diseases such as arrhythmia, cardiomyopathy, coronary heart disease, myocardial infarction, congestive heart failure, congenital heart disease, hypertension, heart infections, and valvular diseases. Procedures include cardiac resynchronization therapy, heart transplantation, coronary artery bypass surgery, valve replacement, beating heart surgery, transmyocardial revascularization surgery, balloon valvuloplasty, and renal denervation surgery.

Th global cardiovascular devices market is expected to reach $60B in 2022 at a 6.9% CAGR. Cardiovascular diseases are the leading cause of death across the world.



Neuro & Respiratory: RMD, NVCR, LIVN, NVRO, INSP, INGN, AXNX, XENT, AXGN, STIM, ZYXI, VAPO, LUNG, AHCO

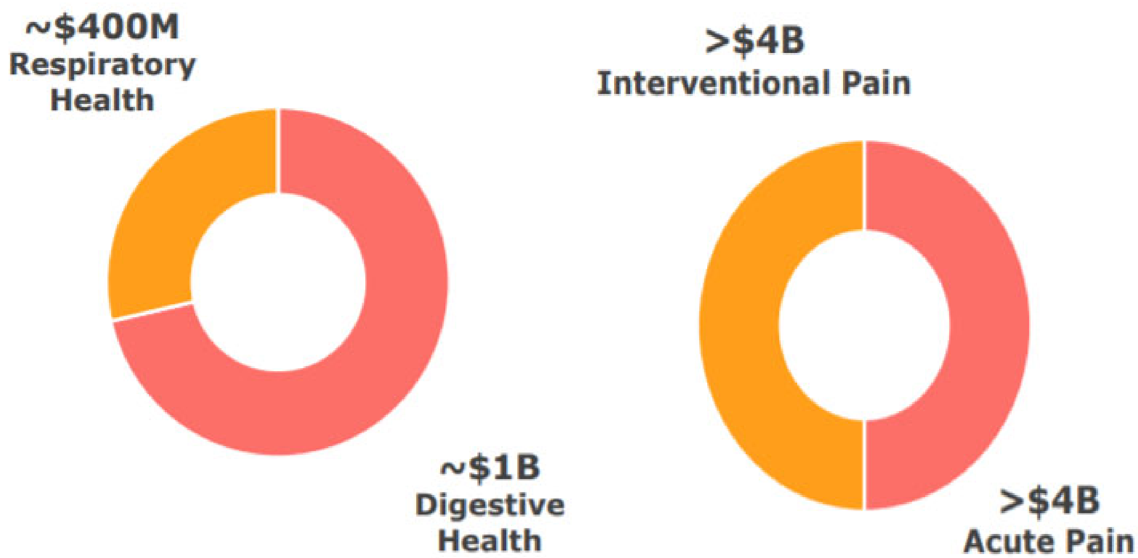
Global neurology devices market is expected to reach $10.8B by 2022 and $17B by 2026 with a growing need for development of different neurostimulation techniques with efficient and accurate algorithms for treatment of several CNS associated disorders. Rise in incidence of cerebral stroke and other severe disorders such as Alzheimer's disease, epilepsy, and Parkinsonism is expected to fuel demand of neurology devices thereby driving industry growth. The growth of the global neurology devices market is driven by significant rise in geriatric population across the globe, rise in demand for minimally invasive surgeries, and development of advanced neurological devices. Neurostimulation Devices, Interventional Neurology and Cerebrospinal are the three main product categories.



Respiratory Care market is expected to be valued at $30B by 2025 at a 12.5% CAGR. Respiratory care devices are devices which are used for monitoring, treatment, and diagnosis of respiratory diseases such as asthma, pneumonia, tuberculosis and obstructive pulmonary disease (COPD). The use of these devices improves pulmonary function and lung oxygenation. Respiratory care devices include PAP Devices, Ventilators, Nebulizers, Oxygen Concentrators, and Inhalers. The growth of this market is mainly attributed to the high prevalence of respiratory diseases, rising aging population across the globe, high prevalence of smoking, rising urbanization and pollution levels, increasing incidence of preterm births, and lifestyle changes. The COVID-19 outbreak drew a strong focus to respiratory care in 2020. The rapid growth in the global geriatric population, rising incidence of chronic diseases (including COPD and asthma), and the cost advantages of home care devices and services (compared to hospital visits) are the key factors driving the growth of the home healthcare market. The respiratory care devices market is segmented into therapeutic devices, monitoring devices, diagnostic devices, and consumables & accessories. COPD held the largest share of the respiratory care devices market in 2019. This was followed by sleep apnea, asthma, and infectious diseases.

Diversified & Hospital Supplies: BAX, BDX, MASI, ABT, JNJ, TFX, ECL, ITGR, PHG, GRFS, MLAB, STE, WST, CTLT, HRC, ICUI, UTMD, NTUS, AVNS

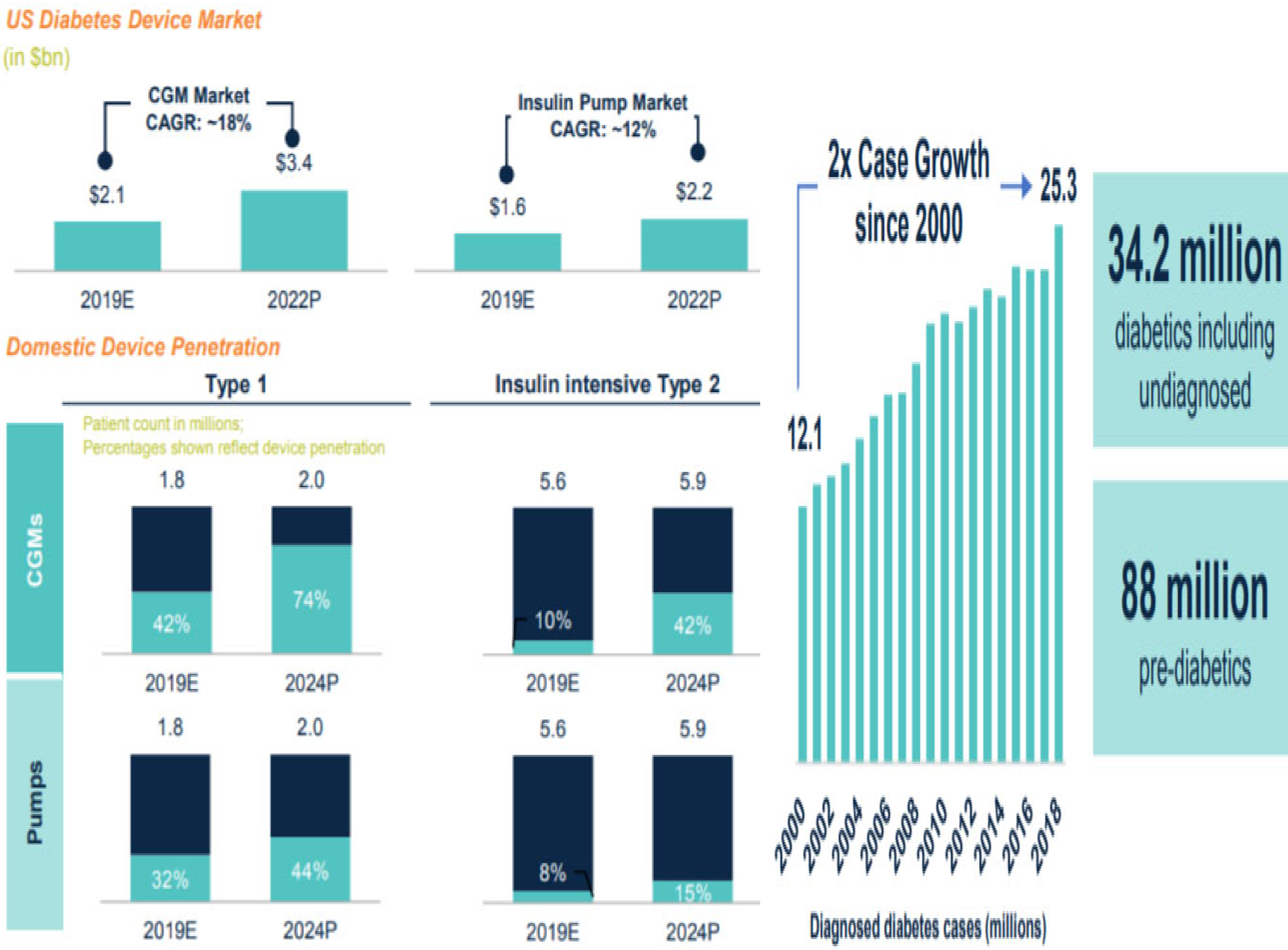
The global hospital supplies market is estimated at $38B and seen reaching $61.5B in 2024 at a CAGR of 11.8%. Market for hospital supplies is segmented by products such as sterilization and disinfectant equipment, mobility aids and transportation equipment, operating room equipment, disposable hospital supplies, patient examination devices, syringes, and needles. The increasing prevalence of communal diseases in many parts of the world has increased the demand for hospital supplies. This has also resulted in awareness among health workers and the patient population for proper maintenance of hygiene in the hospital premises. The increase in the geriatric population has accelerated the demand for hospital supplies. The rising technology has led to the development of advanced equipment, which can be used in multiple applications.



Product Category	IV Solutions	IV Sets and Needlefree Connectors	IV Oncology CSTDs	Infusion Pumps	IV-EHR Interoperability
Type of Market	Mature	Mature / Still-Developing Segments	New Category Creation	Mature	New Category Creation
US Market Size	$1.5B	$1B	>$400M	$1.2B	>$400M

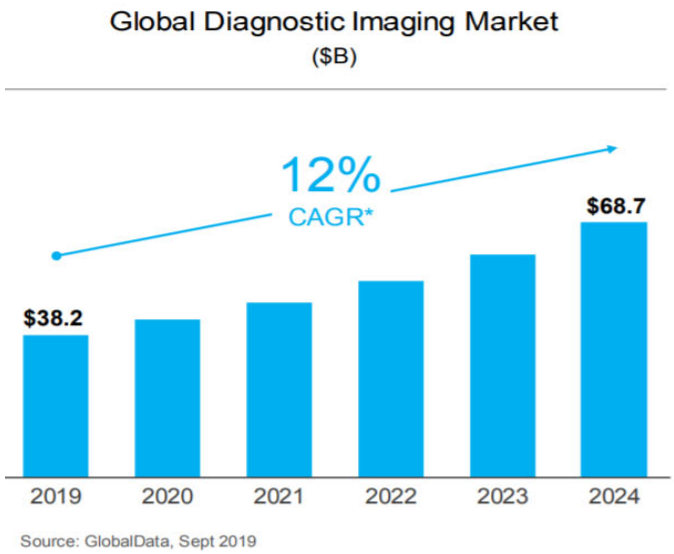
Consumer Health Devices: STAA, GKOS, ALC, ALGN, DXCM, COO, XRAY, PODD, HSIC, NVST, TNDM, PDCO, BEAT, TCMD, SIEN, SDC, PGNY, OM, EAR

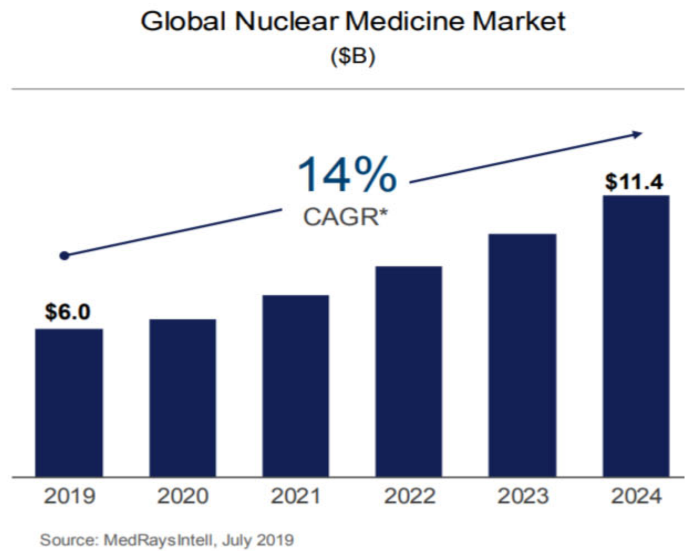
This group is more focused on consumer health areas such as diabetes, vision, and dental while also some other niche categories included. There have been a lot of technological advancements across consumer health driven by wearables and providing a long runway for growth as a strong way to move closer to preventative care. The Cardiac Monitoring market is currently seen as a $2.5B market opportunity. The assisted reproductive technology (fertility) market is a $6.7B market where PGNY is looking to expand coverage and open up an additional $5B opportunity. The vision care market is massive expected to reach $195B by 2026 at a CAGR of 5.1%. In 2020 there was an estimated $70B spend with $48B in eyeglasses, $16B in contact lenses and $6B in refractive with growing cases of myopia. The Oral care maker is expected to reach $53B by 2025 at a 3.1% CAGR with better growth in specialty/orthodontist segments. The Diabetes care market is seen reaching $33B in 2025 at a CAGR of 6.8%.



Surgical/Aesthetics/Imaging: ISRG, HOLX, MMSI, VREX, LNTH, CUTR, TMDX, VRAY, MSON, APYX, STXS, INMD, ESTA, NNOX

The global medical imaging market is estimates at $23B and seen rising to $33B in 2024 at a 5.5% CAGR. The growth of this market is primarily driven by the increasing demand for early disease diagnosis and widening scope of clinical applications. Diagnostic imaging market is broadly segmented into six segments—X-ray imaging systems, CT scanners, ultrasound imaging systems, MRI systems, nuclear imaging systems, and mammography systems. Large cap diversified companies are leaders such as GE Health, Siemens Health, Philips, Canon Medical, Hitachi and Samsung.





The Medical Aesthetics market sees 40M laser procedures and 2.5M plastic surgery procedures worldwide annually. The market size is seen growing to $22.5B by 2027 at a 10.45% CAGR. Medical aesthetics is referred to as a branch of medicine that mainly focuses on procedures and techniques to improve and enhance the appearance, texture, and contours of the skin, face, and body. This branch comprises of treatment processes of scars, moles, liver spots, excess fat, wrinkles, skin laxity, unwanted hair, cellulite, spider veins, and skin discoloration. It generally includes reconstructive surgery, oral and maxillofacial surgery, plastic surgery, dermatology, and many others.

The surgical robotics market is seen reaching $13B by 2026 at a 15.4% CAGR. Some of the factors that are driving the use of surgical robotics include high precision and accuracy as compared to conventional procedures, increasing demand for minimally invasive surgery, the increasing prevalence of gynecology, orthopedic disorders, an increasingly aging population, technological innovations, and the rising adaption of surgical robotics among the population.

Management Commentary

Globus (GMED) on its spinal implement business: "Our U.S. spinal implement business grew by 17% in the quarter. This team is firing on all cylinders. We've launched 5 new products in 2020 with continued strong uptake in the HEDRON line of 3-printed interbody spacers and SABLE, our fourth generation expandable MIS TLIF spacer. As we alluded to last quarter, we have had to limit access to these products until we expand our 3D manufacturing capacity, which should be online this quarter. We also saw significant growth from resonate, our new low profile extreme angle anterior cervical plate that features automatic locking. Surgeon interest and demand for robotic technology is strong and growing. On the product development front, we launched the ExcelsiusGPS interbody module in September and upgraded several systems."

SI-BONE (SIBN) on market potential: "Specifically, given the improved reimbursement landscape, including expanded insurance coverage from private payers, as well as the 27% increase in surgeon payment, we believe we're in a unique position to expand the market for minimally invasive SI Joint Fusion. We estimate the U.S. market in 2019 was a little over $100 million, with the potential to be over $2 billion per year in the future. As the current market leader, we will be the beneficiaries of market expansion. And to capture this opportunity, we plan to invest in a number of growth initiatives in 2021. We intend to grow our field sales force, leverage our simulators to train surgeons, invest in patient awareness, expand product offerings in sacroiliac Joint Fusion, trauma and deformity and engage in process improvements and systems initiatives to scale the business to profitability."

Edward's (EW) on International TAVR: "Outside of the U.S., in the third quarter, our underlying TAVR sales increased in the high single-digit range year-over-year. We continue to be encouraged by the strong international adoption of TAVR, particularly in Europe, where growth continues to be faster than expected. Edwards' underlying TAVR growth in Europe versus the prior year was in the high single-digit range. We saw unit increases in nearly every country across Europe. Growth was driven by continued strong adoption of our SAPIEN 3 Ultra platform. And although transcatheter valves have been commercially available for over a decade in Europe, AS continues to be significantly undertreated. Outside of the U.S. and Europe, we're continuing to see strong TAVR adoption driven by SAPIEN 3. Sales growth in Japan and other regions was strong as aortic stenosis remains an immensely undertreated disease, and we remain focused on increasing the availability of TAVR therapy. In China, where Edwards recently received regulatory approval to begin treating high-risk patients suffering from severe aortic stenosis, we successfully completed our first cases in the third quarter. And although it will likely take significant time to expand our TAVR presence in China, we look forward to partnering with hospitals across the country to introduce this therapy through our comprehensive, proven training program."

Inspire Medical (INSP) on R&D investments: "We continue to invest heavy in our R&D platform. This is just showing development of our digital tools, where we're going to have Inspire Cloud has already been launched. But we're launching a new patient remote that has Bluetooth that will take the information from the implanted product share with information provided from the physician programmer in the cloud and prevent a cloud-based patient management system that will only continue to develop further as we move forward."

ResMed (RMD) on patient populations in core markets: "In our core markets, the patient diagnosis trends in sleep apnea, COPD, asthma and beyond are steadily increasing as well as prescription therapy flow from those diagnoses. Growing numbers of people are returning to health care systems, including primary care as well as specialist care. We are seeing more health care systems come back online through telehealth and in-person visits. Overall treatment capacity as well as capacity utilization rates of those systems are both increasing. We have seen a steady sequential, what we would call U-shape recovery of patient flow to primary care physicians as well as then to specialist physicians across the 140 countries that we serve. This is just as we forecast 90 days ago on our Q4 earnings call. We expect this same patient flow growth trend to continue throughout fiscal year 2021."

Ecolab (ECL) on hygiene market outlook: "We use common standards and platforms of hygiene, of antimicrobial products as well, similar technology as well. The business model, as mentioned, is the same. We leverage a lot of our technology and digital platforms as well, and 90% plus of our sales are driven by recurring revenue, which means consumables that we're selling to our customers, so razor blades while we provide the razors to our customers as well. This is a proven model that we're expanding in all the new industries that we are entering as well. The market trends are very positive for us. They haven't changed with COVID. If anything, they've gotten stronger. The population growth, we're going to be 25% more people by 2050. That's 1 billion more people eating more, traveling more and increasing the infection rate. To be honest, in here, this is what we do. The middle class is growing with people consuming more consumer goods. Obviously, this is a good thing. Population aging, this is kind of driving our hospital and Healthcare business and Life Science as well, which are high profitable business as well. Technology, people are expecting new digital connection, having real-time information, global real-time data. This is what we can provide. And last but not least, climate change is not going anywhere during COVID-19. If anything, what we see and hear from customers, this is becoming even higher on their agenda, which is part of what we're delivering as well. We serve a $135 billion market. It's a total addressable market that's kept growing. As you can see on that chart, we're 9%, 10% of the market. And on the bottom part of the chart, you can see some Ecolab in blue and all our competitors in green out there. No one is coming even close. There is no one-to-one Ecolab competitor out there, it's industry by industry. And that's the reason why it's all fragmented."

OptionsHawk Executive Summary and Top Picks

The Medical Device group saw some weak growth numbers in 2020 due to the disruptions from COVID that slowed demand for elective surgeries but as things normalize the group should face easy comps in 2021. In Orthopedics **Stryker (SYK)** is a quality company but I prefer **Globus (GMED)** with better growth, margins, and returns on capital. Two small caps stand out in Orthopedics as well with **SI-BONE (SIBN)** and **Alphatec (ATEC)** impressive growth numbers. In Cardiovascular **Medtronic (MDT)** sets up to be a strong new product growth story at attractive valuation and against easing comps while **Edward's (EW)** remains the preferred own with the TAVR opportunity that brings better growth and margins. There are three small cap growth stories to focus on in this group with **Inari (NARI)** the most intriguing newcomer and **Silk Road (SILK)** and **Shockwave (SWAV)** favorites from last year that gained sharply in 2020.

In Neuro there are plenty of quality growth stories, **ResMed (RMD)** the large cap continues to be an impressive name across all metrics and seeing margin expansion while **NovoCure (NVCR)** a long-time favorite continues to post explosive growth numbers. For the small caps **Axonics (AXNX)** is a multi-year growth story with its SNM approved and could be a nice acquisition target while newcomer **Pulmonx (LUNG)** worth watching as a strong tech play on COPD. As we move to Diversified & Hospital Supplies **Abbott (ABT)** remains a high-quality operator while **Ecolab (ECL)** a consistent winner with a strong moat. In the next market cap tier **West (WST)** is a favorite I detailed extensively in 2020, **Masimo (MASI)** a leader in patient monitoring with strong growth opportunities, and **Teleflex (TFX)** another long-time favorite that gets little recognition but delivers strong growth, high margins, and impressive ROIC. **Utah Medical (UTMD)** a small cap and thinly traded name I like in this group.

For the Consumer Products group **Align Tech (ALGN)** is a great growth story and its recent Investor Day really painted the picture for how much growth it has left to capture. The Diabetes names each offer impressive growth (**DXCM, PODD, TNDM**), and **Dexcom (DXCM)** remains my preferred name despite a weak close to 2020. In the final group, Surgical, Imaging & Aesthetics, **Intuitive Surgical (ISRG)** was a top pick in 2020 and continues to be a best-in-class operator and top way to play the robotics theme. **Hologic (HOLX)** has asserted itself as a leader and offers solid growth, cheap valuation, high margins, and high returns on capital. The rest of the group are small caps and the most attractive stories are **InMode (INMD)** and **Establishment Labs (ESTA)**.

Industrials: *Industrials overall tracked the S&P fairly closely in 2020 as the pandemic provided challenging for a number of end-markets like Automotive, Aerospace and Energy. The Housing market, residential construction, was a bright spot while the Industrial 4.0 theme continues to play out with a number of large industrials pushing more to a software-centric approach. Global manufacturing continues to improve off the March trough and many companies set to emerge stronger after cutting costs and improving operational efficiencies. An infrastructure package would be a boost to this group while other key mega-trends include population growth requiring more electricity, energy efficiency, intelligent products and connectivity, and environmental concerns. Transports have outperformed with strength in Rail/Trucking outweighing weakness in Airlines. There are so many diverse markets within the Industrial group that it makes it the most interesting to do deep dives into earnings reports and discover read-throughs for other companies operating in those markets. Some of those markets include Electrical, Hydraulics, Aerospace, Defense, Oil & Gas, Power Systems, Vehicle, Pumps and Flow, Artificial Lift, HVAC, Food Equipment, Automation and Controls, Residential Equipment, Connectivity, Water Systems, Welding, and Tools. This group is more sensitive to the USD and interest rates while capital intensity brings higher credit risk. The group is comprised mainly of cyclical and high capex businesses so we are focusing more on EBITDA growth and margins and less on the top-line while also paying attention to FCF and capital allocation.*

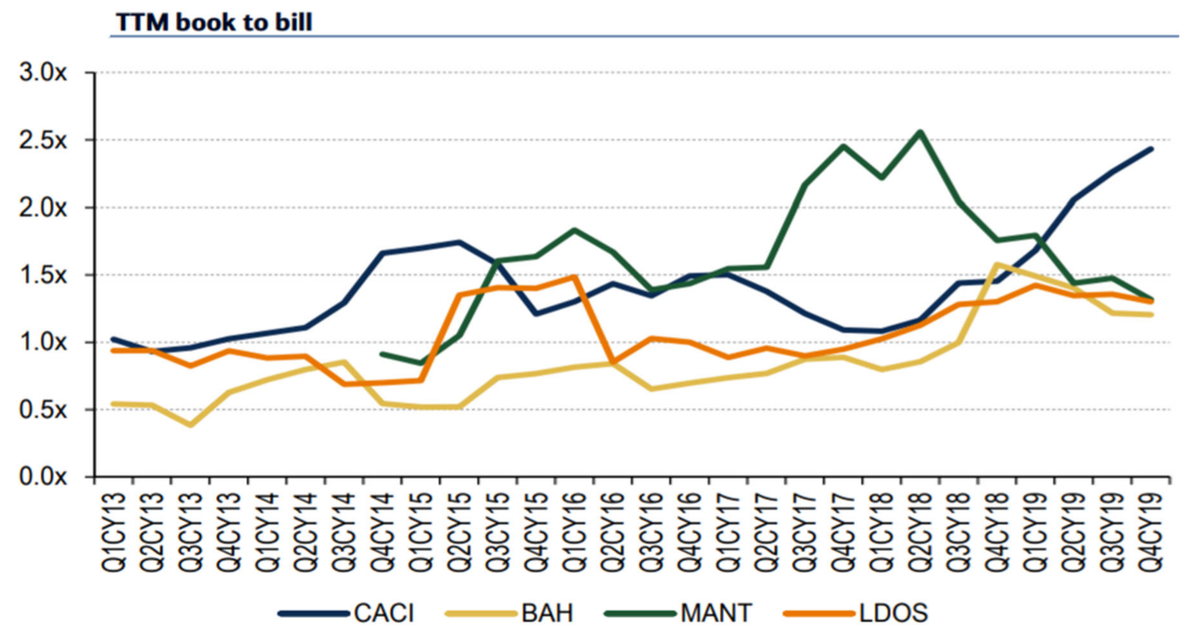
Aerospace/Defense

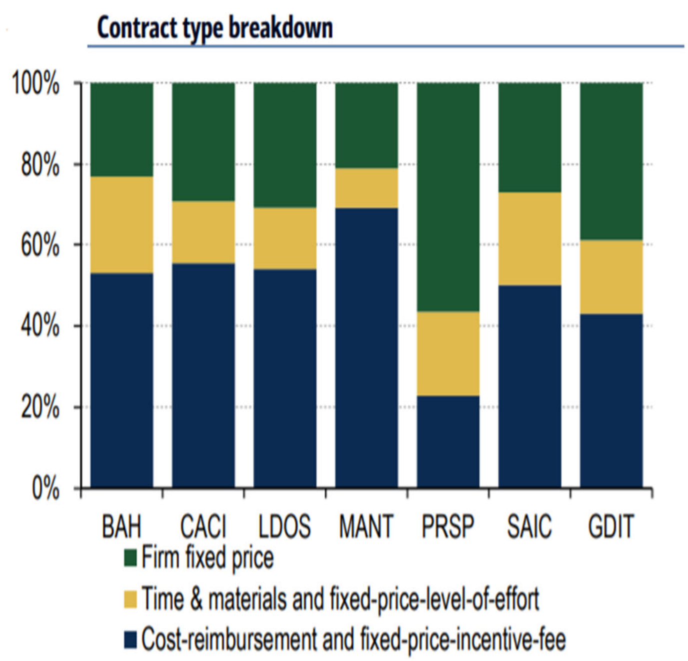
Defense IT Components: CACI, CUB, CMTL, LDOS, PRSP, PSN, BAH, MANT, MAXR, TLS, SAIC

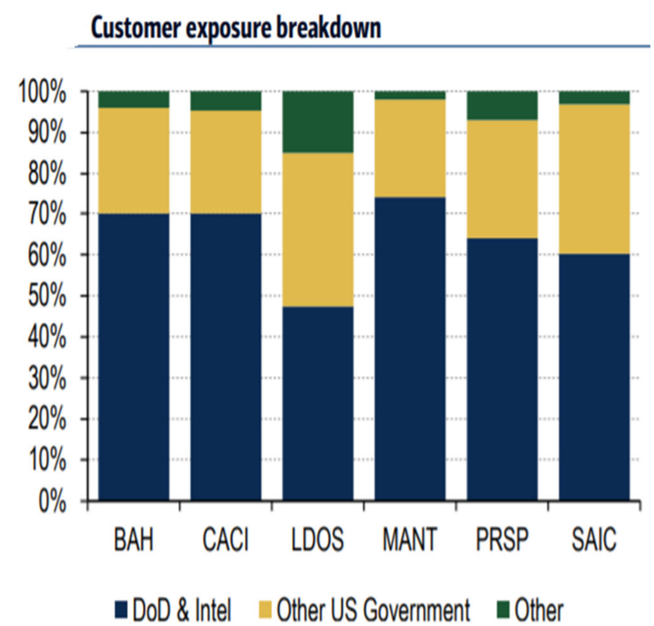
The Government IT Services group has been posting strong results in 2020 and is supported by a strong budget with an overall shift to higher IT spending and system improvements. Areas seeing strong funding include electronic warfare, signals intelligence, and cyber. The estimated TAM is $220B. The role of advanced technologies on modern warfare and accelerated needs for digital modernization and cybersecurity post-COVID-19 support robust growth for the National Security IT. These industry pure-plays focus primarily on serving the US national security, homeland security and intelligence communities. Their primary customer is the US Government, the largest consumer of services and solutions in the US. The US Government represents 85%+ of sales. The Department of Defense (DoD) and IC represent at least 60% of last fiscal year sales. The main players are the large defense primes and pureplay US Government IT services providers. The industry's core technologies include full-spectrum cyber, data science, digital modernization (including DevOps, cloud, artificial intelligence, and others), and mission-oriented systems and software engineering. The Defense Services industry also works in adjacent markets providing services of complex and large-scale operations and logistics and other mission-support solutions (including ISR operations, specialized professional solutions, life sciences and medical research, and advanced training solutions). The industry has been very successful in developing the IT capabilities needed to serve US National Security clients, moving away from low-technical outsourced services.

The main players also include large defense contractors like BAE Systems, Boeing, General Dynamics, L3-Harris, Lockheed, Northrop, and Raytheon. E&C contractors like Jacobs (J) and KBR (KBR) also have exposure as do IT Service plays Accenture (ACN), IBM, Dell (DELL), and CGI Group (GIB). These names are discussed in other sections of the report and focusing here on pure-play names where it moves the needle.

Backlog and book to bill are important leading indicators of sales, but some distinctions should be made. Funded backlog is the highest quality, as contracts are fully funded by the US Government. US National Security IT services companies also report unfunded backlog. This typically includes options or expected exercise of multiyear contract buys that have not been funded. US National Security IT services contractors have an asset-light business model with CapEx mostly related to the purchase of equipment or modernization of investments. They convert between 50% and 80% of EBITDA into Free Cash Flow. Many of their employees work at government locations to keep facilities costs and capital expenditures low.

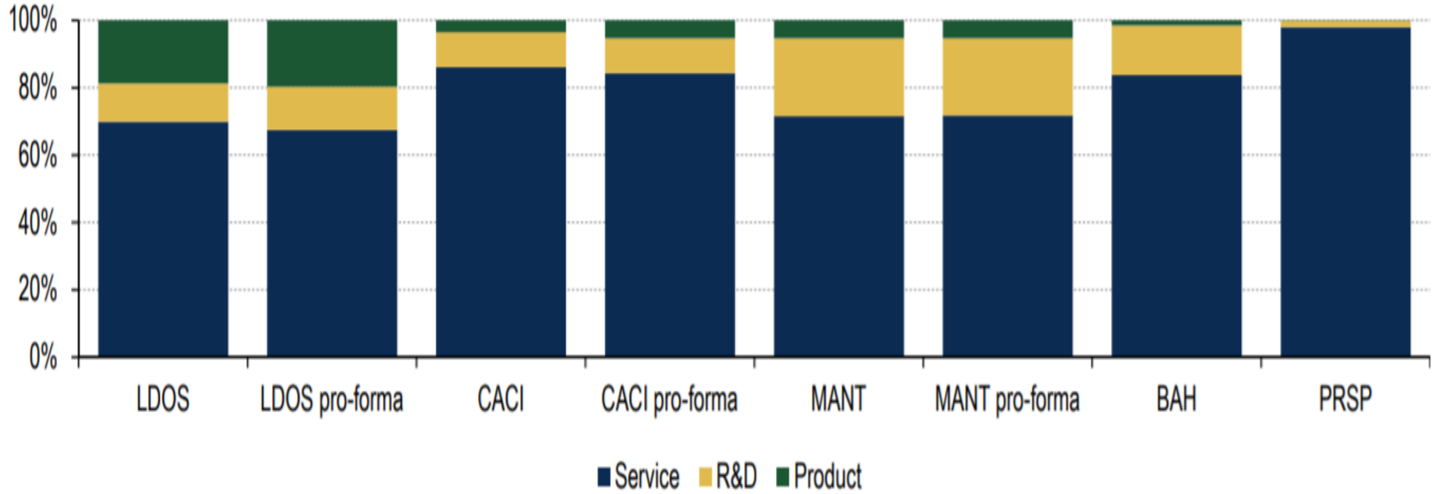






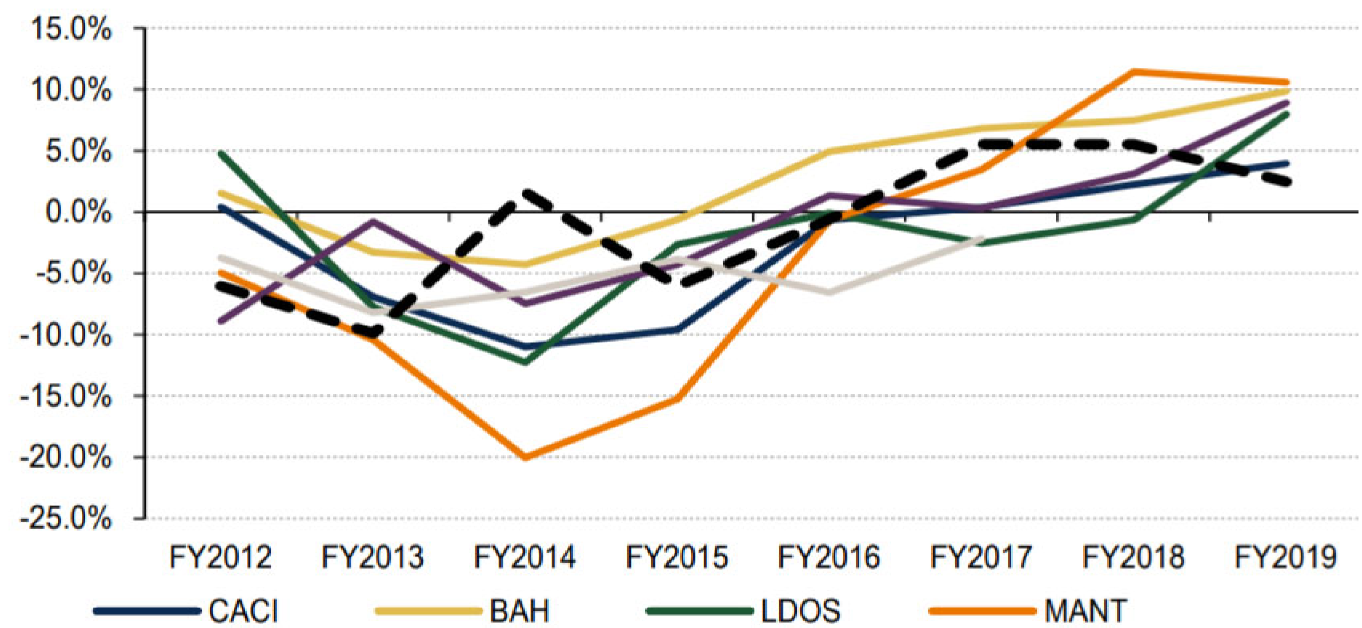
M&A is an emerging trend in the group as well. A trend toward digital modernization of the US federal Government and advanced technologies applied to defense and national security strategies has increased the demand for Defense IT Services targets. The industry players have acquired companies with key capabilities and/or access to contracts and customers. Other services companies, like E&C players KBR, J or PSN, have also acquired Defense IT Services companies. There has been a surge in transaction multiples within the sub-industry. Consolidation and M&A have given rise to substantial debt burdens at some companies and significant goodwill amortization. In order to better compare company capital structures, analysts use enterprise value/EBITDA to value these companies.

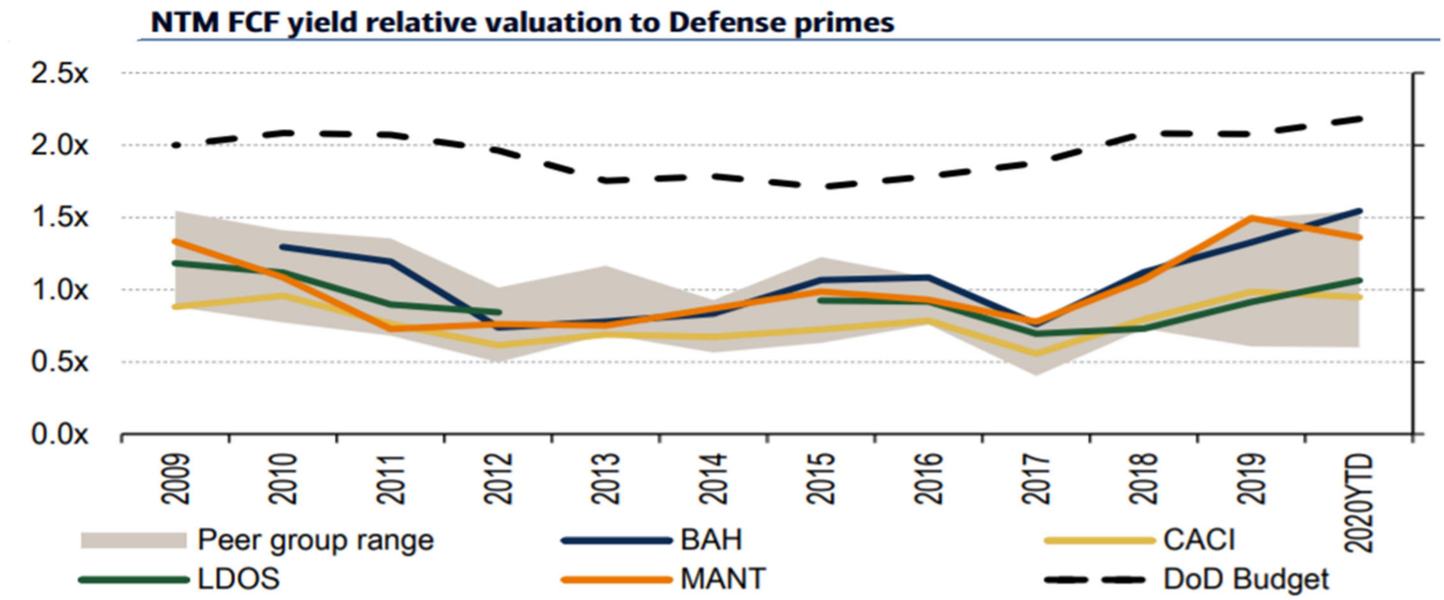
It is critical for investors in US National Security services companies to get below the broad sector data that most firms choose to report and into the details of individual programs and services they can provide. Knowing what is in a company's portfolio of contracts and capabilities is the key to understanding how the company could grow, assessing what strategic risks and challenges it may face, and anticipating potential merger and acquisition plans.



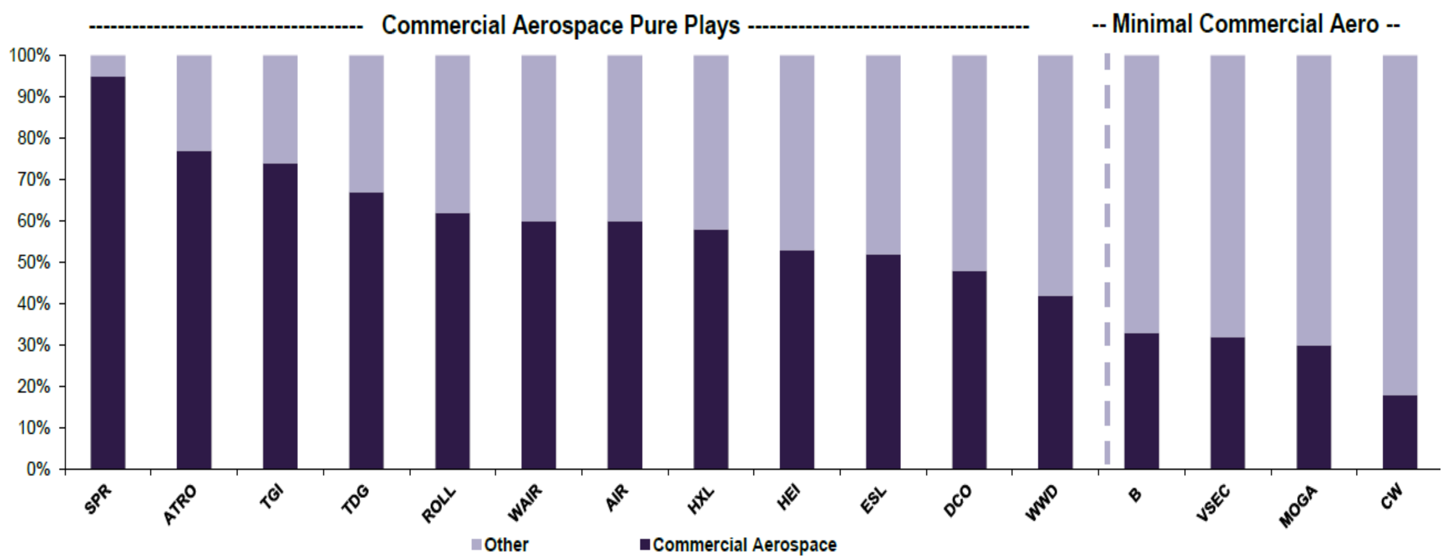
In an acquisitive industry it is important to keep a close eye on organic growth trends, show below. Book to bill metric is also a good leading indicator of the future organic growth. Book to bill is calculated as contract awards, or bookings, divided by sales. However, as well as backlog, not all contract awards are the same quality and have the same impact over time. Usually, contract awards include options or expected exercise of multiyear contract buys that have not been funded. Due to the acquisitive nature of the industry, we focus on EBITDA margins to assess the IT services contractors' profitability. Amortization of intangible assets varies significantly form company to company impacting operating profit. Labor is one of the major direct costs for the US Government service contractors representing ~30% of sales for CACI and almost 50% for MANT. Due to increase competition in attracting qualified employees, direct costs have remained high. In some cases, the IT services providers have to rely on subcontracted labor to meet the contract requirements. Subcontracted labor and third-party materials negatively impact margins. Due to the asset-light business model, most National Security IT services companies strongly focus on cash conversion cycle, in particular accounts receivable, to maximize their FCF conversion. We look at FCF as a % of Sales and Days Sales Receivables as indicators. The most popular method of valuation for US National Security IT services stocks is enterprise value divided by adjusted EBITDA. FCF Yield is an important metric as well due to its low-capital intense profile. Free cash flow allows the companies to invest internally, fund acquisitions, and pursue other strategic capital deployment activities (such as dividends or share repurchases).

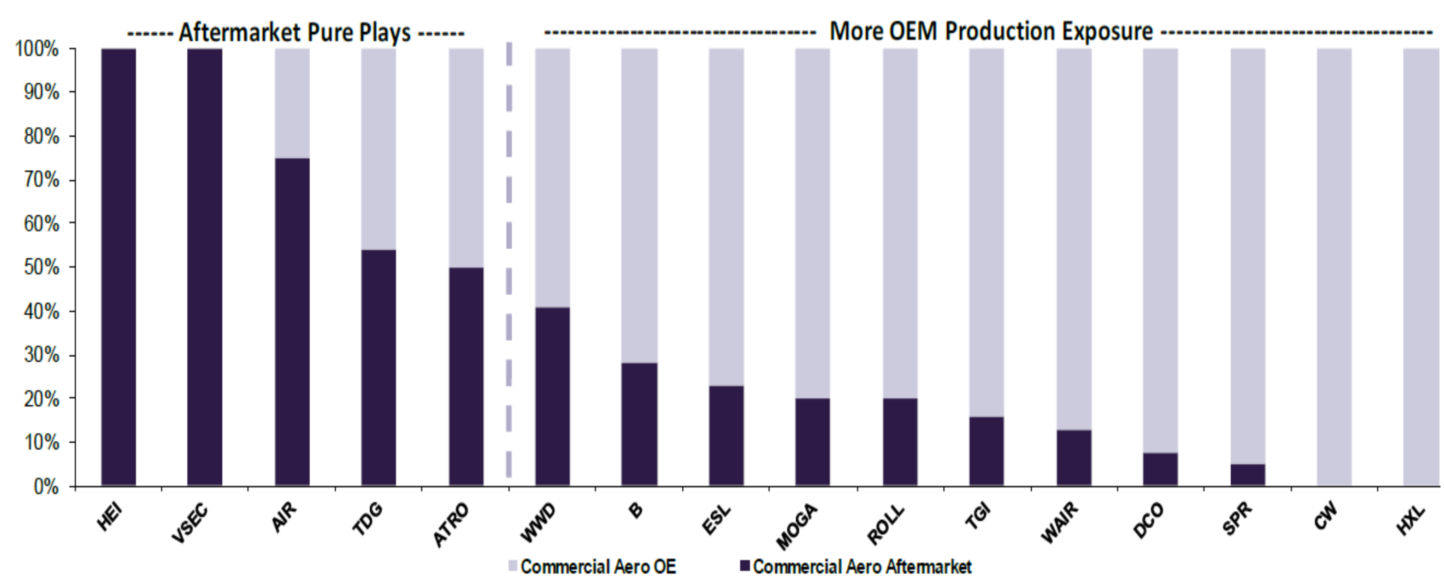
Organic growth measured as top line Y/Y change excluding LTM acquisitions and divestitures





Aerospace Components: AJRD, ATRO, AVAV, BA, DCO, ESLT, HEI, HON, HXL, MOGA, ROLL, SPR, TDG, TGI, TXT, UTX, WWD, AIR, CAE, HWM, SPCE, AIN, CIR, KAMN, PKE

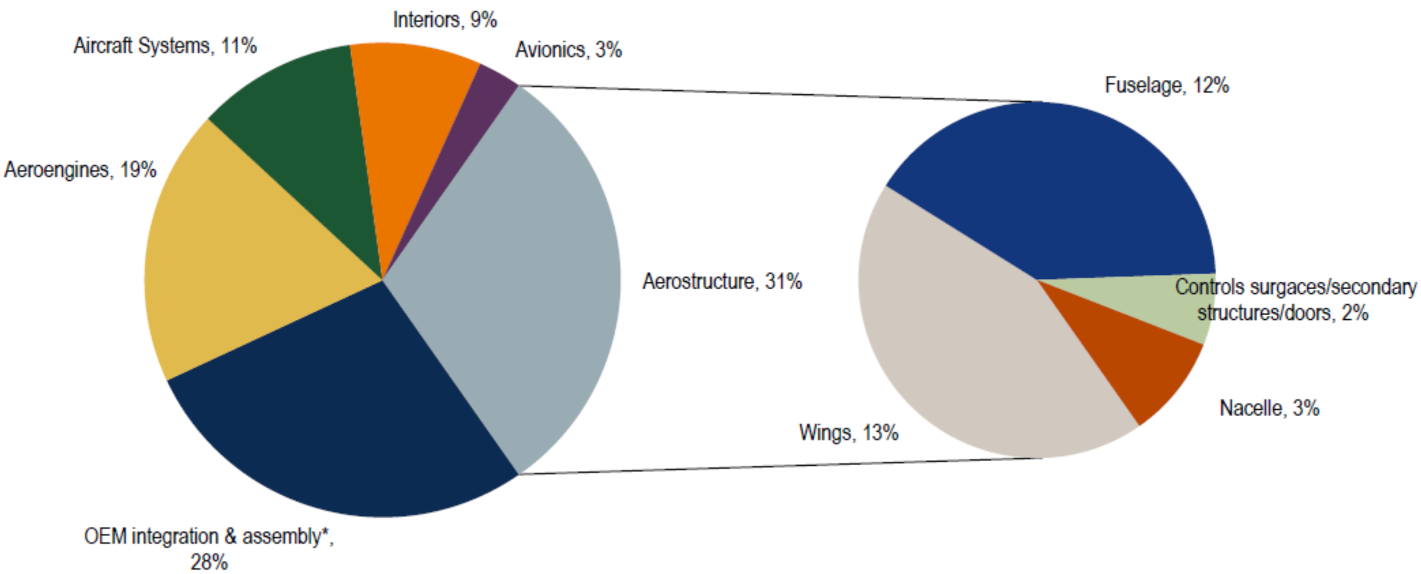


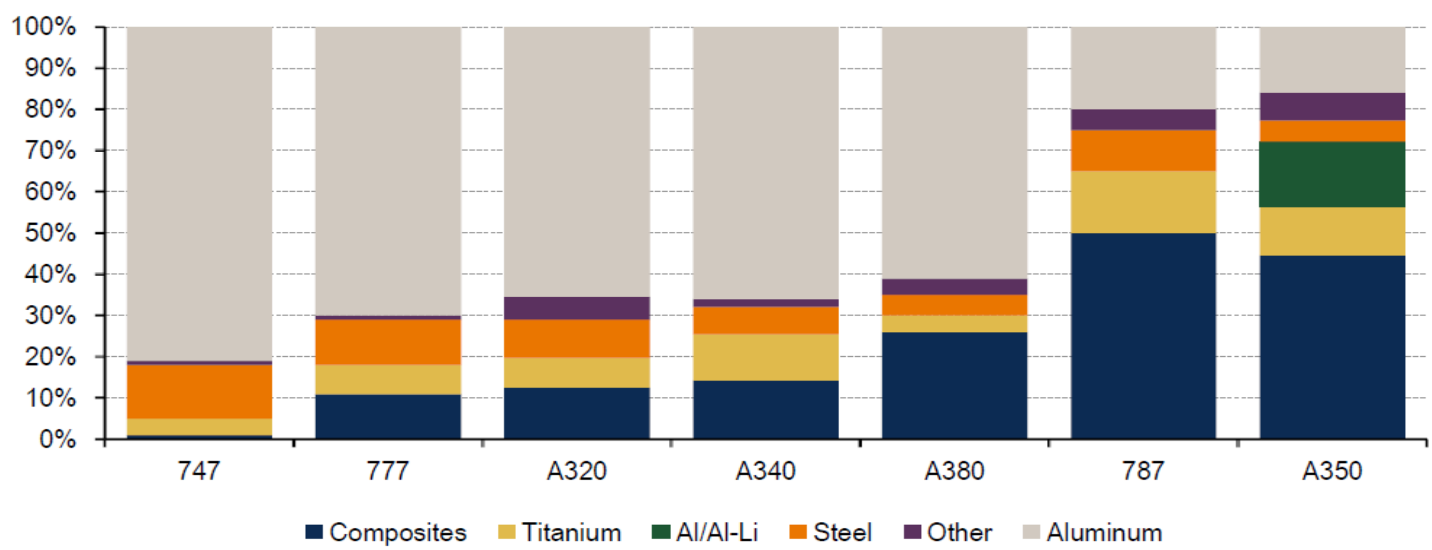


Aerospace Leasing: FLY, AL, AER

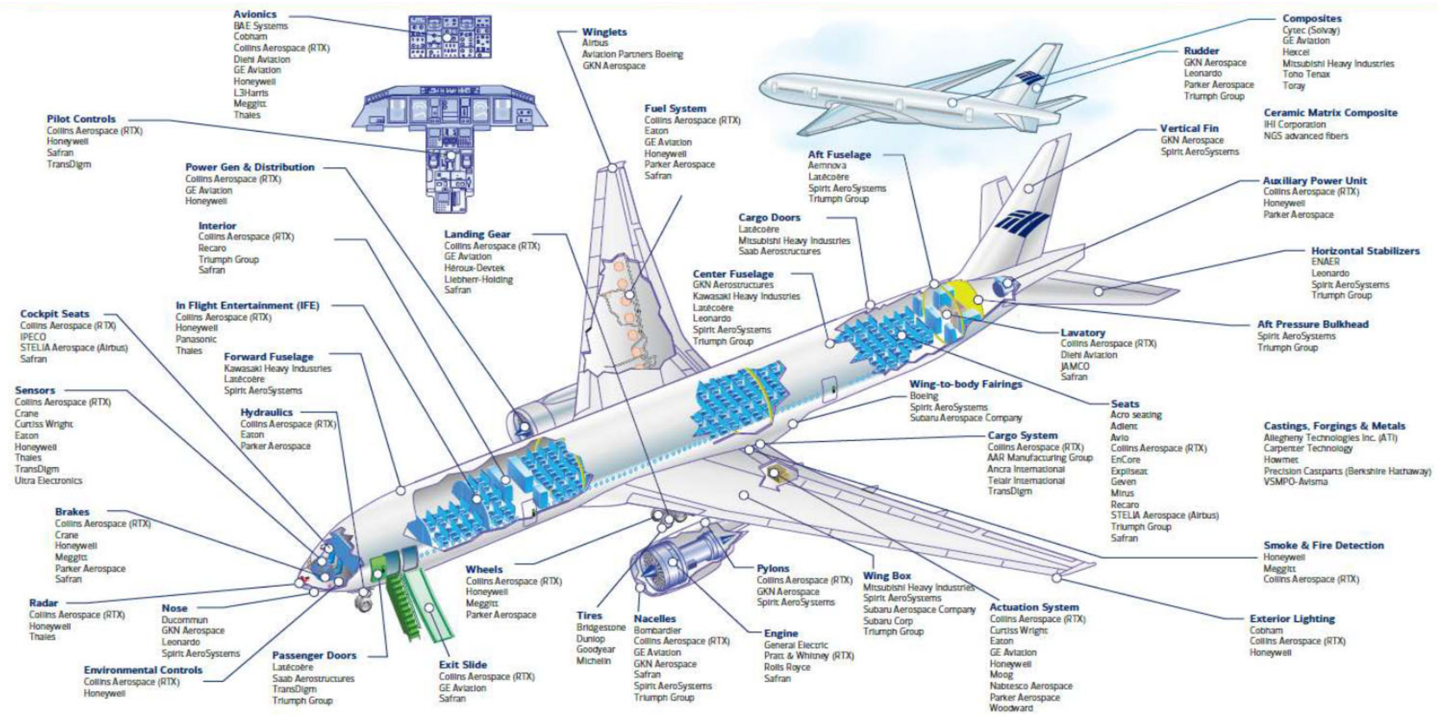
Commercial aerospace spans a wide range of products that are produced by three major airframe companies (Boeing, Airbus, and Embraer), three major aircraft engine companies (GE, Pratt & Whitney, Rolls-Royce) and a range of other suppliers. The industry differs from other sectors because product life cycles tend to be very long, up to 25-40 years, in addition to the tremendous upfront costs involved in developing new aircraft or aircraft products. The business is also cyclical, and it is critical, to understand what impacts supply and demand for aircraft. Aerospace is divided into original equipment (OE) and aftermarket. The OE business is cyclical. For this business, it is critical to understand what impacts supply and demand for large civil airliners. GDP growth, airline profitability and the behavior of major aircraft suppliers are critical factors to consider. The aftermarket business is more sensitive to the macroeconomic environment, and is generally driven by the age and flying hours of the installed fleet.

The airframe of large commercial jetliners represents approximately 30-40% of the total cost of a modern commercial jet aircraft, with the balance incurred by avionics and propulsion, interiors and landing gear. Though the basic technologies of jet aircraft flight have changed little over the past 30 years, advances in materials and manufacturing processes have had a significant impact on airliner production.

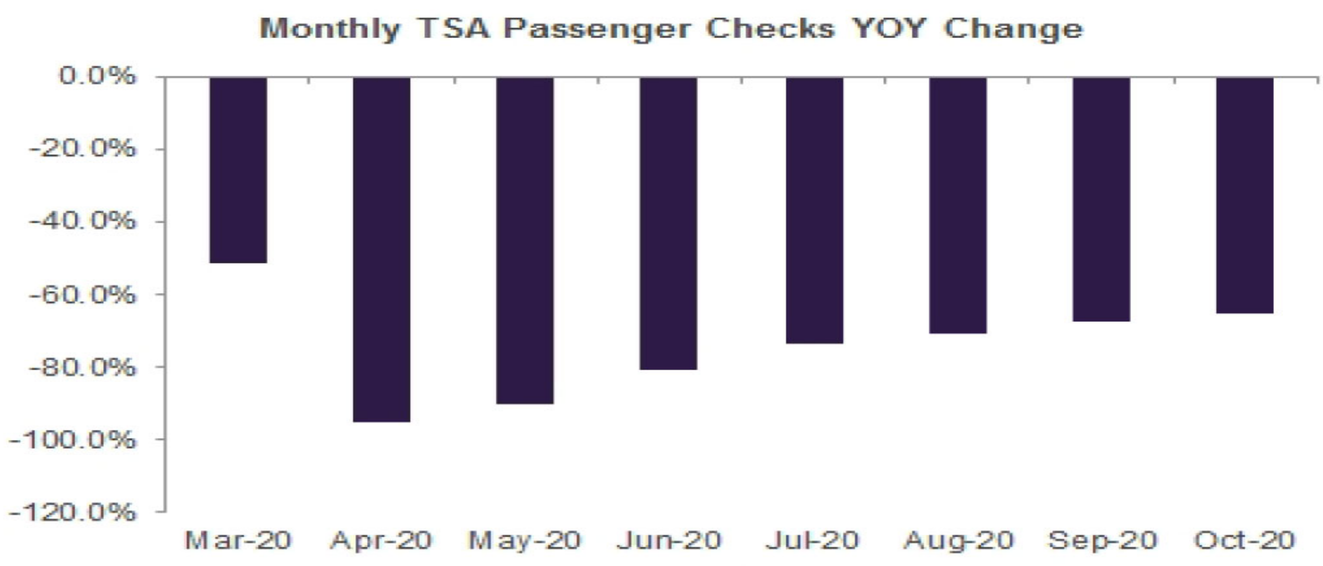




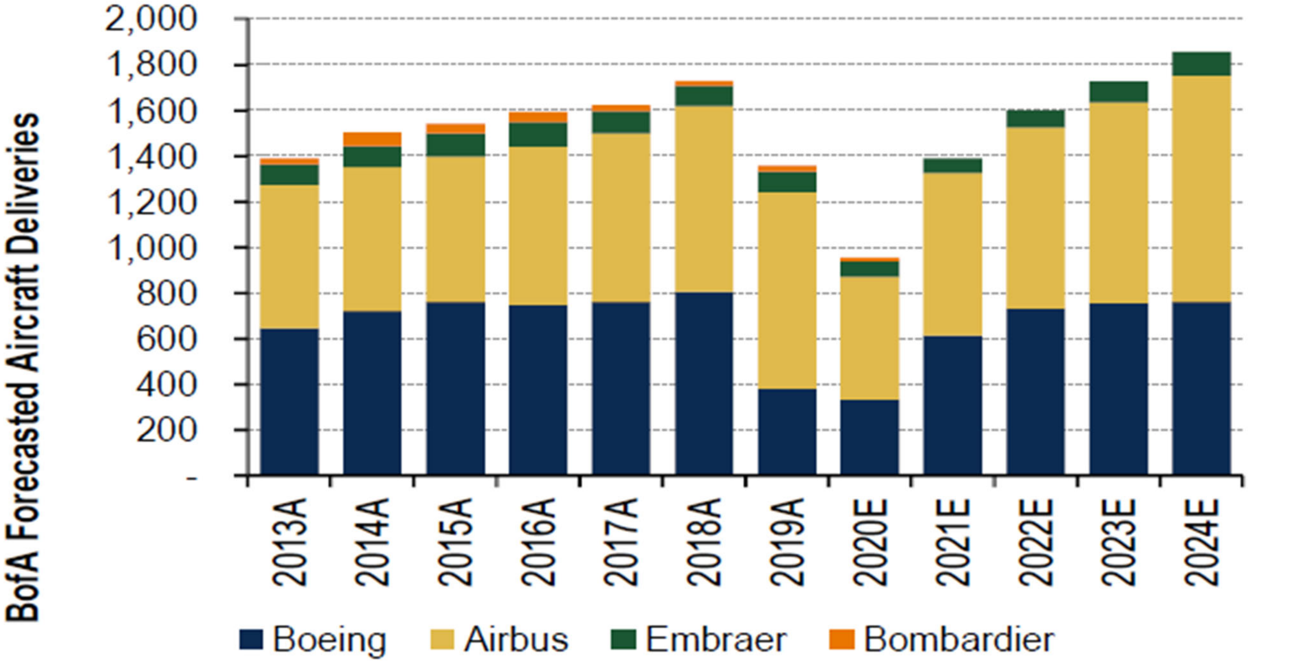
Many industrial and multi-industry firms provide engineered products and systems to commercial aerospace. Although there has been increased concentration among these suppliers, the industry is very fragmented. The major aircraft engine suppliers are General Electric, Pratt & Whitney (RTX), Rolls Royce, CFM International and International Aero Engines. Aerostructure suppliers are led by Spirit (SPR), while International players like Kawasaki, Mitsubishi, Fuji, and Alenia also involved and to a smaller degree Triumph (TGI). For flight controls and sensors the top names are Honeywell (HON), Collins (RTX), Garmin (GRMN), Thales, and Smith Industries (GE). In wheels, brakes and landing gear the top suppliers are Precision Castparts (BRK.B), Collins (RTX), and Safran. Honeywell (HON), K&F Industries (Meggitt), Dunlop Aero (Meggitt), Esterline, and Triumph are also players. The cabin interior suppliers include BE Aerospace (RTX), Zodiac (Safran), Recaro, AIM Aviation, Triumph (TGI), and Seton House. In-Flight entertainment systems are supplied by Rockwell Collins (RTX), Thales, and Panasonic. In Metals, leading aluminum suppliers include Arconic (ARNC) and Rio Tinto (RIO), Titanium suppliers RTI Metals (ARNC), Allegheny (ATI), and Titanium Metals (Precision Castparts), and Nickel-Allot suppliers Haynes (HAYN), Carpenter (CRS), Allegheny (ATI), and SMC (Precision Castparts.) Actuators are supplies by Collins (RTX), Moog (MOG.A), Parker Hannifin (PH), Curtiss-Wright (CW), Safran, and Eaton (ETN). Hexcel (HXL) is a leading supplier of composites. Woodward (WWD) supplies duel and engine control systems, and Ducommun (DCO) is a supplier of fuselage skins, aerostructures and machining. Fastener suppliers include KLX, Howmet (HWM), and others. Crane (CR) offers an integrated source for sensing, power, braking, electronics, and other products that are used not only in aircraft engines and landing gear but also space satellites and medical implants.



It was a rough year for this group with Aerospace names coming under pressure from a lack of air travel demand after a long stretch of being a bright spot in Industrials, driven by pandemic shutdowns. The Aerospace group is one rebounding late in the year on prospects of a vaccine leading to a rebound in passenger demand.



Civil aircraft and regional jet deliveries



Air traffic is highly correlated with economic growth, and historically, air traffic has grown at a faster rate than GDP. Boeing and Airbus release order and delivery information on a weekly and monthly basis, respectively, and it is important to keep an eye on order cancellations. Airline net income is a leading indicator of airliner orders. The effect of airline profitability is another interesting factor to analyze in aircraft orders trends. It is fine if the economy is expanding, but it is an entirely different matter if airlines do not have the money to purchase or lease aircraft. Higher fuel prices correlate with higher retirements and lower fuel prices correlate with lower retirements. New aircraft are more fuel-efficient and therefore become attractive alternatives to operating fuel-guzzling aircraft when jet fuel price increases.

According to the Alton Aviation and AeroDynamic Advisory, the cost of aircraft maintenance, repair and overhaul (MRO) was $83B in 2019 and could grow to $120B by 2029.

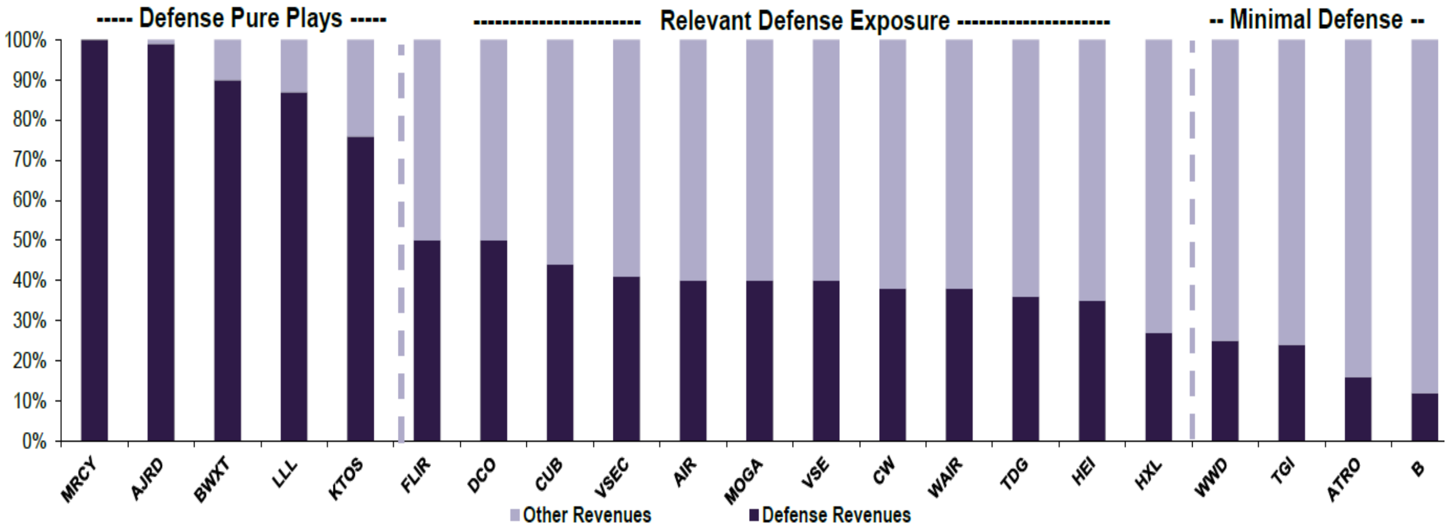
Prevailing views about the supply of and demand for civil aircraft will exert the greatest influence over the attractiveness of the commercial aerospace industry to investors. In this group orders and backlog are good leading indicators of earnings. A few key ratios for relative comparisons are EV/EBITDA, Price/Backlog, Price/Book and DCF. Commercial OEMs' book-to-bill ratio, or the number of orders taken versus products shipped and bills sent, is a metric which can impact share price performance. Book-to-bill could be useful in signaling when a sales decline might occur, and in past cycles, peaks in total civil jet orders were followed 1-2 years later by peaks in total deliveries. A potential drawback to relying solely on book-to-bill is that it becomes less robust when backlog duration grows beyond a couple of years. Book-to-Bill has been more useful in the business jet group where backlog has a shorter duration.

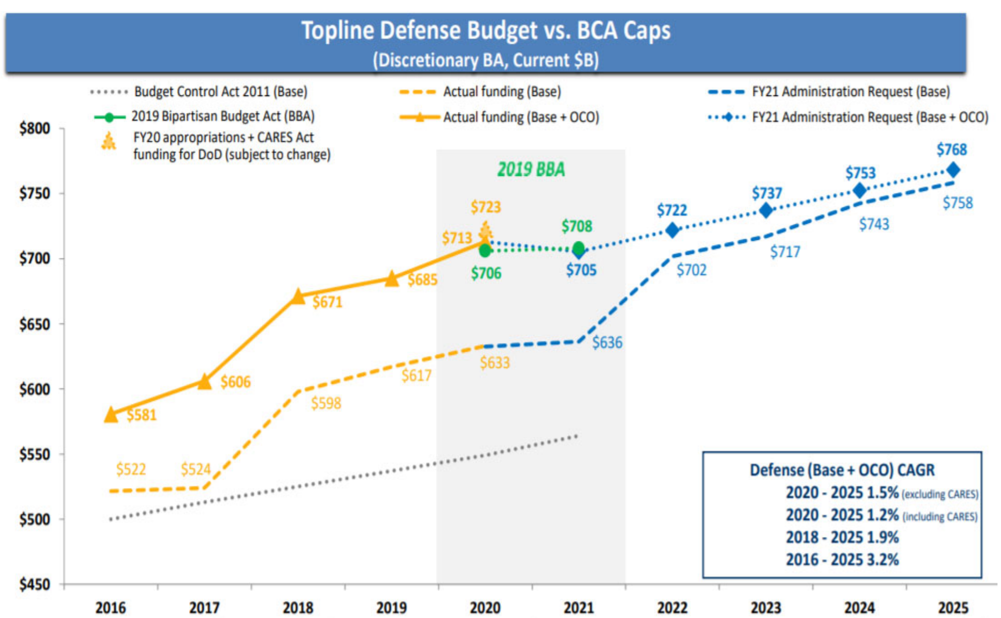
The four major trade shows for the global commercial aerospace industry occur in Farnborough, England; Paris, France; Dubai, U.A.E; and Singapore. The internet has a lot of industry resources, some of the key ones:

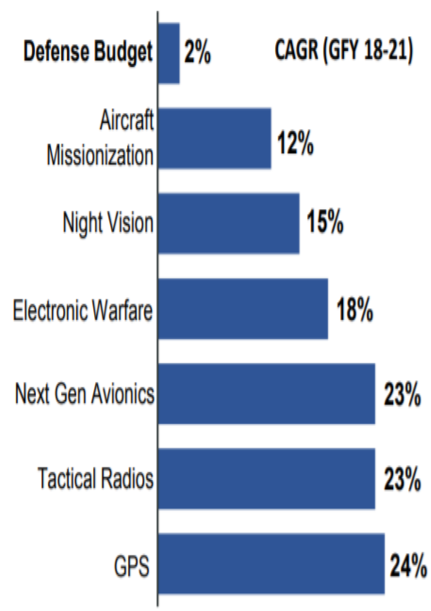
Publication	Website
Air & Cosmos (in French only)	www.air-cosmos.com
Air Transport World	www.atwonline.com
Aircraft Maintenance International	NA
AirFinance Journal	www.airfinancejournal.com
Airline Business	https://www.flightglobal.com/products/airline-business/digital-editions/
Aviation Week	www.aviationweek.com
Business & Commercial Aviation	NA
Flight International	www.flightglobal.com
Overhaul & Maintenance	NA

Organization	Website
Air Transport Association	www.air-transport.org
Federal Administration Association	www.faa.gov
International Air Transport Association	www.iata.org
International Civil Aviation Organization	www.icao.int
National Air Traffic Controllers Association	www.natca.org
Regional Airline Association	www.raa.org
World Airline Entertainment Association	www.waea.org

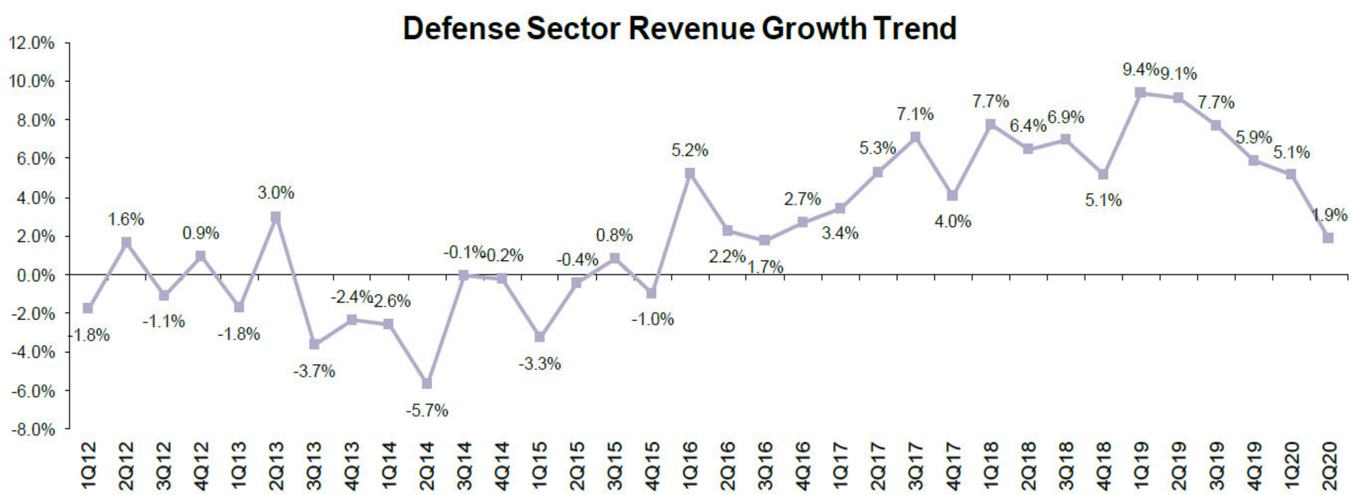
Defense Product Components: GD, HII, LHX, KTOS, LMT, NOC, KBR, BWXT, RTX, OSIS, MRCY, PAE, VEC, RADA, MAXR

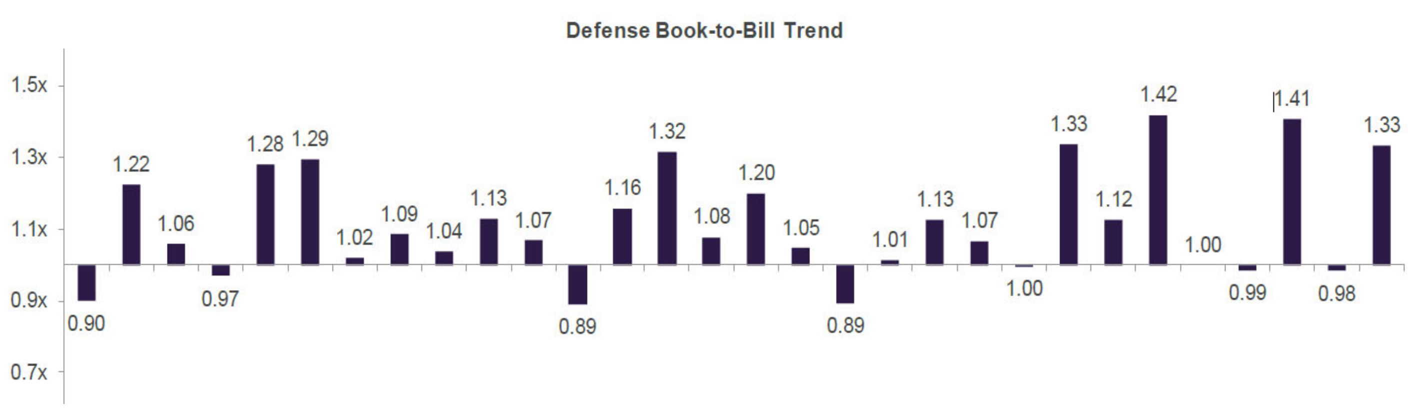






Defense names performed a bit better but also lagged the broader markets. The Defense industry now faces the reality of a new administration which could constrain budgets. Space Age 2.0 remains an intriguing growth opportunity with the US space market seen growing to $2.7 trillion in 2045 from $340B in 2016. The industry already has a playbook from the spending downturn in 2011 and the threat environment remains elevated with North Korea, China, Russia and Iran, so while budgets may be tighter, expect investments to continue into new technologies including advancements in artificial intelligence, biotechnology, quantum computing, space and counter-space, hypersonics, lethal autonomous weapons, microelectronics, cyber, and electronic warfare. This group tends to be tied to politics and investors will be watching for potential tax reform changes as well as updates on R&D tax credit amortization. This group is also exposed to rising interest rates due to pension expenses. Defense is defensive. Defense stocks remain largely immune to a slowing US or global economy, as they have little to do with the credit markets, the consumer and the broader economy. They have outperformed the S&P 500, on average, during the last five US recessions. The Aerospace & Defense electronics market is estimated at $140B annually.





	Platform & Mission Mgmt	C2I	Comms	EW	Radar	EO/IR	Acoustics	Weapons
	Avionics / Vetronics	*Command & Control / Battle Management*	*Dedicated Communications*	*Electronic Warfare*	*Radar*	*Electro-Optical/ Infrared*	*Acoustics*	*Missiles/ Munitions*
Definition	Control & operation of platform & mission systems	Processing & exploitation of information	Dissemination of information	Offensive / defensive exploitation of EM spectrum	Use of RF signal to detect, track, ID	Thermo-graphic camera with video output	Sound pulses to determine object location	Seekers, HEL, HPM Naval Launched Air Launched
2019 Market ($B)	**$28.1B** 4.0% '19-24 CAGR	**$37.0B** 2.8% '19-24 CAGR	**$17.1B** 3.7% '19-24 CAGR	**$9.7B** 4.0% '19-24 CAGR	**$10.4B** 3.4% '19-24 CAGR	**$11.6B** 3.8% '19-24 CAGR	**$4.0B** 5.2% '19-24 CAGR	**$5.8B** 4.0% '19-24 CAGR
2019 Tier 2* Market ($B)	**$7.1B** 4.8% '19-24 CAGR	**$7.6B** 3.7% '19-24 CAGR	**$7.9B** 3.8% '19-24 CAGR	**$5.9B** 4.1% '19-24 CAGR	**$5.3B** 3.7% '19-24 CAGR	**$2.3B** 5.1% '19-24 CAGR	**$1.0B** 6.0% '19-24 CAGR	**$2.9B** 4.4% '19-24 CAGR

Management Commentary

CACI International (CACI) on its market environment at November Analyst Meeting… "CACI's performance reflects strong execution in high-value areas of our market, where we provide expertise and technology to enable our customers to address critical national security and IT prioritization priorities. When we provide expertise, we provide talent with specific technical, functional and domain knowledge. Expertise delivers respectable margins with low capital requirements, and the opportunity to build past performance and customer relationships. When we provide technology, we provide software and hardware capabilities enabled by CACI's innovative research and development. Technology is more differentiated with a faster-growing addressable market and higher average margins. Together, expertise in technology represent a more than $230 billion addressable market for CACI, large, growing, and richwood opportunity in any macro environment. Internally, we're investing in technologies in the area of 5G and artificial intelligence as well as in the convergence of signals intelligence, electronic warfare, cyber and communications."

Science Application (SAIC) on dynamics around the Election: "As we navigate the dynamics of both the recent presidential election and the impacts of the coronavirus pandemic, we continue to serve a market that while not immune to change in pressures, has proven over time to be very resilient. Our customers' need for technology solutions and digital transformation is growing, and we continue to win and deliver on large and attractive business opportunities. SAIC's portfolio of offerings are strategically aligned with the enduring requirements of our government. Digital transformation is a critical component of our nation's security, efficient operations and the ability of government to provide better services for the advancement of our collective interest. It will continue to be a priority and focus of the solutions that we provide for our customers. The demand by our customers for digital transformation was a core strategic rationale for our acquisition of Unisys Federal. Speaking of Unisys Federal, I should note that the integration continues to go very well and I'm excited about the opportunities ahead resulting from this very successful acquisition. Government fiscal year 2021 continues to operate under a continuing resolution, and we expect that it will be extended past its current expiration of December 11. It is a continuation of customer budget levels from last fiscal year, which were robust and provided for investments by our customers. Should there be substantial change to government spending, SAIC is well positioned to meet a wide array of government priorities."

L3 Harris (LHX) on leveraging ISR leadership Internationally: "Well, ISR is one important area. So we are under-penetrated in our view, about 20% of our revenue is coming from international. We spent the last 9, 10 months really organizing ourselves going after the international opportunities. 10 different focus countries across the Middle East, Asia, Canada, U.K. and we're really attacking this. So ISR monetization is one important area. So you can see what's happening in the DoD. You're putting ISR systems on to business jets. And that opportunity is leveraging itself internationally. There's ISR opportunities in the maritime domain. And certainly, there's a pretty aggressive build-out of opportunities on the tactical side as well as night vision goggles. So there's lots of opportunities in those soldier systems, missionization of aircraft, driving more in the maritime domain, and we're really attacking this opportunity."

Mercury (MRCY) on design-wins: "I mentioned earlier that our Q1 design wins amounted to more than $300 million in estimated lifetime value. One of the most notable was Mercury's selection for the next phase of the Army's Aviation Mission Common Server program. AMCS is a great example of delayering by the DoD, who are focused on working with nontraditional suppliers like Mercury. It also demonstrates how we've aligned our technology road maps with the government's commitment to existing platform modernization and new platform risk reduction. We expect the wave of modernization occurring in both Sensor and Effector Mission Systems and C4I to continue driving growth across the business. As in the past, we expect to see this growth in multiple markets, including radar, EW, avionics and platform and mission computing as well as secure rugged servers. We believe that overall defense spending will continue to be primarily driven by national security threats, especially considering China's militarization and tightened U.S.-China diplomatic, technological and economic tensions. Microelectronics has become a critical defense technology. Although the IP around microelectronics is largely developed in the U.S., most manufacturing and packaging are done offshore. In response, the DoD has identified U.S.-produced trusted microelectronics as their #1 defense technology priority. Given the investments we've made in secure processing and trusted microelectronics domestically, this is a strategic opportunity for Mercury over the long term."

Air Lease (AL) on the challenging environment: "Looking forward, we do see a continued difficult environment over the next several quarters with the airline industry as we go through virus resurgence and the winter season in the Northern Hemisphere. We expect to see further liquidity pressure on the airlines, which will likely lead to further insolvencies, restructurings and deferrals. We are prepared for this. We believe our young fleet, strong balance sheet, unparalleled relationships, structuring tools and creativity will see us through. At the same time, this morning's positive news regarding a potential vaccine could improve the short-term forward outlook. Despite all these challenges, now more than ever, we have absolutely no doubt that the airline industry will recover. The timing of recovery, I leave to your own crystal balls. We believe there is growing pent-up travel demand. China domestic passenger traffic has neared pre-COVID levels and Russia domestic traffic has recently exceeded 2019 levels. We see good domestic recovery trends in Vietnam, Korea, New Zealand and most recently, even in Brazil and Mexico. And while Europe traffic has recently retreated due to the resurgence in cases and the states' restrictions, leisure traffic intra-Europe during the summer months was encouraging. Here in the U.S., in October, TSA traveler throughput reached north of 1 million per day for the first time since traveler numbers dropped off in mid-March. And we also see in the U.S. a trend supporting stronger bookings for the upcoming holidays. Country-to-country travel barriers due to quarantine restrictions and requirements remain the single biggest obstacle. Our conversations with airlines around the world indicate that they are using this as a onetime opportunity to resize and modernize their fleets. Astute airlines are looking at this opportunity to accelerate efficiency and environmentally sustainable -- and environment and sustainability goals. We are very much engaged in those conversations as airlines are focused on the modern, fuel-efficient and environmentally friendly aircraft from our order book delivering in 2022, '23 and '24. This, coupled with airline balance sheets and capital resources significantly being handicapped in the foreseeable future, explains why we are witnessing a further shift towards leasing. In fact, one aspect of this pandemic crisis has emerged clearly, and that is the role of the leasing industry. It has strengthened considerably. For many years, I have said that the leasing industry provides a much needed buffer and capital provider to the airlines and OEMs. We are seeing that unfold before our eyes today in a major way. Our role is stronger, and our voice is stronger than at any time in the past."

Boeing (BA) on Commercial Aero markets: "And while we balance the supply and demand through the near-term impacts in the global pandemic, we do remain very confident in the long-term outlook. And certainly, the health of the 787, as you've seen between the versatility and just the demonstrated market-leading economics that airplane brings to the marketplace, the long-term potentials post pandemic are very robust. I think on the narrowbody front, we're continuing to expect domestic air travel to lead the recovery and, as a result, expect narrowbody demand to be a really key driver in the overall market. And as we're navigating this unprecedented time in the commercial market, we're not taking our eye off defense space and security business and ensuring that we're executing and meeting our expectations there. That's clearly driving some stability back into the company, and the market outlook remains solid domestically and international for our major programs."

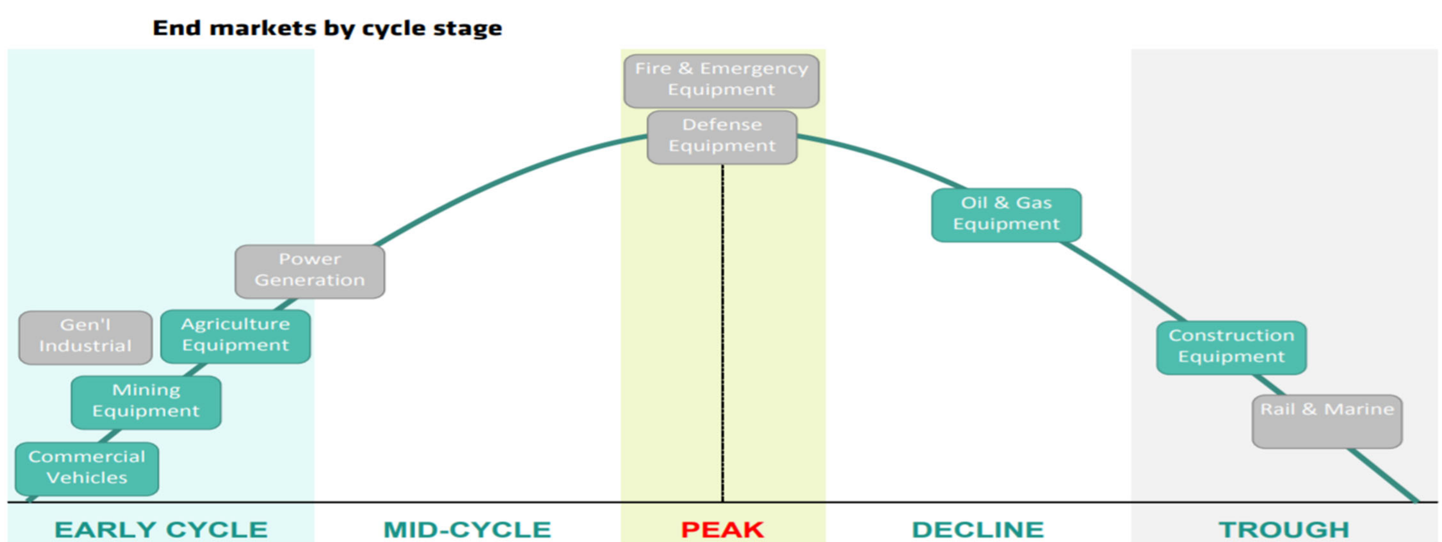
OptionsHawk Executive Summary and Top Picks

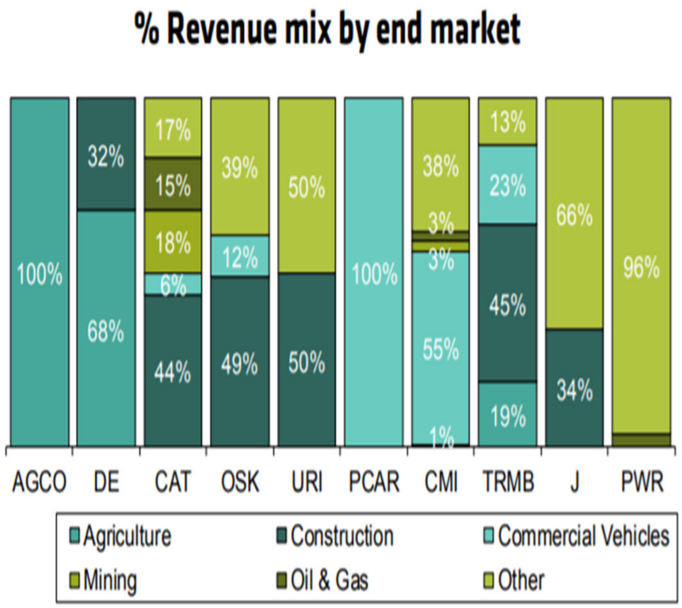
In Defense IT there are four names with market caps over $5B and **Booz Allen (BAH)** continues to screen as the favorite while **CACI International (CACI)** also has strong business momentum. **LDOS, SAIC** are not bad either and more Neutral-rated. **ManTech (MANT)** is the preferred small cap in this group while **Maxar (MAXR)** a big gainer in 2020 with two business lines, Earth Intelligence, a recurring satellite business, and Space Infrastructure that position it well moving forward. In the large Defense names **Lockheed (LMT)** is a best-in-class operator while **L3 Harris (LHX)** one of my favorites due to its higher margin businesses and strong growth. **RTX, NOC** are both solid as well with Raytheon likely seeing the biggest snap-back due to its Aerospace exposure, and the only real name to avoid is **GD** although its Electric Boat business is strong. **BWX Tech (BWXT)** is a high margin, high return on capital mid-cap favorite and **Mercury (MRCY)** has long been a favorite in the small caps with superior growth and margins to peers. **OSI Systems (OSIS)** is a small cap that screens cheap on valuation with strong margins and returns of capital with growth set to return in a few quarters. Lastly, **RADA Electronics (RADA)** has been a strong growth small cap with unusual bullish options activity through 2020 and gained 80% YTD.

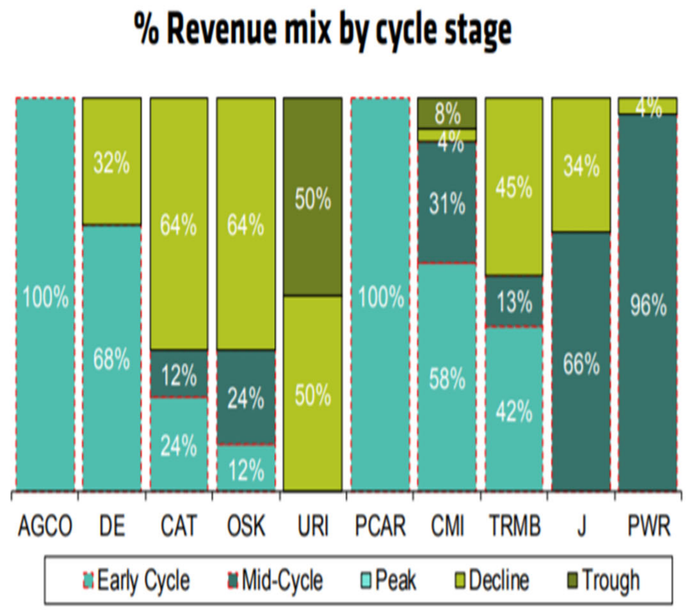
The Aerospace Leasing group was hit hard from the slowdown in travel but may actually benefit longer term and the MAX getting back online should be a boost, **Air Lease (AL)** screens favorably in this group. The Aerospace group has always held some of the best compounders as a bright spot in the Industrial group and the pandemic caused a sharp reset in valuations. There is still plenty of uncertainty on the recovery with a lot of order cancellations and the state of business travel in question. **Honeywell (HON)** may be the safer way to play the group as it is also involved in other business lines and making a big push into Software with it seeing nice margin expansion. **Heico (HEI)** may be the best operator that can manage the best through this downturn while **TransDigm (TDG)** the high margin aftermarket name. **Boeing (BA)** continues to have a lot of uncertainty but is still the go-to name for a recovery in air travel. **Howmet (HWM)** with an $11B market cap an interesting spin-off that has seen bullish January 2022 call buying and seems to be a nice recovery story. **CAE (CAE)** is a $7B civil aviation training company with a nice niche that has sustained growth and offers higher margins. **Virgin Galactic (SPCE)** is the thematic momentum name and the opportunity in Hypersonic is massive. **Woodward (WWD)** is a diversified industrial in this group with a long history of strong operations. For the smaller cap names **Aerovironment (AVAV)** a strong play on unmanned aircraft, **Park Aero (PKE)** a very interesting maker of advanced composites with excellent growth & margins, and **Albany International (AIN)** a discovery from a few years ago that continues to perform very well.

Industrial Machinery and Equipment

The Machinery Industry is a cyclical, capital-intensive sector. Major markets served include agricultural, construction, energy, industrial, infrastructure, mining and transportation. Among the varied products and services are tractors, engines, compressors, generators, cranes, tools, logistics, financing and remanufacturing. We are entering the industrial tech era with optimizing productivity growth is the primary driver of secular earnings growth. The key themes include digitalization of the sector, rise of the rental economy and adoption of alternative propulsion, the latter a $730B diesel engine sector due for displacement from a $500B fuel cell and $800B electrolyzer market. Machinery's end markets are in the early stages of becoming digitized. Processing power is falling faster than the cost of capital equipment, labor and inputs. As the penetration of sensors/information processing capability grows in machinery, it will improve (and even automate) decision making, thus increasing customer productivity.





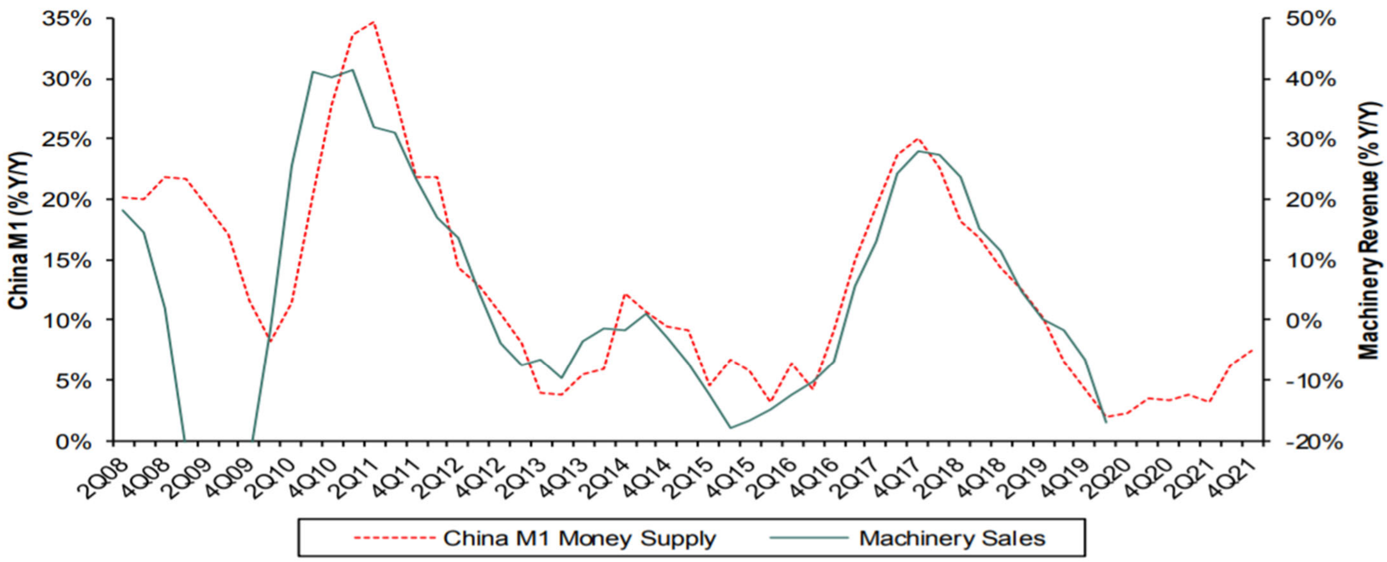


Machinery companies manufacture heavy (and often mobile) equipment that enhances productivity. Engineering & Construction companies, on the other hand, sell their labor/expertise to either design/construct physical infrastructure and/or serve as a provider of outsourced labor and assets (equipment, facilities, etc.) for work that ranges from the very mundane (managing equipment) to highly technical (cybersecurity). Most machinery companies are original equipment manufacturers (OEMs) who sell their equipment to third party distributors (dealerships), except URI, whose primary business is renting out equipment. The 5 most important end markets for companies are Construction ($40B in sales), Commercial Vehicles ($35B in sales), Agriculture ($30B in sales), Mining ($7B in sales) and Oil & Gas ($7B in sales).

% Revenue	Construction $40B	Commercial Vehicles $35B	Agriculture $30B	Mining $7B	Oil & Gas $7B
URI	50%	0%	0%	0%	0%
OSK	49%	12%	0%	0%	0%
CAT	44%	6%	0%	18%	15%
TRMB	45%	23%	19%	0%	0%
DE	32%	0%	68%	0%	0%
CMI	1%	55%	0%	3%	3%
PCAR	0%	100%	0%	0%	0%
AGCO	0%	0%	100%	0%	0%
J	34%	0%	0%	0%	0%
PWR	0%	0%	0%	0%	4%

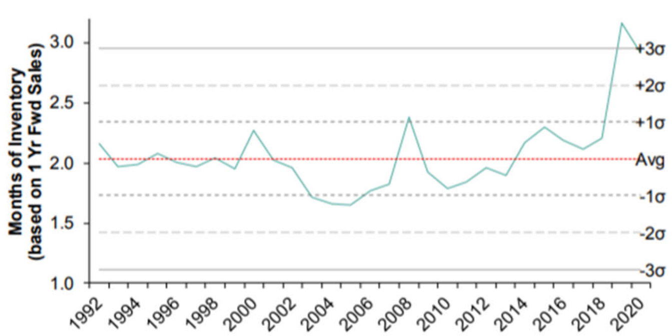
2020 is likely to mark a trough for many of these names though different than previous cycles as this cyclical recovery is different coming out of a pandemic driven decline. The ag equipment and commercial vehicle exposed names are set up for stronger recoveries than construction and oil & gas. The Machinery sector trades on Industrial Production growth expectations (shares lead IP growth by 8 months). China M1 is another indicator that leads machinery revenues. Construction equipment is likely to take longer to recover and may be a 2022 set-up with commercial construction activity remaining subdued, which accounts for 15-20% of non-residential. The slower recovery is also impacted by tighter Commercial & Industrial lending standards.

Adjusted for the 5-quarter lead time, China M1 suggests a recovery ahead for Machinery revenue

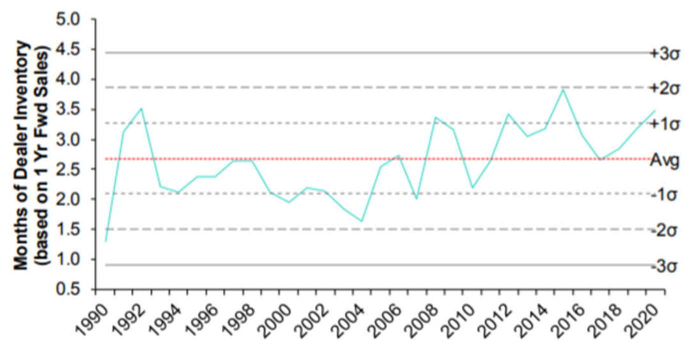


A downside risk into 2021 is that destocking still has months to play out with OEMs overstocked with inventory and dealers as well.

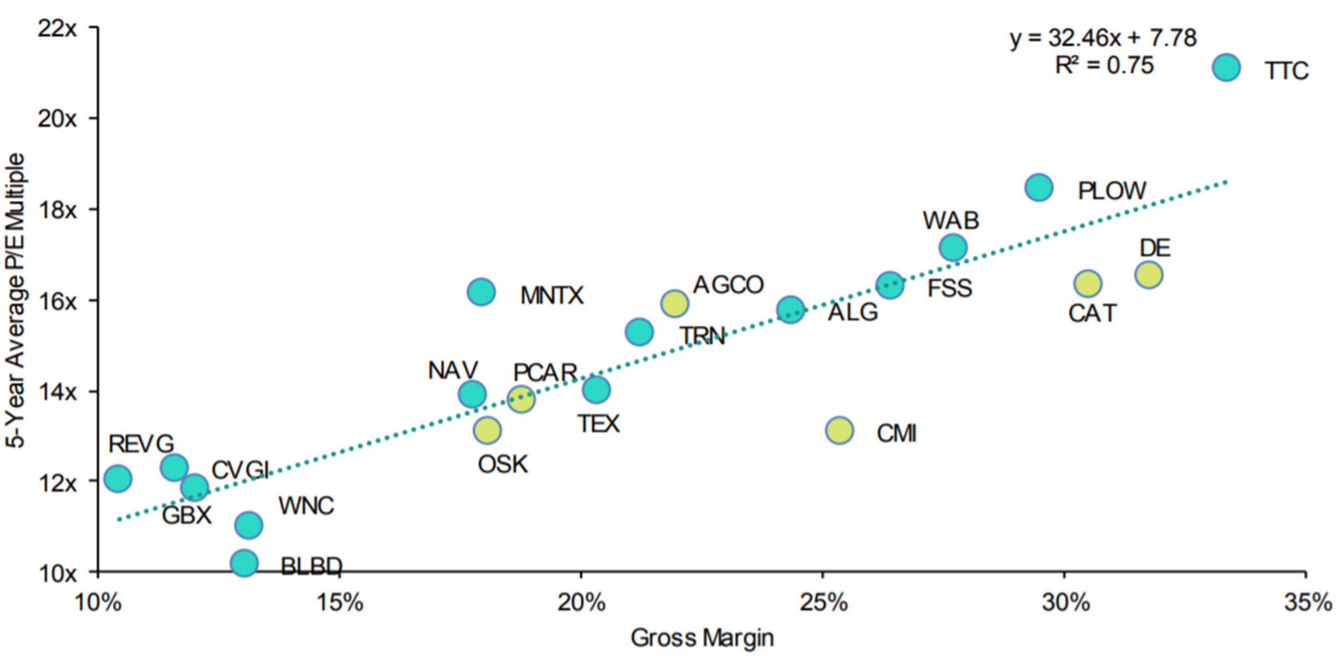
OEM inventories are at all-time highs



Dealer inventories are also near prior highs



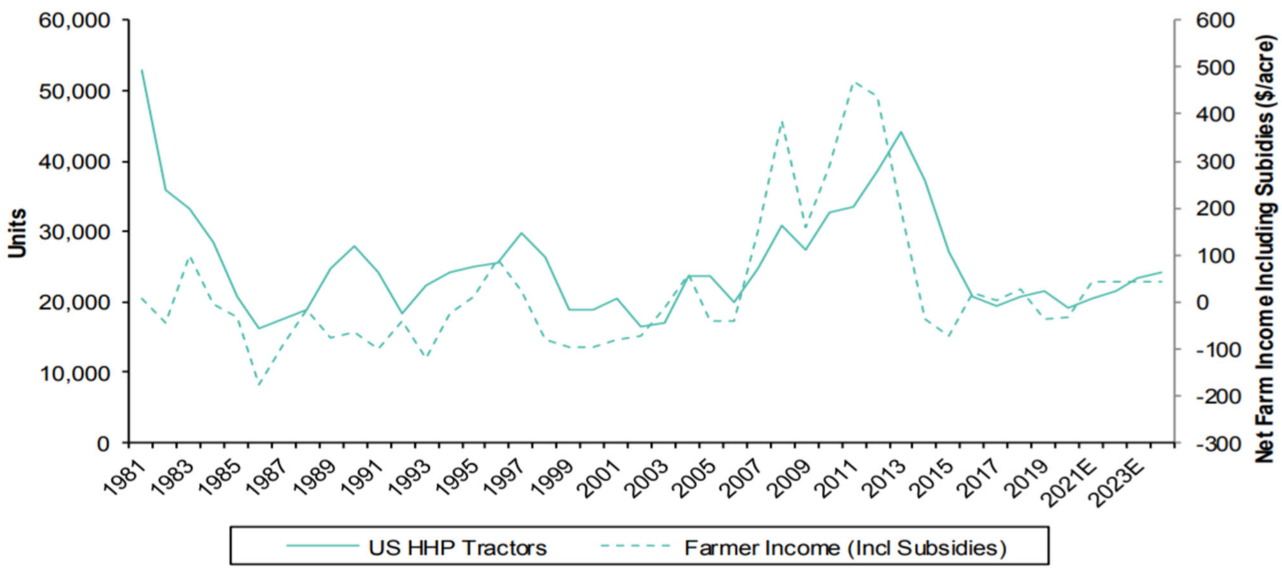
Productivity Growth→Value Creation→Price Realization→Gross Margin Growth→Multiple Expansion



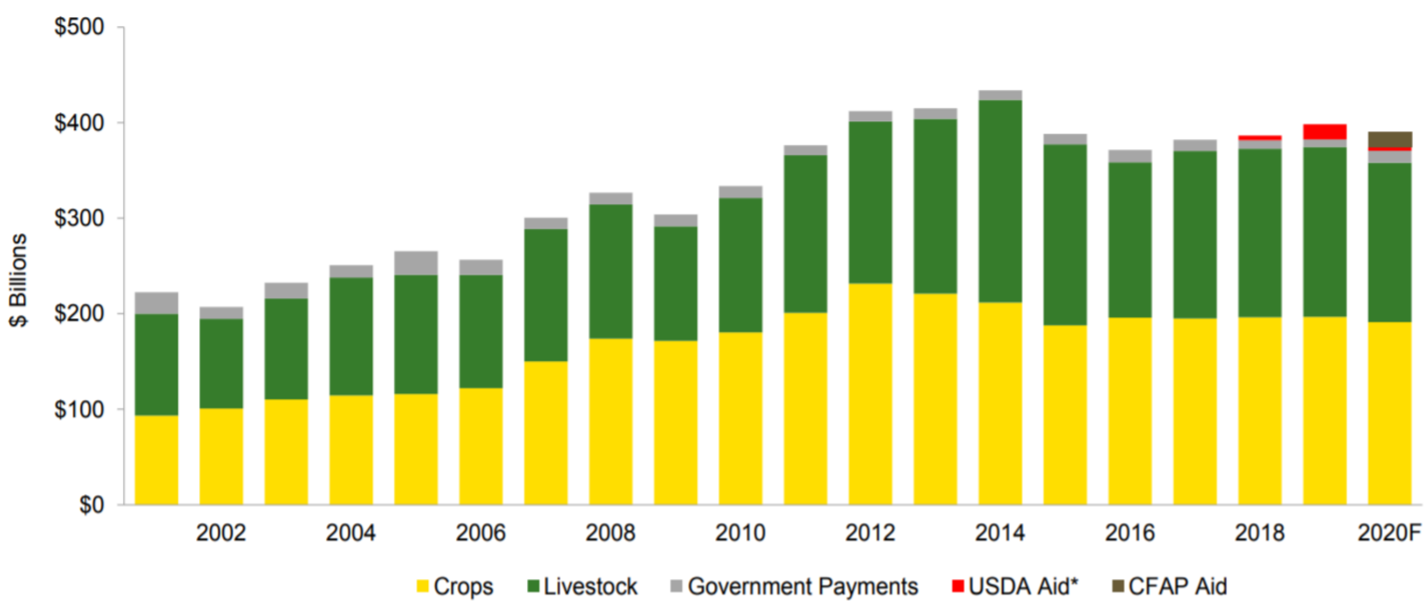
Ag/Construction Components: AGCO, ALG, CAT, CMCO, CNHI, DE, LNN, MTW, RAVN, TEX, TTC, TWI, VMI, ACA

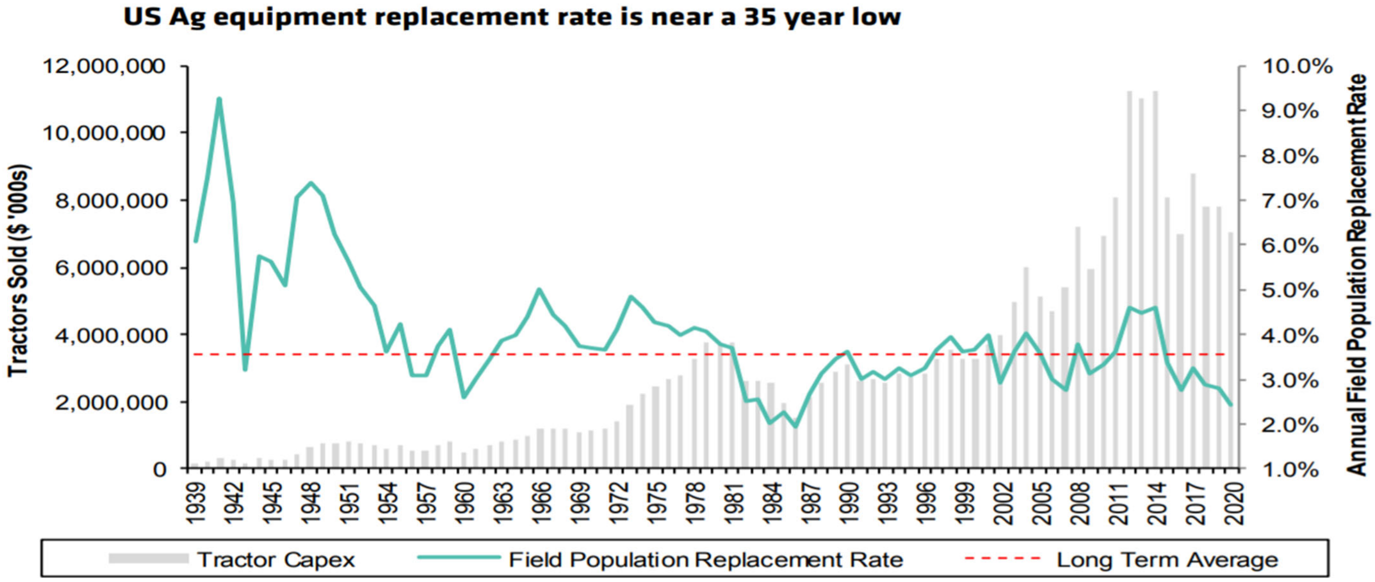
The ag equipment group is set for 5-10% growth in 2021 with supportive crop pricing and precision ag replacement cycle two primary drivers. This group is closely tied to farmer profitability which supports a replacement cycle and also backed by government subsidies. The ag equipment fleet has aged significantly – the replacement rate of US ag equipment has hit the lowest level since the mid-1980s (following the great farm crisis). The aged fleet, paired with the recent emergence of productivity-enhancing precision ag technologies (Precision Planting, ExactEmerge, ExactApply, Combine Advisor, etc.) that were launched in the last 5 years (trade cycle for equipment ends to be 4-5 years is likely to stimulate greater replacement demand. Precision ag will be a disruptive force across the farm supply chain. Machinery OEMs apply this technology embedding sensors into the farm equipment to pick up data on the farm and applying machine learning/algorithms to automate and improve growing decisions during various parts of the crop cycle (planting, spraying, harvesting, etc.). The key catalyst for further adoption of this technology is the declining processing power cost relative to the cost of labor/input costs. Precision ag targets 40% of the farmer cost structure by potentially reducing the inputs used to grow crops and enables higher yields, making farmers more productive.

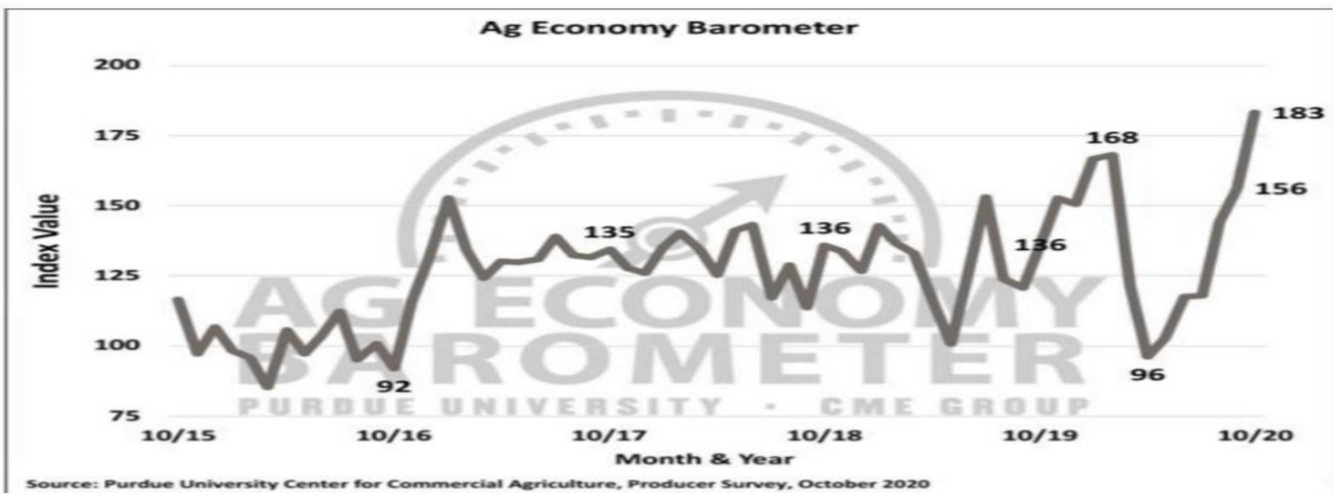
Farmer profitability is supportive of 2021 growth for US large ag



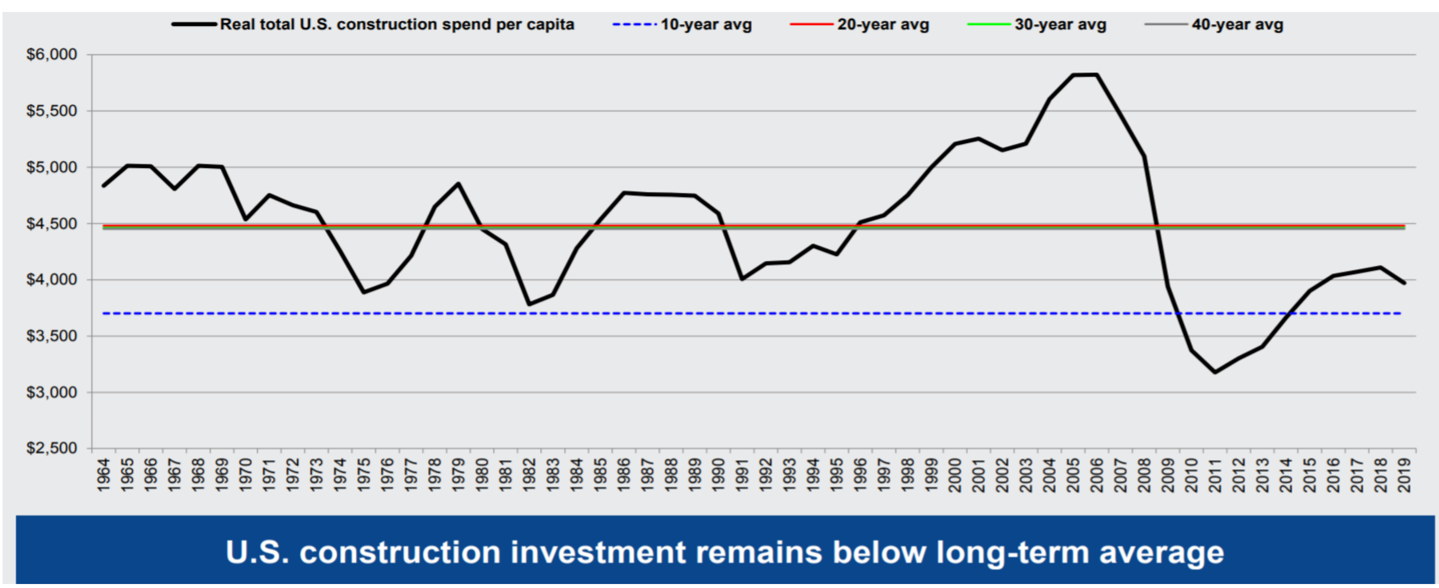
U.S. Farm Cash Receipts





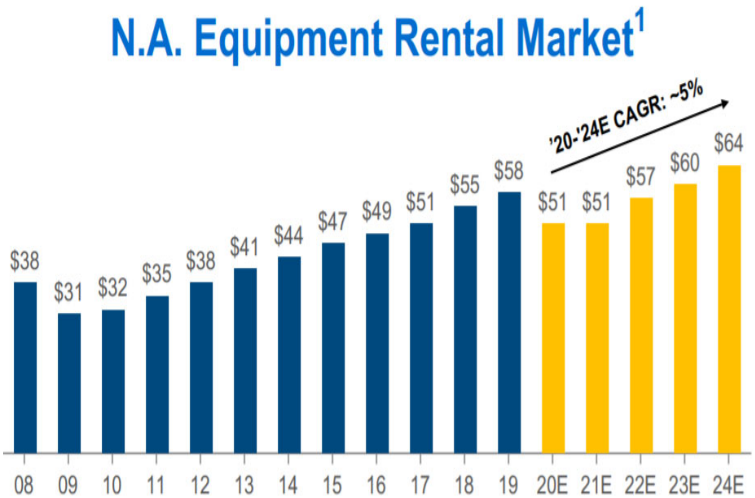


The global construction market is one of the most unproductive markets in the industrial economy and it is ripe for disruption. The world spends $10 trillion per year on construction and $2T of that spend is complete waste. 80% of projects are over schedule, 70% of all projects over budget and the average project ends up costing 25% more than expected. The construction equipment industry was valued near $125B in 2019 and seen growing at a 4.3% CAGR through 2027. The construction equipment market has been segmented into earthmoving machinery, material handling machinery, and concrete and road construction machinery on the basis of product.



Rental/Leasing Components: HEES, HRI, MGRC, URI, WSC

The trend towards renting vs. owning construction equipment will continue gathering momentum as contractors seek to improve their productivity through greater capital efficiency (higher utilization) and a lower fixed cost burden. Historically, downturns/crises have been positive catalysts for penetration growth, and rental penetration is poised to grow from 55% to 70% over the next decade. The equipment rental market is forecast to grow to $64B in 2024 from $51B in 2020 with secular trends favoring rental versus ownership and Healthcare, Warehouse and Infrastructure strong drivers of growth.

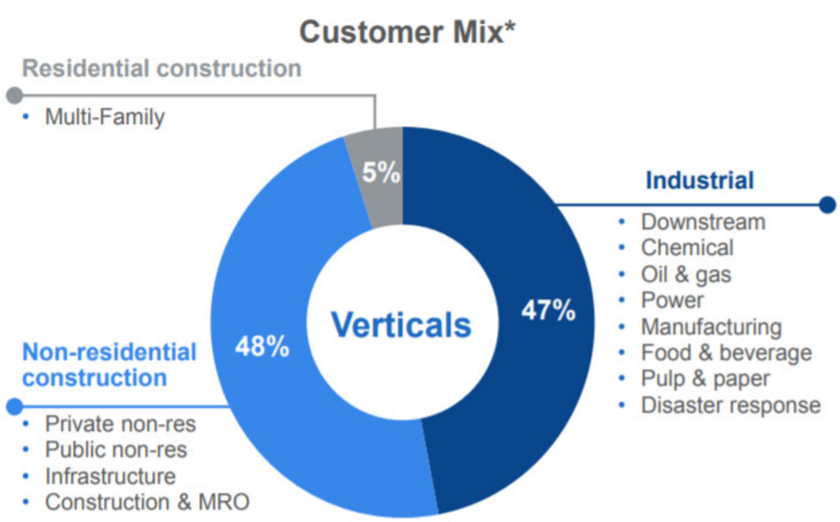


U.S. Nonresidental Building Starts

	History			Forecast			
	2017	2018	2019	2020	2021	2022	2023
YOY Growth	+12%	+3%	+5%	(20)%	+4%	+10%	+8%

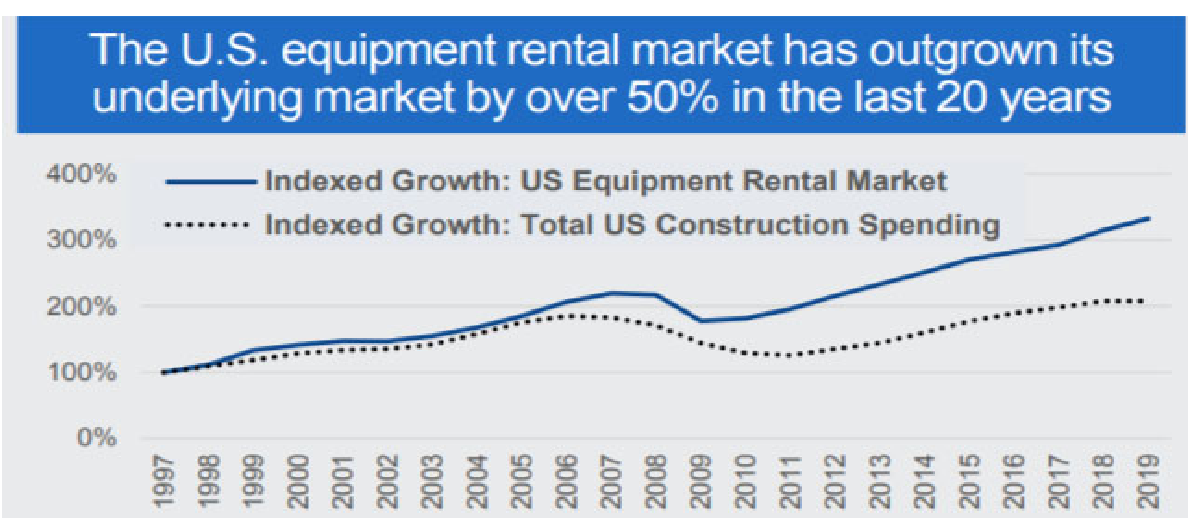
Sectors with Tailwinds

	History			Forecast			
	2017	2018	2019	2020	2021	2022	2023
Healthcare	+7%	(3)%	+2%	(4)%	+9%	+9%	+8%
Warehouse	+18%	+1%	+26%	+2%	+9%	+12%	+1%
Infrastructure	+5%	(2)%	+10%	(15)%	+10%	+5%	+2%

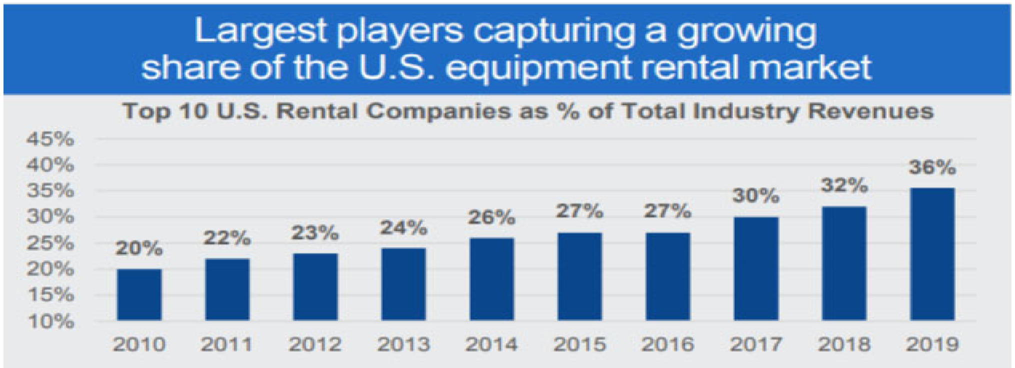


Why Customers Rent Instead of Buy

- Control expenses and inventory
- The right equipment for any job
- 24/7 customer care / support
- No need for maintenance
- Save on storage/warehousing
- Reliability / reduce downtime
- Save on disposable costs
- Equipment tracking
- Conserve capital
- Manage risk

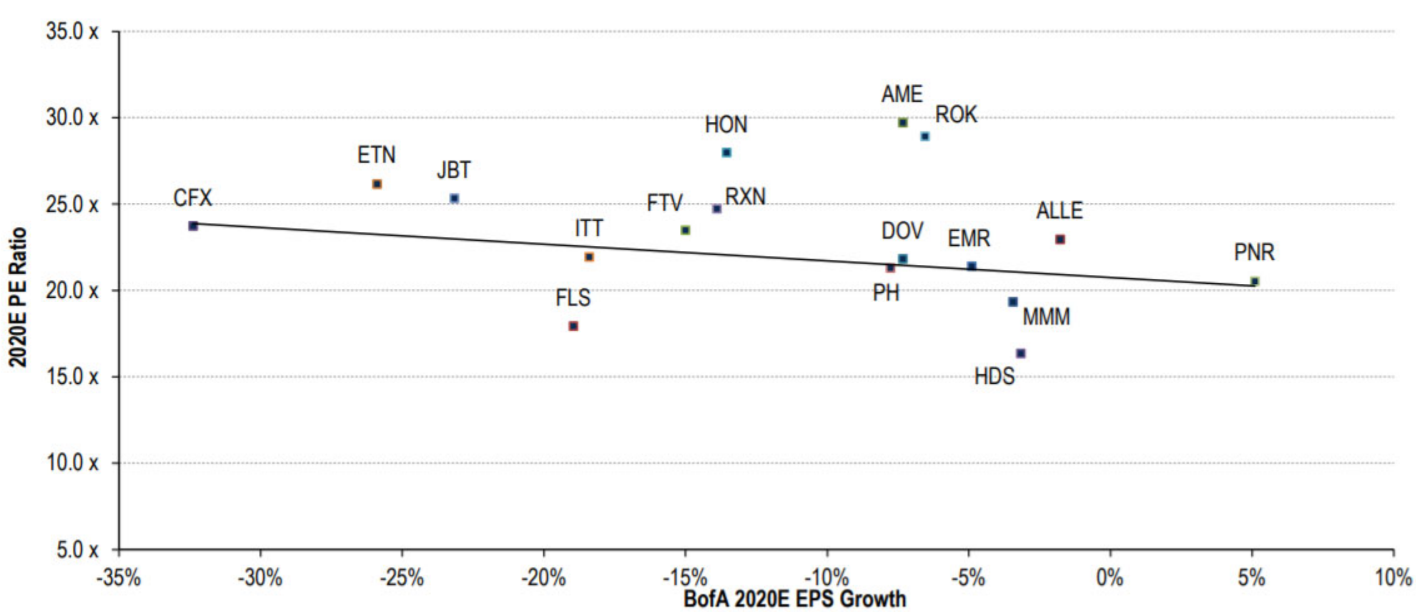


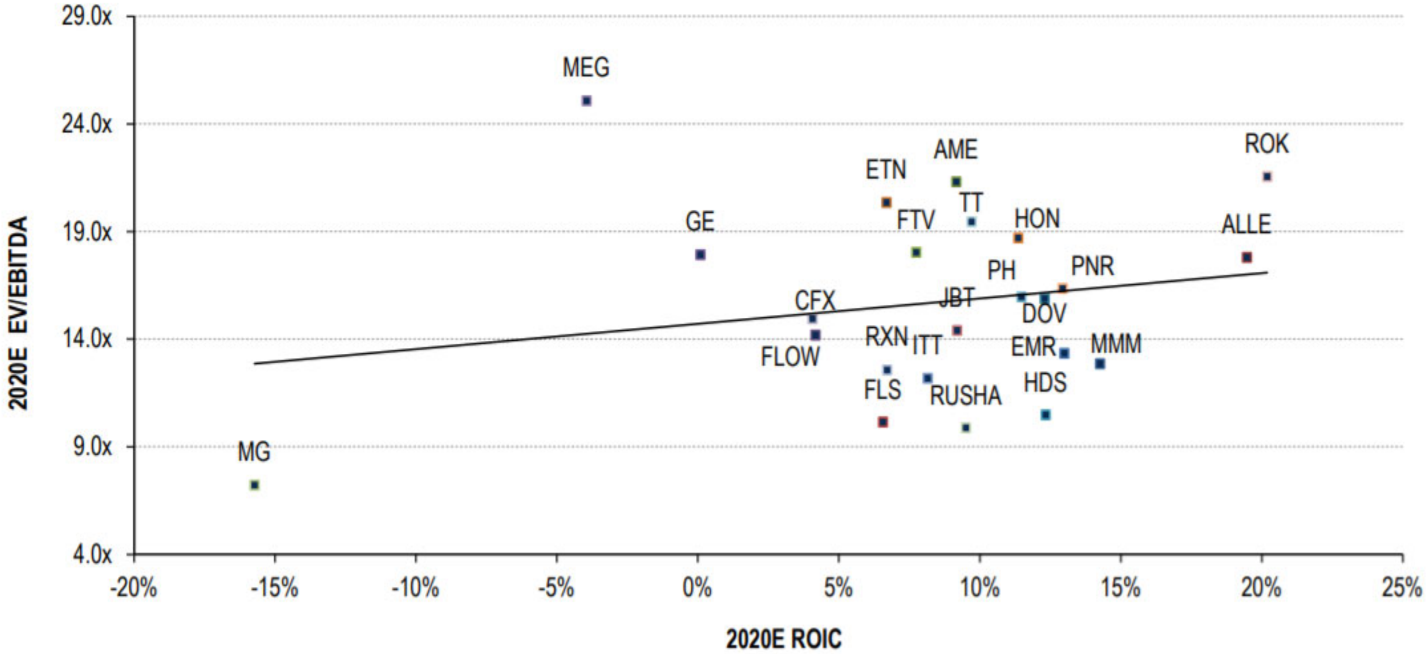
The industry is also very fragmented with large players starting to capture a growing share of the market:



Diversified (Multi-Industrial) Components: B, CFX, CW, CR, DOV, ETN, FLOW, FTV, GE, HI, HON, IEX, IR, ITW, KAI, MMM, PH, SPXC, SXI, AME, EMR

End Market	3M	ALLE	AME	CFX	DOV	ETN	EMR	FLOW	FLS	FTV	GE	HDS	HON	TT	ITT	JBT	MEG	MG	PH	PNR	ROK	RXN
Industrial	17%		21%	21%	14%	18%	20%	33%	9%	19%			20%		21%		8%	17%	33%	6%	4%	21%
Metals & Mining			10%	2%		2%			2%		1%								3%		14%	4%
Agriculture						3%			2%		1%								5%			2%
Construction	2%			4%		2%													12%		4%	3%
Healthcare	16%		13%	32%	4%		2%		5%	9%	20%								2%			
Residential	1%	29%				6%	6%					49%								39%	4%	5%
Consumer	19%		5%		43%		2%	36%	2%	34%						69%	13%		1%	22%	25%	12%
Electronics & Tech / Data Centers	11%		20%							5%									3%		7%	
Infrastructure & Government		34%			7%	6%					1%						21%	4%				11%
Auto	13%			5%	8%	8%				14%					27%				5%		9%	
Truck & Transportation	0%		2%	5%		10%			2%	5%					18%				10%		2%	2%
Buildings & Non-res Construction		37%		13%		15%	4%					51%	18%				20%			20%		12%
Aerospace & Defense			16%			9%				5%	39%		33%		15%	31%		13%	16%			9%
Utilities / Power Gen	4%		7%	6%		8%	7%	7%	14%	5%	34%						23%	6%		3%		6%
Data Centers						9%																
HVAC & Refrigeration					17%		20%							100%					4%			
Oil & Gas			6%	10%	5%	5%	23%	19%	44%		3%		12%		15%		13%	58%	5%		8%	
Telecom																			2%			
Chemicals				2%	3%		11%	5%	18%				8%		4%		2%	2%			5%	
Security & Protection	13%																					
Finance																						
Water									4%											10%	5%	13%
Software / SASS	3%						4%			5%	1%		8%								12%	
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%





Industrial Automation and Motion Control Components: ABB, OTIS, ROK, NDSN, GGG, ITT, RBC, GTES, AIMC, AMOT, HLIO, HOLI

Distribution Solutions

Smart Power

Smart Buildings

Installation Products

Power Conversion

Energy Industries

Process Industries

Marine & Ports

Turbocharging

Measurement & Analytics

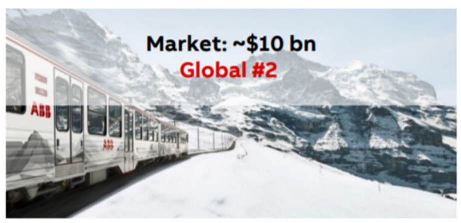
Motors & Generators

Drive Products

System Drives

Service

Traction



Mechanical Power Transmission

Robotics

Machine Automation

Power and Energy Equipment: GNRC, ENS, THR, BGG, TNC

Water, Filtration & Flow Industry Components: XYL, MWA, RXN, GRC, BMI, FELE, PNR, DCI, FLS, WTS, ESE, NPO, CIR, AQUA, CECE

Transport Equipment: CAI, FTAI, GATX, GBX, TGH, TRTN, WAB, LXFR

Industrial "Tech": ZBRA, ROP, VNT

Food Equipment Components: MIDD, JBT, WBT

Management Commentary

Toro (TTC) on demand environment: "We're encouraged by improved demand for our professional segment products, particularly in the landscape contractor, rental, specialty construction and irrigation markets. We're seeing demand driven by greater business confidence and increased home investments. Improved retail demand within the quarter reduced field inventory, which is in good shape and lower than prior year, setting us up well for preseason shipments."

AGCO (AGCO) on the Ag market: " If we break it down North America, we think small ag has been on such a high run. It's at really record levels of demand. We think at some point, there's going to be a reversion back to more normal levels. I've been saying that for a couple of years now and been wrong every year. So I guess we'll wait and see, but there should be, at some point, some exhaustion of some of this demand and see that come down. So we think that, that's still likely for 2021. Large ag, we've got stronger commodity prices. We have an extended fleet age, those dealer inventories are low, used inventories are low. So a lot of positives going into next year, and particularly where the commodity prices are, that adds a lot of confidence and improves the sentiment of farmers, and we're certainly seeing that. We're seeing that in the demand here in the fourth quarter. The one offset to that or balancing to that is that this year in 2020, they're getting a lot of government support payments. And so their farm income is going to be benefited by the recent commodity price increases as well as all this government support. And so if you look at the income levels going into next year, they're likely to be flat or coming down. So it would depend on where those commodity prices end up and what their yields are, of course, but also we don't expect the same level of government support."

Arcosa (ACA) on the strong Energy Equipment market: "The utility structure market is extremely strong with demand outpacing our current production capacity. Utility customers continue to implement great hardening and reliability initiatives as well as invest in renewable connections. To meet this increased demand, we have started delivering products from our plant in Mexico, where we have invested roughly $20 million over the last year. We're very excited about the possibilities and the ramp-up we expect to see over the next several quarters. Our new acquisitions of traffic and telecom structures and concrete poles are doing well with strong backlogs and positive trends. We're in the beginning stages of this integration and have started to achieve early commercial and operational synergies. Moving to our Wind Tower business. As we have discussed before, we expected the wind tower market to become project-based as the production tax credit phases out. And this is what we're seeing. We booked $154 million of new wind tower orders in the third quarter, and we continued to see good project-based inquiries."

United Rentals (URI) on rental volumes: "In the third quarter, we continued to gain ground, with rental revenue increasing sequentially in 15 of our 16 regions and that one outlier region was essentially flat. The standout verticals so far have been the ones we've been talking about: power, biotech and pharmaceuticals. And we see solid activity from warehousing and distribution, data centers, hospitals and other facilities in the health care and technology sectors. And there were some verticals that were a little less pronounced but still on a positive path. Food and beverage is an example of a vertical that's edged back to historical levels. And by contrast, as I'm sure you know, all segments of oil and gas remain depressed, led by upstream. Looking specifically at construction, non-res markets as a whole showed mild improvement, while retail, hospitality and entertainment remained largely on pause. And the individual verticals within non-res are still a mixed bag, but our core markets all have solid long-term fundamentals."

Rockwell (ROK) on EV: "Let's talk a little bit about electric vehicle production. Rockwell has had a long history of expertise and performance for traditional production of internal combustion engine-based vehicles, cars and trucks. But on top of all of the traditional processes in those plants, the stamping, the paint shop, the body, the trim and the chassis operations, those don't go away when we talk about producing electric vehicles. But what you have in addition is the battery assembly and other aspects of an EV drivetrain that Rockwell has a particularly good readiness to serve. Some of our new technologies like independent Cart are a perfect fit for electric vehicle production"

Pentair (PNR) on returning to growth mode: "I mean where we are now is focusing on our longer-term strategic growth and longer-term value creation opportunities, which I feel good about. And we stabilize the ultimate performance of our 5 external businesses under the 2 segments and making sure that our product leaders are winning through differentiation and innovation of their products. Then we think we have the ability to grow high single digits or double digits in Consumer Solutions. We got great growth platforms, like pool, residential filtration products and services and ultimately, commercial filtration products and services. And then in IFT, it's really about choosing a growth platform or two, primarily around sustainable solutions, CO2 and biogas as well as smart membranes for Beer. And then ultimately getting the complexity reduced, a lot of different disparate businesses and reducing SKUs and really driving the margin performance in IFT."

Xylem (XYL) on the evolution of Smart Water: "As we see smart water evolving, I think the same macro drivers that others have talked about are continuing. Constrained budgets, aging workforce, explosion of data and information but not very well organized and then, certainly, COVID here. More recently it is certainly a driver that's impacting the adoption of digital water technologies. From our perspective in the Danaher platform, we have a lot of instrumentation businesses and a variety of different business models, and we've seen a lot of appetite for point solutions over the last several years and we think that continues. These are really the integration of hardware and software to solve valuable problems in municipal operations. Typically, we see this a lot in waste water, could be applications like managing phosphate or sludge or nitrification. But then in industrial, we see the adoption of point solutions around applications like cooling towers or heat exchangers. Again, similar concepts, taking sensor data, integrating it with models, helping customers make better decisions. And those -- the benefits that customers see there are lowering operating costs, reduction risk and improved compliance."

Badger Meter (BMI) on secular drivers in water: "Turning to the more important longer-term dynamics, it is clear that COVID-19 will have a profound impact on the global water sector, and we will -- and we believe it will be a catalyst for increased adoption of smart water solutions. Our customers have a need for holistic, integrated solutions that operationalize real-time data. These digitally enabled solutions, such as our smart meter AMI offering, reduce overall costs and offer safer remote solutions. These factors are in addition to the secular drivers that have already been evolving, such as the need to reduce nonrevenue water, drive conservation, address the aging workforce of utilities and connect with end consumers. With our robust cash flow and ample liquidity, we are actively investing in and developing products and solutions to address these challenges. This includes both organic and acquisition-driven growth geared toward augmenting our offerings in attractive adjacencies serving water-related markets and applications. For example, added sensors and instruments for complementary data elements such as pressure and temperature, which are used to determine system health. It also includes expanding functionality of our EyeOnWater software app that helps drive consumer engagement."

Wabtec (WAB) on mods: "I think for the North American market, you should think about 15,000 locomotives that run at, what I call, prime horsepower for the railroads out there. And if you think about those 15 locomotives, they will go through the overhaul cycle. And by the time you reach the third overhaul cycle, right, you really got an asset now that you're exiting in 20 years. I think the question is, do you just do a simple overhaul in that asset, you returned it back to be in the same application? Well, it's hard to do, especially if you need reliability on that asset. And if you look at the opportunity you have to modernize it with a lot of the technologies we have, driving fuel efficiency, driving, I'll call it, just better productivity with a lot of the digital electronic tools we have, we see that as a significant opportunity. So if you play that out, we see the opportunity to modernize the fleet in the U.S. by more than 500 units per year in average. If that's going to play out into new locomotives or mods, that's maybe the way we think about it. We see the opportunity to grow mods going to next year. Do we expect that to be a significant growth? No. But I think there's pent-up demand here in terms of just the dynamics you've seen in carloads, and we think that, that's going to be a story that's even more robust and a lot more robust as you go into '22 and beyond."

Generac (GNRC) on the early innings of the home standby market: ""Recall that Generac created the home standby category over 2 decades ago, and the market continues to significantly expand, with every 1% of penetration, representing approximately $2.5 billion of additional market opportunity at retail prices. Despite the unprecedented home standby activity being experienced during 2020 in the form of home consultations, orders, build rates, activations and net new dealers, the reality is that the overall penetration rate for the product category is only expected to be slightly over 5% at the end of the year. With demand for home standby generates being uniquely aligned with some key megatrends and secular growth drivers, we believe there remains considerable room for this dynamic market to continue to grow over the next several years."

Zebra Tech (ZBRA) on its solutions critical to customers: "First, I think in this environment, our solutions have become even more critical for our customers. We are, I'd say, uniquely positioned to empower frontline workers across all our vertical end markets. And COVID-19 has been accelerating a number of secular trends around digitization and automation, and it's probably most apparent in retail around e-commerce, around omnichannel and buy online pick up at store. Here, we've seen, particularly around mass merchants, grocers and e-tailers, that they have been the most -- the quickest, I guess, to pick up on this, and that's about 2/3 of our business. But I'd say, the largest retailers have been the -- mostly been the most aggressive or the earliest to start adopting and investing in solutions around omnichannel and e-commerce. They have seen a great growth in their omnichannel and buy online, pick up at store businesses. And they have -- still believe that there's lots of market share that they can continue to grow and take. So they are continuing to invest heavily in building out their capabilities and scaling their capabilities compared to where it was, say, just 6 months back. So we see the pipeline of business around these larger trends around digitization, automation and particularly in retail as quite robust. And we think that this is a trend that will be going on for quite some time. And we're just saying that, I think for now, we see then the pipelines of these types of opportunities as we look into 2021 as being as robust as we would have expected them to be in prior years."

Middleby (MIDD) on key investments in the food industry: "As the industry is quickly adapting, the many investments we've made leading into 2020 and are now more relevant and critical than ever before. Key examples such as the investments we've made in ventless, automation, delivery and our industry-leading Open Kitchen IoT platform specifically address customer challenges of labor, speed of service, menu flexibility and operating footprint. Since the launch of our Open Kitchen IoT platform at the beginning of this year, we have increased our engagement with foodservice operators. Open Kitchen provides the tools to simplify, automate and monitor many of the challenges in the kitchen. I'm very excited to report that to date, we have in excess of 5,000 restaurants and retail locations operating in our system. This installed base continues to grow as Open Kitchen is the preferred solution, given its broad capabilities to support not only all equipment in the kitchen, but all other facility operations such as lighting, HVAC and ventilation. Open Kitchen is the only solution to connect literally all equipment in operations on one platform."

Vontier (VNT) on its leading tech solutions: "We have a large global installed base with low cyclicality. If you look at our revenue profile shown here in the lower right, about 30% of our revenue comes from retail fueling hardware, 20% from auto repair, and about 1/4 of our revenues are recurring revenues. And this is split between SaaS revenue and service revenue. And then the balance of our revenue predominantly comes from Environmental Solutions and retail solutions. Smaller contributions of our revenue come from smart cities and e-mobility. We have 2 major platforms: Mobility Technologies, or MT, and Diagnostic and Repair Technologies, or DT, and this represents an attractive $27 billion market that are fragmented and growthy markets."

General Electric (GE) seeing big opportunities in digital energy transition: "So this is our single largest market opportunity. And the single -- it's where our largest businesses are, and it's where we think that there's very exciting opportunities. In fact, critical opportunities for digital transformation is in the energy transition. The energy transition is really about more and more renewables online. Now electricity still has to operate 24/7, always beyond and always be inexpensive and outages will happen as a result of weather conditions or those sorts of things. And so the ability of the -- to run the grid, to operate the grid, to manage these assets is -- digital plays a big role. And I wanted to focus in on what we call problems worth solving. This is where we're over the target. This is the targets we're focused on in these vertical markets. So in the area of generation, we're really focused on the fact that this is now no longer, for example, in power generation, no longer base log, there's peaking. The wind doesn't always blow and the sun doesn't always shine, but electricity always has to be on. So whether you've got a gas turbine or a wind turbine or solar, how the grid operates and how those assets operate under those conditions requires a great degree of visibility as well as flexibility. In the transmission area, our software, our AEMS software, is really focused on -- and helping orchestrate that combination of gas power assets, for example, and renewables -- and renewable assets, and have an environment, a digital environment that allows that field to operate with high levels of stability. And then over in ADMS, what really done is we've taken our distribution management system and combine it with outage management systems. And what this allows then is really the ability to operate in a highly secured and dependable way and recover, for example, from disruptions. This is the most comprehensive set of software offerings enabling the energy transition. And we have market-leading customers here, market-leading products and significant business. Grid business is our largest business, followed by power generation, oil and gas, manufacturing and aviation. In the past, this business has been about $1 billion but losing money. We've improved the profitability meaningfully. We've really applied lean to the business to improve our margins, accelerate our growth, improve our customer experience, improving the free cash flow of the business. In 2021, we anticipate mid single-digit growth in the business. And we have about 40% recurring revenue and improving in the business."

IDEX (IEX) on vaccine production machines: "We also have an exciting new opportunity to partner with customers to develop a highly accurate point-of-care solution for diagnostic testing for COVID-19. Our IDEX Health & Science team is hard at work ramping up with public health experts increasingly predicting that the coronavirus will be like influenza, remaining in circulation even after vaccines are widely available. We anticipate this will be a significant new program for our company for the foreseeable future. We also continue to see machines used in production of pharmaceuticals and vaccines. In-sourcing critical API manufacturing is a key initiative for several countries. And last quarter, we shared how our Microfluidizer processors are a key technology for manufacturing vaccine adjuvants. Vaccine adjuvants are an immune stimulator added to many vaccines commonly used today. By using adjuvants in a vaccine, the body can often produce a better immune response to the antigen while also allowing vaccine manufacturers to be able to produce more doses of vaccine with less antigen. Our team was excited to recently deliver machines for use in producing advanced supplies of one of the leading vaccines in testing today. We are also working actively with other vaccine manufacturers as the world prepares for unprecedented rates for production and distribution of this critical piece of the puzzle for solving the COVID-19 crisis."

Rexnord (RXN) on water business opportunities: "As I discussed previously, we've been seeing exceptional, really unprecedented demand and growth and order flow for our touchless sensor products for public restroom applications, and we're seeing the market developing along 3 sets of opportunities. The first leg of the opportunity, which is essentially the only pillar of the growth that we're seeing at this point, is the triage stage of building owners making the restrooms feel more safe and more comfortable for users when they're out of their home environment and either at their place of work or at their school or a local business like a retailer. We're seeing a surge of activity to replace manually operated restroom faucets and flush valves in retrofit applications that began during the second quarter of this year, and that momentum continues to build as we go throughout the year. As you can see on the slide, the retrofit opportunity is huge, with an estimated $2.5 billion installed base today of manual faucets and flush valves that will convert to touchless sensor products over time at an average selling price that is 2x that of a manual product, which means that the retro valve opportunity is really $5 billion over time. In addition, we have a new annual construction market today for manual products that will also convert to touchless sensor products resulting in an estimated $600 million new insulation market opportunity annually."

OptionsHawk Executive Summary and Top Picks

In the Ag & construction group I continue to favor lesser followed **Toro (TTC)** with its strong margins, better than peer growth and very high returns on capital. **Deere (DE)** is the other large cap favorite due to the health in Ag and its Precision Ag leadership as well as being an extremely well managed company already reaching its margin goals. There are two small caps I like with **Arcosa (ACA)** undervalued while delivering strong growth and **Lindsay (LNN)** a higher margin play in water management and road infrastructure. In the Rental group **United Rentals (URI)** is the clear leader and continues to trade very cheap on valuation while **McGrath (MGRC)** the small cap favorite with a combination of solid growth and high margins that are expanding. **Willscot Mobile (WSC)** is another intriguing story in the Modular business and merged with Mobile Mini and the latest earnings call was quite positive on the demand environment.

In Automation & Motion **Otis (OTIS)** a spin-off that I see as a long-term compounder and really like management and the opportunity. **Graco (GGG)** stands out as it still grew through the tough environment and delivers high margins and high returns on capital. **Rockwell (ROK)** is still the large cap leader but at 23X EBITDA has become a bit pricey and a name prefer to buy lower. For the smaller cap names **Altra Motion (AIMC)** a quality organic growth story that screens well while **Helios (HLIO)** is a newer find that looks very solid and its recent deal for Balboa is the health & wellness space an intriguing one with the company targeting $1B in revenues and 24%+ EBITDA margins.

In Water & Filtration **Xylem (XYL)** remains best-in-class while **Pentair (PNR)** is having a strong year a lot of it was pull-forward from pool exposure though still a solid company. There are several small caps in this sub-industry segment with **Badger Meter (BMI)** one name that really stands out with strong FCF, high return on capital and high margins. **Watts (WTS)** is a long-time favorite small cap in this group that continues to screen attractively. On a much smaller market cap level **Mueller Water (MWA)** is a strong operator. In Power & Transports **Generac (GNRC)** is one of the best growth stories in the entire Industrial sector and continues to post impressive metrics. **Wabtec (WAB)** looks compelling at 12.7X EBITDA with carloads set to improve and delivers strong FCF and seeing margin expansion. For small caps in this group **Triton (TRTN)** is an attractive value as global trade rebounds as a leader in a fragmented container leasing industry. **Fortress (FTAI)** should see its energy assets recover and has a nice opportunity in aviation leasing. The Industrial Tech names are all attractive in their own way, **Roper (ROP)** a long-time favorite continues to be a high margin software focused business and aggressively acquiring companies, **Zebra (ZBRA)** a growth and margin expansion story for its unique solutions that capture key secular growth trends, and newcomer spin-off **Vontier (VNT)** looks to be a compelling long-term opportunity.

The Multi-Industrial group contains most of the larger cap plays with **Parker Hannifin (PH)** and **Illinois Tool (ITW)** screening most attractive on growth, margins, and return on capital. **AMETEK (AME)** is the top preferred name in the entire group with its strong growth, margin leadership and best-in-class metrics. **IDEX Corp (IEX)** a favorite mid-cap that screens strong across growth, margins and returns on capital. **Dover (DOV)** is a quality company as well but does not screen as well as the other favorites. In small Caps **Curtiss Wright (CW)** is a great name that was hit from commercial aerospace exposure and I expect it to recover strongly. **Rexnord (RXN)** and **Kadant (KAI)** are two small cap quality names in this group, the former with a strong opportunity for its water business.

Building Materials and Tools

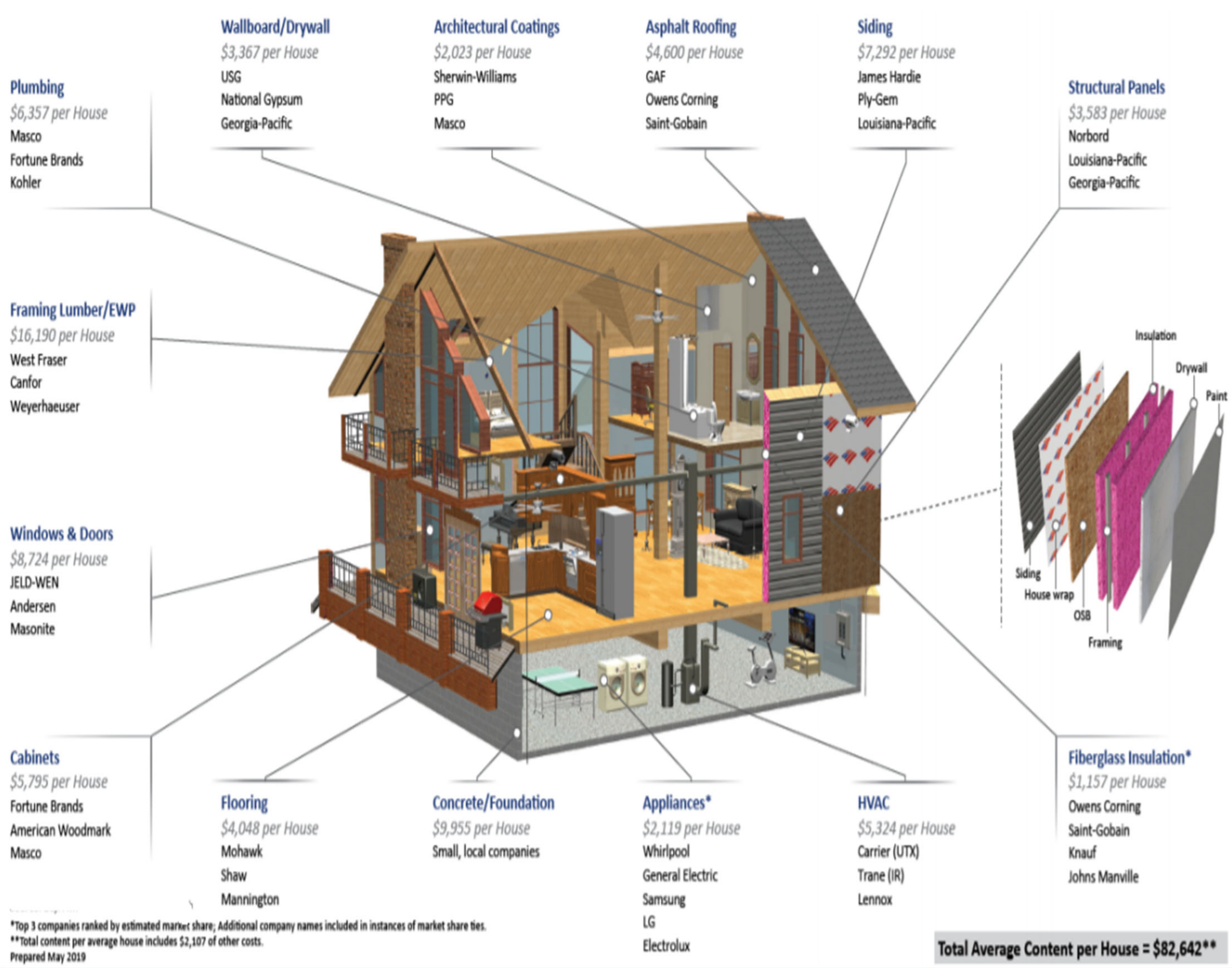
Building Products: PATK, AFI, AMWD, AOS, APOG, ATKR, AWI, AYI, BCC, BECN, CSL, CSTE, DOOR, FBHS, FRTA, HUBB, JELD, JHX, LPX, MAS, MHK, NX, OC, OSB, PCH, PGTI, RYN, SHW, TGLS, TILE, TREX, AZEK, UFPI, USG, WIRE, WY, ROCK, WMS, FRTA, CSWI, BDC

Distributor & MRO Components: FAST, GWW, HDS, SITE, BLD, MSM, BLDR, IBP, BMCH, WCC, AIT, GMS, FBM, LAWS, DXPE, PKOH, BXC, EVI

Tools Components: ALLE, LECO, NSSC, SNA, SSD, SWK, ESE, MTD, REZI, EPAC, GFF

Material Components: CRH, EXP, LOMA, MDU, MLM, SUM, TSE, USCR, USLM, VMC

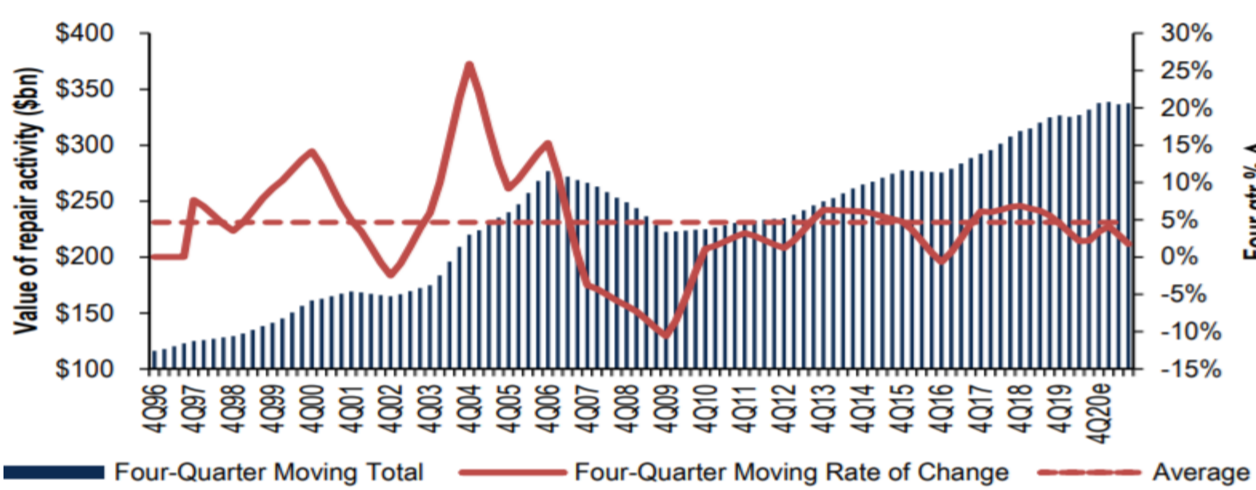
The value of content in an average US new single-family home has grown at a compounded annual growth rate (CAGR) of 3.6% from $23,073 in 1982 to $82,642 in 2018. Rising raw material prices have accounted for 2.4% of the CAGR, while increases in square footage represent the remaining 1.2%. New, residential construction is roughly a $56B market opportunity for products companies, excluding labor. The US residential repair and remodel market opportunity is estimated at $107B for building products companies, excluding labor. This puts the total residential opportunity at ~ $163B while another $23B in commercial.

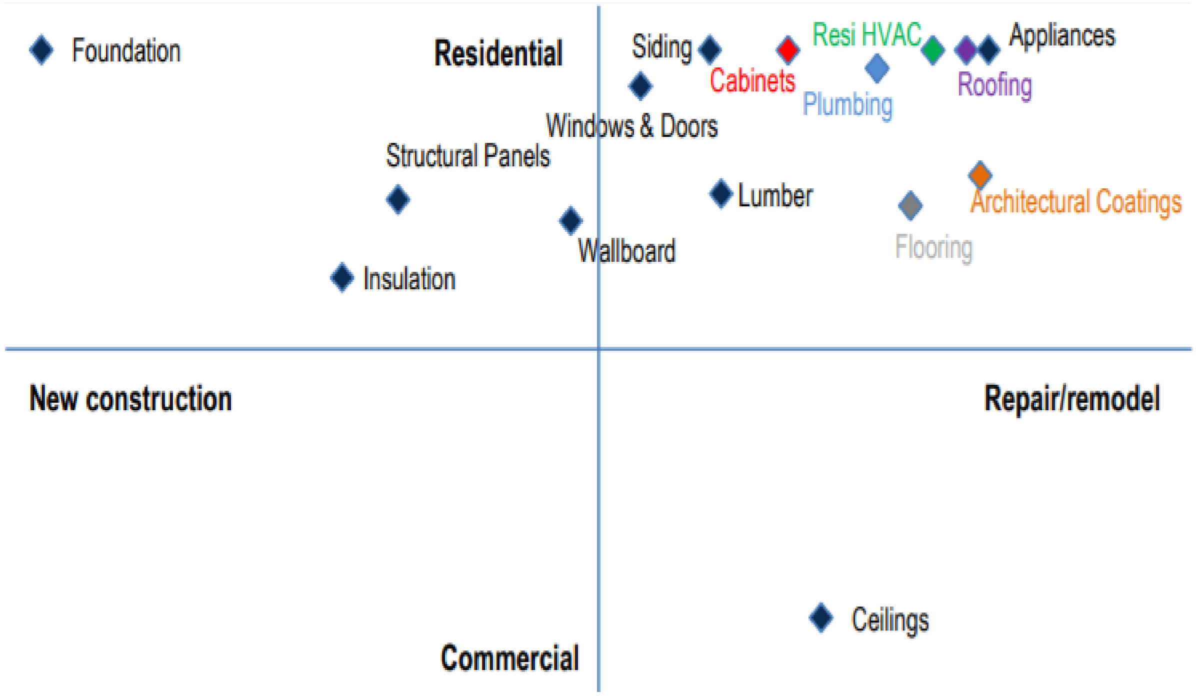


Component group	$CPH	% total content	Total addressable market ($bn)	Resi new construction market ($bn)	Resi repair/remodel market ($bn)	Top 3 players market share %
Framing Lumber/Engineered Wood	$16,190	19.6%	$25.2	$7.3	$11.1	35%
Concrete (foundation)	$9,955	12.0%	$8.8	$8.8	na	na
Windows & Doors	$8,724	10.6%	$12.4	$6.3	$5.4	47%
Siding	$7,292	8.8%	$9.5	$3.8	$5.7	38%
Plumbing	$6,357	7.7%	$7.9	$2.0	$5.9	68%
Cabinets	$5,795	7.0%	$10.2	$3.4	$6.8	48%
HVAC	$5,324	6.4%	$13.2	$2.6	$10.6	64%
Roofing	$4,600	5.6%	$9.4	$1.6	$7.8	77%
Flooring	$4,048	4.9%	$25.5	$4.1	$14.8	48%
Structural panels	$3,583	4.3%	$14.0	$7.6	$3.4	62%
Wallboard/Drywall	$3,367	4.1%	$4.1	$1.5	$1.3	63%
Appliances	$2,119	2.6%	$29.3	$4.4	$24.9	69%
Architectural coatings	$2,023	2.4%	$13.0	$1.6	$8.7	81%
Fiberglass insulation	$1,157	1.4%	$3.1	$1.4	$0.5	78%
Other	$2,107	2.5%	na	na	na	na
Total	**$82,642**	**100.0%**	**$186**	**$56**	**$107**	**60%**

Harvard's Joint Center for Housing Studies (JCHS) publishes the Leading Indicator of remodeling activity index (LIRA) which is a great resource. The JCHS analysis measures the value of repair and remodel activity as reported by homeowners and therefore includes both the cost of labor and materials. Private Fixed Residential Investment (PFRI) is another measure of repair and remodel activity that is used to gauge potential industry growth. The median age of the US housing stock hit 43 years in 2018, up from 32 years in 2000. Decorative Architectural (Paint), Roofing and Plumbing are the three best returning sub-sectors. Most of these building product sub-sectors are very fragmented and see a lot of consolidation. The US residential repair and remodel industry tends to be less cyclical than the new construction industry. US residential repair and remodel industry is influenced by numerous macro related factors. First, consumer confidence is critical for residential repair and remodel activity, similar to its effect on most large-ticket purchases. Consumer confidence tends to reflect the state of the general economy, employment trends, wages, and etcetera and therefore appears to be a reasonably good proxy for the consumer's willingness to spend. The US housing stock is now at its oldest point in history, which should also support residential repair and remodel activity. A third key driver of residential repair and remodel activity is existing home sales turnover and existing home sale values. These factors are also relatively intuitive in that most repair and remodel activity occurs when title of a home changes hands and the new owner makes alterations and updates to reflect his/her personal style and preferences. Therefore, higher existing home sales volume should result in greater residential repair and remodel activity. Existing home values are also correlated with the level of residential repair and remodel activity given that homeowners sometimes borrow against the equity in their homes to finance larger improvement projects. In addition, rising existing home values tend to support remodeling activity as it reinforces the view that investing in a home is a sound financial decision.

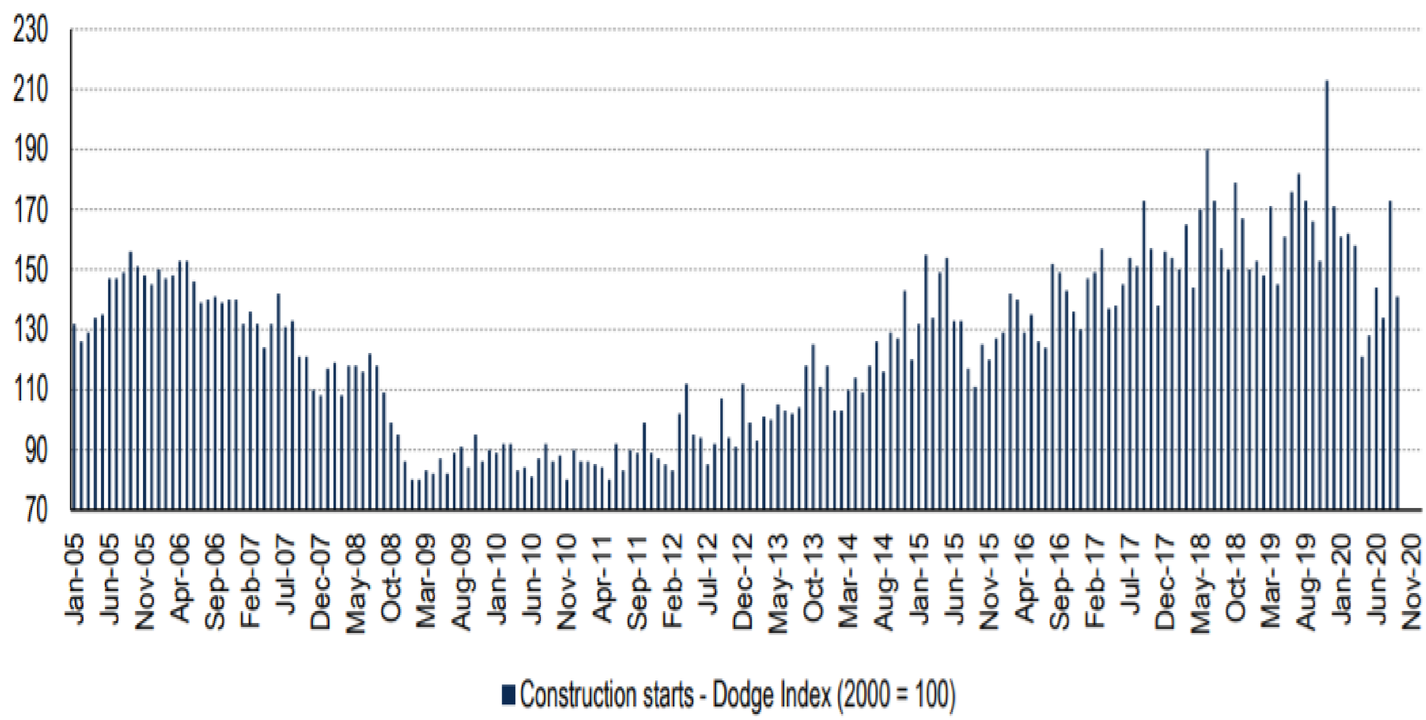
: Leading Indicator of Remodeling Activity

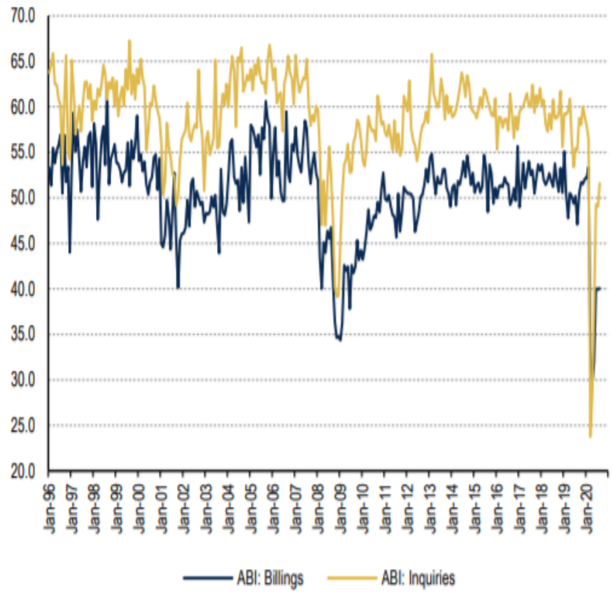


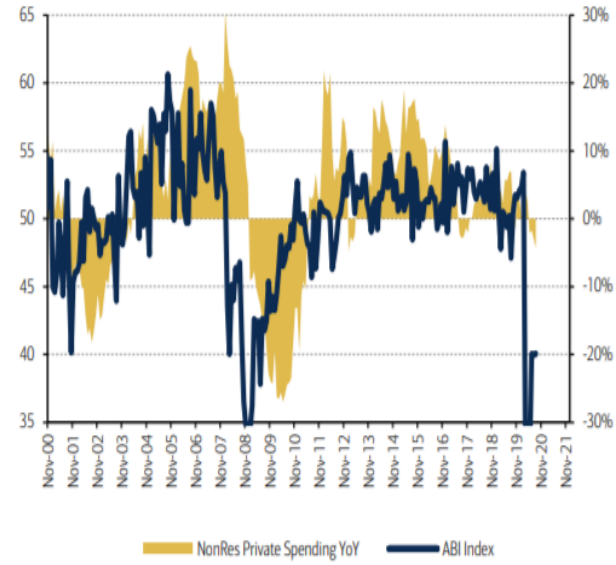


US building products operating costs consist of approximately 73% variable and 27% fixed cost components. The cost of goods sold line for most building products companies is approximately 78% variable on average, driven by substantial material purchases. However, energy, labor and overhead costs associated with manufacturing activities provide a fixed cost component in cost of goods sold. Building products companies have opportunity to leverage COGS to drive margin expansion as volumes improve. There appears to be additional opportunity for operating margin expansion through SG&A expense leverage.

Architecture Billings Index ("ABI") and Dodge Momentum Index ("DMI") are leading indicators for nonresidential building construction activity.







HVAC Components: AAON, FIX, WSO, TT, JCI, CARR, LII

North American residential heating, ventilation and cooling (HVAC) market is valued at approximately $15B, with approximately 80% exposure to the repair and replacement end-market and 20% to new construction. TT, CARR and LII account for a 65% market share. Industry trends indicate that energy efficiency and environmental regulation along with the use of cloud-based technology are contributing to growth, particularly for retrofit markets. The COVID pandemic has brought on a surge for upgrades to the filtration technology.

Management Commentary

AO Smith (AOS) on its markets and investment proposition: "Commercial boilers represent 65% to 70% of our boiler sales, and industry volumes are down 15% to 17% year-to-date, and improved slightly in the third quarter from the second quarter. The market is competitive, and we are getting our fair share of the available market. We project 22% to 24% sales growth in North America water treatment products, which includes incremental water right sales. We believe that mega trend of healthy and safe drinking water as well as reduction of single-use plastic bottles are driving consumer demand for our point-of-use and point-of-entry water treatment systems. A. O. Smith is a compelling investment for a number of reasons. We have leading share positions in our major product categories. We estimate replacement demand represents approximately 80% to 85% of U.S. water heater and boiler volumes. We have a strong premium brand in China, a broad product offering in our key product categories, broad distribution, and a reputation for quality and innovation in that region. Over time, we are well-positioned to maximize favorable demographics in both China and India to enhance shareholder value."

Fortune Brands (FBHS) on key consumer trends: "Key consumer trends have been expedited by the pandemic, which appears to have accelerated the movement of the key millennial generation toward household formation, suburbanization and investment in the home. These trends, which were already in place prior to the pandemic should drive new construction and repair and remodel demand, especially at the entry price point part of the market where there is a short supply of available homes for purchase. The current environment has also accelerated trends for the large baby boomer generation. We have long identified that more and more seniors prefer to thrive in place in their homes. We expect that the pandemic's disproportionate impact on senior living facilities will only add to this trend. Repair and remodel activity during the quarter remained elevated as home purchasing activity was high and consumers focused on home improvement. Additionally, as more people work from home and entertain at home, they have reconfigured and upgraded their homes to accommodate an expanded set of needs. With existing housing sales accelerating and aged housing stock and U.S. homeowners sitting on near all-time highs in home equity levels, we expect that the R&R market should continue to benefit from these underlying tailwinds. Given the market fundamentals of very favorable demographics, low inventory and aged housing stock, we see a very positive multiyear tailwind, powering the U.S. housing market back to consistent mid-single-digit R&R growth and high single-digit single-family new construction growth. Consistent with our long history, we intend to outperform this market and continue to gain share."

Hubbell (HUBB) on grid modernization trend: "We achieved high single-digit growth in our Power Systems business in the quarter, as secular grid modernization trends continue to drive the need for utilities to invest in critical grid infrastructure. We continue to differentiate ourselves in this space with our unique Utility Solutions platform as well as our reliability and service, and we anticipate T&D markets to remain supportive of growth. The strength we are really seeing on the distribution side that last mile, grid hardening, spending on components and transmission aided by renewable spending that are required to transmit the longer distances to get the electricity to customers."

Carlisle (CSL) on Roofing: "We still foresee a robust and growing reroofing market with positive trends continuing well through 2025, driven by the need for maintaining an aging and continuous cycle of replacement of U.S. roofing infrastructure. This distinction is important as most of CCM sales are largely driven by replacement demand, not new construction. Year-to-date, we have benefited from CCM's variable cost structure and notably lower input cost versus last year. Due to our size and scale, we believe we have the lowest cost structure in the industry, that we create significant value through the Carlisle experience, and we continue to demonstrate price leadership, connecting pricing to our value proposition."

Grainger (GWW) on beating the MRO market: "While we estimate the U.S. MRO market declined between 5% and 6% in the third quarter, Grainger was able to capture roughly 850 basis points of outgrowth fueled by pandemic-related sales, selling to new customers and improving sales of non-pandemic product. Despite the challenges of 2020, U.S. segment daily sales are up 2.1% year-to-date, and we have outgained the broader MRO market by over 900 basis points through the first 9 months of 2020."

Carrier (CARR) on indoor air quality markets: "We looked at the markets that we participate in and focus on the commercial markets. And we looked at that as a $90 billion to $100 billion overall market. And then we looked at what the incremental sales that we've been realizing associated with healthy buildings, and a lot of that is IAQ, but it includes some other things that we have, including parts of our Fire & Security portfolio, where we've been selling thermal scanning, contact tracing, other elements there. So we looked at kind of a healthy building incremental to it. And we've been -- our experience has generally been around 10% of incremental sales. We've had chiller sales, where on top of what we would have traditionally sold, we sold bipolar ionization or we sold different filtration systems on top of that. We also looked at introductions of new products like our OptiClean and other new products that we've been coming forward with. And what we've traditionally seen is this 10% incremental, and that's how we got to the $9 billion to $10 billion. I don't want to pretend there was more science behind it than that. I mean that's -- it's our best sense of what that market opportunity looks like."

Johnson Control (JCI) on its smart building platform: "When you look at our HVAC and building controls, we have $12 billion in revenue that's skewed heavily towards institutional and commercial infrastructure. And we also have a $9 billion global Fire & Security platform with a very large installed base and high service attachment and a lot of interactive qualities, particularly on the security side. And with our digital transformation platform, OpenBlue, this is what is uniquely positions us to be able to serve smart buildings of the future with a very comprehensive suite of solutions that connect both the IT of a building with the OT, all of that together that leverage data analytics, artificial intelligence and machine learning and then leverages the incredible channel that we have globally to deliver outcome-based solutions for our customers. And all of these attributes play very well into addressing the immediate needs around indoor air quality and healthy buildings. And I believe that there is no one better positioned to help customers operate healthy and safe buildings."

Snap-On (SNA) on a new fundamental driver post-COVID: "I think one of the fundamental drivers we're kind of pumped about is, out of the COVID, we think people are going to be driving more. I think if you look at China, people are driving more. They drove more out of the COVID, and it just makes a lot of sense. It's been documented in a lot of articles around. I mean people are going to think twice before they depend on mass transit anymore. Ridesharing maybe. The world may have turned on urbanization and ridesharing and all that stuff to the point people are going to want to drive more, at least certainly have access to these kinds of things. They won't want to depend on that kind of thing in the future because they're worried that the COVID will come back. I think people would be moving out of the cities into more a distributed offices and more distributed living. And so I think that drives more kind of a tailwind for us. It's one of the reasons why during the COVID, we have kept introducing new product because we believe the future is stronger. It's because we have held our brand. We've invested, and we haven't -- we've pretty much kept our people intact because we want the team to be full strength when we come out of this because we think there'll be a lot of opportunities. If you roll back, there are fundamental drivers. First, the cars in the United States are 11.8 years old. They've gotten -- and they've gotten older every year since 1980. So the car park is getting older. And secondly, I think the big thing -- and it gets figured. It adds a few cars every year. The new car is always overwhelmed with scrappage. So it gets bigger. It drives -- as I go through some of the hard scrabble, America, you can see the number of cars grow in the driveways there. You see it before your eyes. And then the -- but the principal driver is the complexity of the cars. There's a number of these things, but I can name them. So in the mid-'90s, the number of trouble calls on the cars could be measured in a dozens. Now it's measured in the thousands. So we have products that will help you do that."

Vulcan (VMC) on its geographic markets: "According to Dodge, Vulcan-served states are expected to account for approximately 90% of the growth in warehouses and distribution centers over the next 2 years. In addition, nonresidential demand for commercial buildings, like gas stations and grocery stores has historically followed the build-out of new housing subdivisions. We could expect this type of traditional nonresidential construction to follow the growth we're experiencing in residential demand. As we think about these current trends, it's important to keep in mind that unlike the great recession of 2008, nonresidential construction going into the pandemic was not overbuilt."

OptionsHawk Executive Summary and Top Picks

Starting off with the Building Products group we have a bunch of names in the $5B to $15B market cap range. One concern into 2021 is rising cost of materials though many companies pass these through via price increases. Residential seems to be the strong demand theme in 2020 with Commercial lagging, any rebound in the latter could be key for a number of these names. **James Hardie (JHX)** is a strong play on Exterior with industry-best margins, high ROIC, and sustained topline growth. **AO Smith (AOS)** is a high return on capital name with strong FCF and should see a boost from the recovery in China. **Carlisle (CSL)** remains a favorite in construction materials while **Owens Corning (OC)** is the cheap value that has potential to re-rate higher. **Trex (TREX)** continues to be a favorite in this entire group with its high margins, high growth and superior returns on capital as it continues to disrupt the wood decking market. **Advanced Drainage (WMS)** is a high-quality mid-cap growth name that has a lot of growth tailwinds. This group has a ton of small cap plays and a low margin industry, but my personal favorites are **Gibraltar (ROCK)** with exposure to renewables and cannabis markets, **Atkore (ATKR)** a high growth, high margin name with a lot of white space opportunity, **CSW Industrial (CSWI)** a lesser followed name with strong margins, excellent growth and strong FCF, and **Masonite (DOOR)** as a leader in residential doors and delivering impressive margin expansion.

For the Industrial Distributors **Fastenal (FAST)** continues to be the best-in-class name with better growth and higher margins than **Grainger (GWW)**. **SiteOne (SITE)** is an impressive business in the highly fragmented landscaping space, albeit a low margin business. In the highly fragmented building supply industry **TopBuild (BLD)** screens as a leader though smaller cap **Installed Building (IBP)** screens even better. Lastly, small cap **GMS (GMS)** is worth a look due to bullish options positioning with cheap valuation. In HVAC among the big three **Carrier (CARR)** stands out as the best-in-class name to own while **Lennox (LII)** in the next market cap tier is equally as impressive and delivers industry-best returns on capital. **AAON (AAON)** is the small cap start with industry-best growth and margins as well as strong FCF and a clean balance sheet. In Tools **Snap-On (SNA)** trades at attractive valuation for its high margin business relative to peers and strong FCF while **Allegion (ALLE)** the favorite play on the security market and some great opportunities intersecting with technology. **Simpson (SSD)** is the standout in the small cap group and been a long-time favorite, an extremely well-run company.

For Building Materials it is always a toss-up between **Vulcan (VMC)** and **Martin Marietta (MLM)** and they tend to perform in-line anyhow, but **Martin Marietta (MLM)** is a bit cheaper with better margins, and really **Eagle (EXP)** screens best at an $8B market cap with better growth, margins, and return on capital. I have also discovered an intriguing small cap in **US Lime (USLM)** which is closing the year strong and delivering extremely strong EBITDA growth, revenue growth, ROIC, FCF and with high margin.

Homebuilders, Waste Mgmt., & Home Services

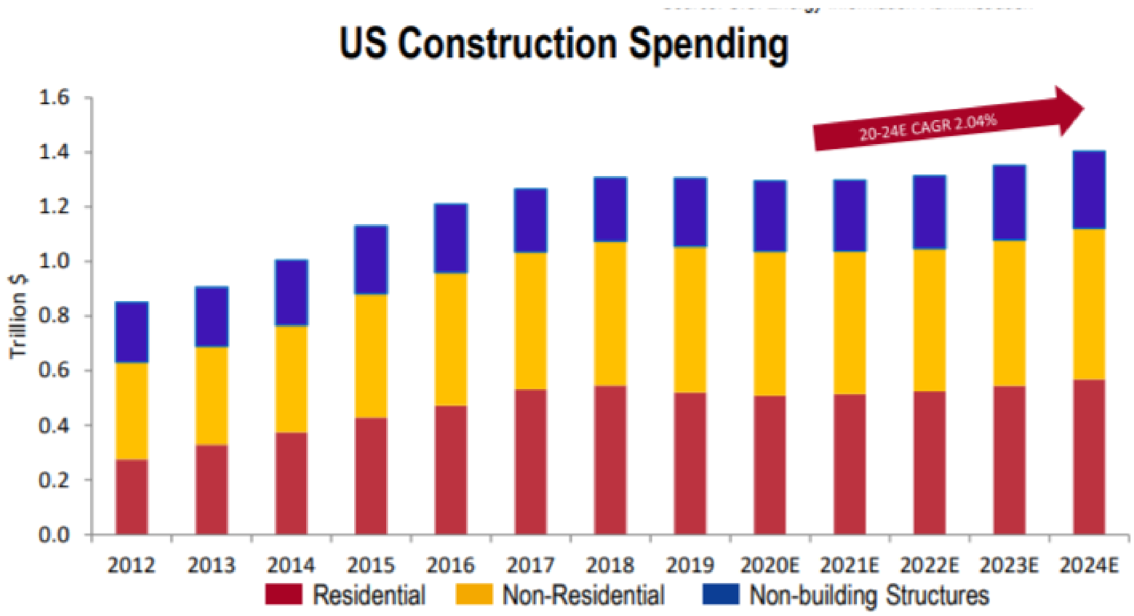
Construction Components: BZH, CCS, CVCO, DHI, HOV, KBH, LEGH, LEN, LGIH, MDC, MHO, MTH, NVR, PHM, SKY, TMHC, TOL, TPH, GRBK, FOR

Service Components: ANGI, BV, FTDR, ROL, TMX, TISI, FSV, SIC

Waste Management & Environmental Solutions Components: WM, RSG, WCN, GFL, MEG, SRCL, CLH, CWST, CVA, HSC, ECOL, HCCI

Housing was a strong story in 2020 driven by record low mortgage rates and the work-from-home theme pushing many out of cities into suburban housing markets. The low supply and pent-up demand set-up played out and if the economy can continue to recover with rising wages and higher consumer confidence, the strength can continue into 2021. Millennial first-time home buyers are a key side of the demand equation. The top ten homebuilders tend to focus on certain categories. Some of the companies under our review cater to the affluent market, providing luxury homes. Others focus strictly on the entry-level category, in which buyers heavily base their purchase decision on their ability to secure affordable financing. A majority of homebuilders, though, concentrates on the "first-time" segment. Here, the average home price is modestly higher than that of an entry-level model. This segment includes another appealing business venue, the first-time move-up market. The industry is highly fragmented. At the peak of the last housing cycle (in 2006), the ten biggest domestic homebuilders accounted for only about 35% of housing starts. There are hundreds of small, privately financed builders that operate solely at the regional level, pursuing niche market opportunities. One major advantage big industry players have over their smaller counterparts is the ability to easily obtain debt and equity financing for large land purchases and construction projects. They have the clout to secure access to the nation's most desirable living locations.

Consumer confidence, employment growth and wage growth are a few of the most relevant economic metrics for the homebuilding industry. Other important considerations are overall economic growth expectations, household formation trends and the relative level of mortgage rates and home prices versus rental costs.

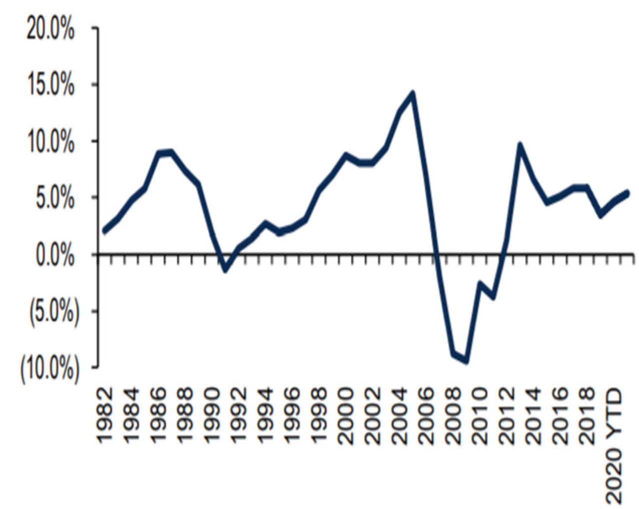


Joe Biden's affordable housing plan, including a proposed $15k tax credit for first time buyers, could drive incremental home sales. Democrats could push for a rollback of the $10,000 cap on the deductibility of state and local taxes (SALT) introduced within the 2017 Tax Cuts & Jobs Act and could boost coastal housing markets. Strong demand for housing, tight inventory and rising input costs seem poised to buoy home prices, which could provide owners with the equity to trade-up, facilitating churn in the existing home market and promoting renovation work. In fact, a significant portion of major renovation work occurs when ownership changes hands. Rising home values also tend to reinforce the consumer decision to invest in their current residence, which should support overall repair and remodel activity. Separately, the building products industry could realize significantly reduced procurement costs if the Biden administration is able to renegotiate tariffs with key trade partners, including China.

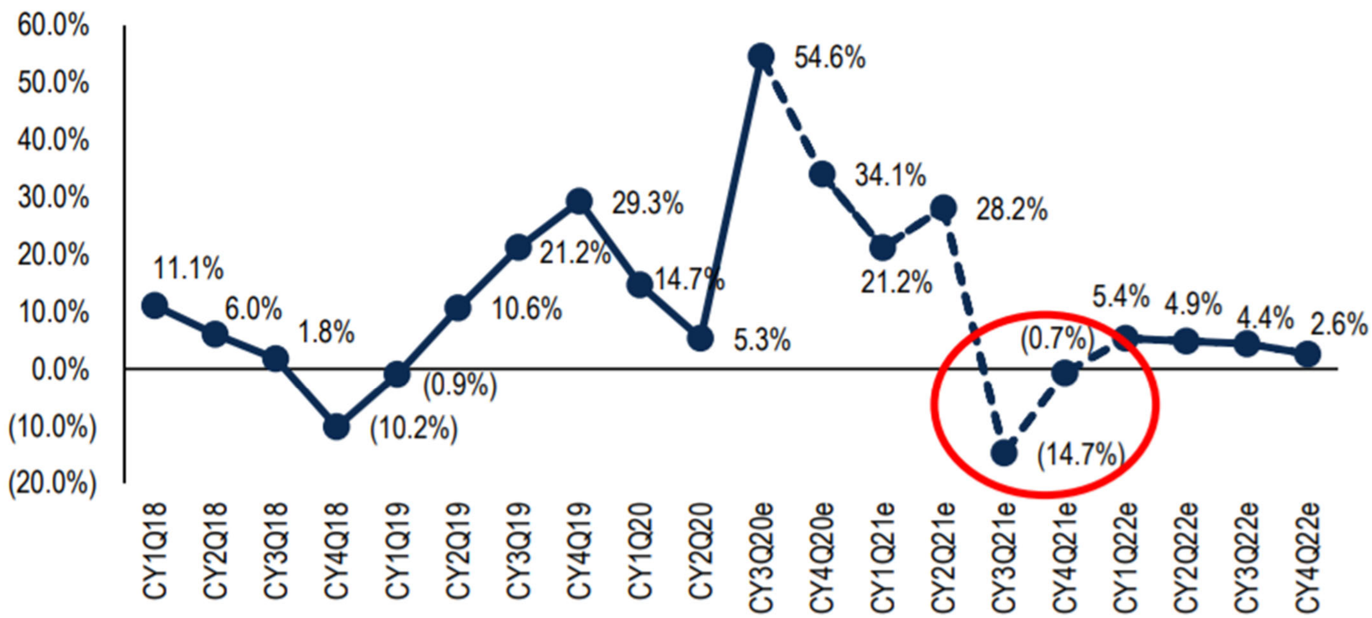
There are potential headwinds as well, interest rates could continue to trend higher on vaccine expectations or broader re-inflation sentiment, which historically has challenged homebuilder stocks regardless of the starting point or actual impact on affordability. Second, builders risk potentially pushing too hard on the pricing lever in attempt to maintain gross margins in a rising input cost environment. Third, public homebuilder YoY order growth comps become very challenging in 2H21, given the COVID-19 induced surge in 2020 demand. the market tends to focus less intently on the actual level of activity than it does the rate of order growth for homebuilder stocks. Biden has proposed raising the corporate federal tax rate from 21% to 28%, which could weigh on homebuilder earnings given 100% US revenue exposure. The ability of the Democrats to successfully push this legislation through with a GOP Senate seems questionable, although the balance of power could change with run-off elections in January.

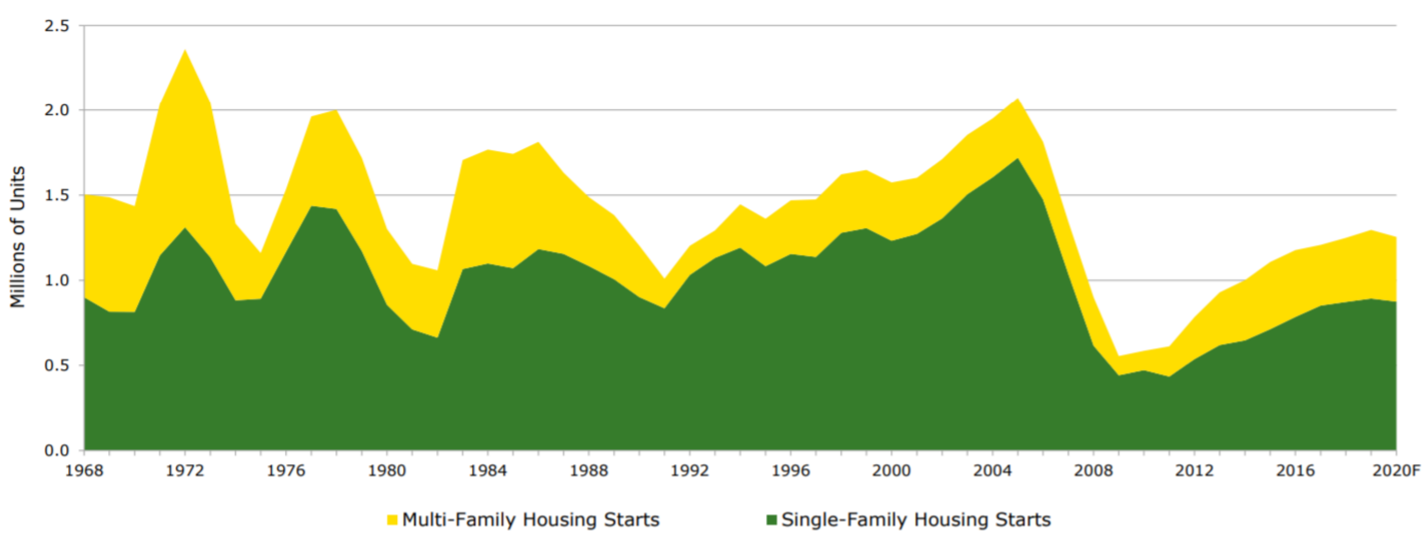
Tight new and existing home inventory months' supply

S&P CoreLogic Case-Shiller Home Price Index: US National



Homebuilder recent historical and forecast CY order growth





In the waste management and home services group we have a small selection of names, and they correlate tightly to the housing market. The ability to raise prices while seeing stable volume growth has boosted results. Positives for the waste management industry include CPI rising, infrastructure stimulus, tax reform, and recyclable commodity prices. The potential for an increase in tax under the new administration is a negative for this group. Waste Management is a defensive group and could be challenged in 2021 in a recovery scenario and the most profitable collection business line is commercial like retail/restaurants where there have been a lot of closures and less demand. Residential faces low CPI, rising 'waste-at-home', and constrained municipalities. Several megatrends fuel the demand for efficient waste management. They include population growth, rising living standards, public health, industrialization and urbanization in emerging markets, and the tendency toward shorter product life cycles of electronic devices. The waste sector is a $2 trillion market. The World Bank sees municipal solid waste volumes rising by a factor of 2X by 2050. The industrial waste sector comprises several end-markets, including manufacturing, chemical, textile, and construction. The industrial waste sector also includes wastewater and hazardous-waste end-markets.

The industry is undergoing its largest period of consolidation in decades: WM acquiring ADSW, GFL acquiring WM-ADSW divestitures, GFL acquiring WCA. The multi-year, long-term outlook is still favorable for the sector – rising barriers to entry, consolidation, early days of technology deployment, etc. As MSW (municipal solid waste) volumes continue to increase, disposal assets become more valuable. Landfills are capital intensive. The 'Big 3' (WM, RSG, WCN) routinely invest in permits, expansions, and environmentally friendly projects (ie gas-to-energy plants). As a result, the Big 3 have 30-40 years of landfill life, favorably positioned as capacity (supply) is constrained. The pricing mechanism in restricted contracts are typically linked to CPI index, wastewater-trash index, or a fixed price reset (~3%). The business of waste is 62 percent collection, 12 percent recycling and transfer, and 25 percent disposal, which includes landfilling and to a much lesser extent, waste-to-energy. Relatively low natural gas prices together with a growing infrastructure of fueling facilities is leading companies and municipalities to invest in converting their fleets to compressed natural gas (CNG) and liquefied natural gas (LNG) powered vehicles.

Management Commentary

Lennar (LEN) on managing costs in a robust demand environment: "With the market this robust, the dominant questions for both Lennar and the industry are how will we continue to meet demand, to grow land positions and manage labor, materials and particularly lumber costs. These are the questions that have the undivided attention of our management team right now. And we're very confident that we'll be able to meet demand, drive high margins and cash flow while we continue to grow with the market. For the short term, we are already extremely well positioned to manage costs and meet demand. While we're selling through communities somewhat faster than expected, we are well fortified with strong land positions that will be brought online. And while lumber, in particular, and other costs are rising, we are actively managing sales pace, primarily to started homes in order to manage that cost risk. For the intermediate term, we are and have been accelerating starts in production of homes under construction, while also accelerating the readiness of new communities that we control wherever possible. And for the longer term, we are focused on ramping up our land purchases for new communities as we believe the industry will have a sustained expansion for the foreseeable future."

Toll Brothers (TOL) on the industry: "We believe the market is on a solid foundation and has significant room to run. Historically, low interest rates are driving the new home market at all price points. We expect low rates to continue for some time. Additionally, a very tight resale market is leading more people to the new home market. Currently, there is only 2.5-month supply of resale homes on the market, the lowest on record. Resale homes are moving quickly. According to Redfin, in October, a record high 35% of all resales nationwide sold above asking price. Also, there remains significant pent-up demand, due in part to the under production of new homes over the past decade as well as the impact of many millennials delaying homeownership decisions. We are finally seeing the millennial generation start to transition from renters to homeowners. Based on the annual average rate of new home production over the past 50 years and the growth in U.S. households, we estimate the industry has underproduced nearly 6 million single-family homes since the start of the housing recovery in 2008. That 6 million fewer people that bought a home in the last decade, who would have in prior decades. Even now, production is just reaching historic norms. The work-from-home phenomenon is driving demand as it allows more buyers to live where they want rather than where their job previously required. Due to this phenomenon, we are seeing an increase in relocation traffic. We also believe our more affluent customer will have greater flexibility to work remotely and is, therefore, out in the market looking for their ideal home."

Republic (RSG) on cash flow conversion: "Cash flow conversion is a conversation we have here all the time. Our cash flow conversion is moving north. There's nothing structural that prevents us from getting above the 40%, midpoint into the high 40s. When we provide a detailed guidance with you guys in February, we're going to be talking more about that. But yes, you can expect the cash flow conversion to move up from its historical levels."

Waste Management (WM) on online sales and recycling improving costs: "Our online sales channel is our fastest-growing sales channel, and we've seen an increase in our conversion rates for customers signing up for new service when visiting our e-commerce site. We've also made progress in automating a variety of operational back-office and customer communication processes, which are paving the way for efficiency gains, improved customer experience and further cost reduction. Recycling continues to show the improved results that we expected when we started to change the business model, providing stronger financial results in the third quarter. In addition to our new highly automated MRF in Chicago, we've opened a similar facility in Salt Lake City with another to open soon in Raleigh. Using advanced technology in our recycling facilities is the blueprint for improving our cost structure, producing a higher-quality material and being flexible to changing recycling end-market demands."

OptionsHawk Executive Summary and Top Picks

In the Homebuilder group, **DR Horton (DHI)** screens as the best-in-class name and really fits well with the first-time homebuyer demand while **Pulte (PHM)** would be the next best play. There are a bunch of small cap names in this group with **LGI Homes (LGIH)** the standout star and **M/I Homes (MHO)** also screening attractive. **M.D.C. Holding (MDC)** also screens cheap with solid growth metrics. In Home Services **Rollins (ROL)** screens as best-in-class with higher returns on capital and strong FCF & margins. **Frontdoor (FTDR)** continues to be a favorite among the small caps generating strong top-line growth with high margins. **FirstService (FSV)** has been a favorite with strong growth and has performed well but does not screen overly well this year and valuation feels rich.

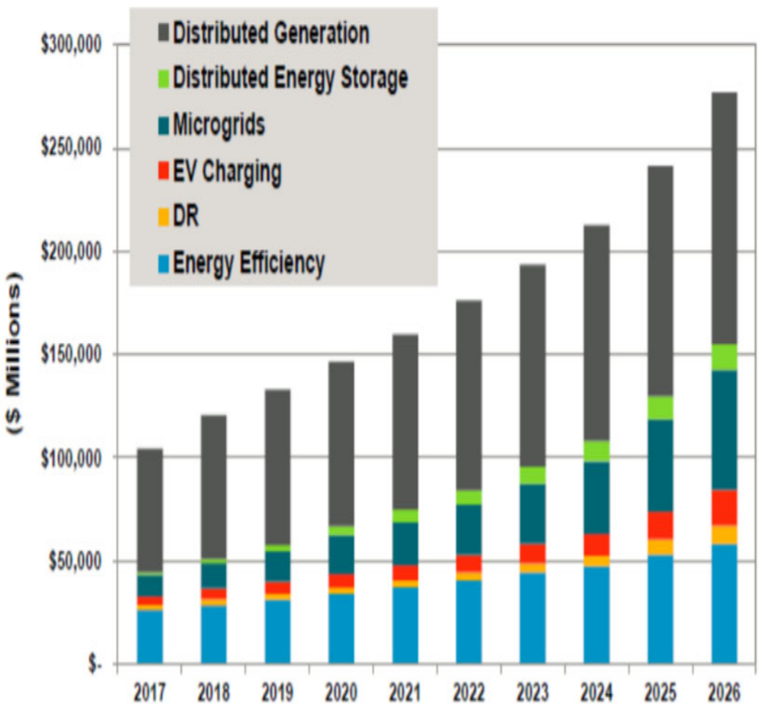
In Waste Management, **Waste Connections (WCN)** remains best-in-class among the big three with higher margins, better growth, and stronger cash flow conversion. **GFL Environmental (GFL)** is the newcomer and is delivering robust top-line growth, a story stock to watch and look for better profitability to develop. **Montrose (MEG)** is a small cap I have previously profiled and like a lot as a high growth, high margin name in this group. **Casella Waste (CWST)** has always screened very well in small caps and continues to deliver impressive numbers, another quality name.

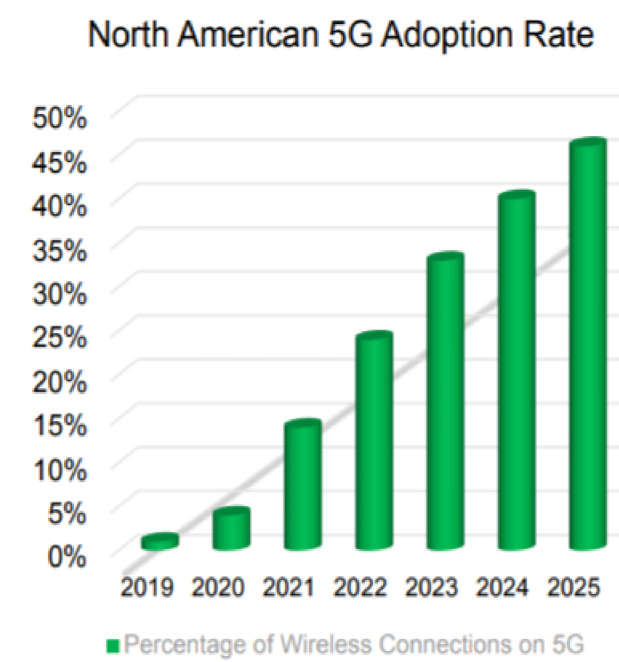
Engineering & Construction

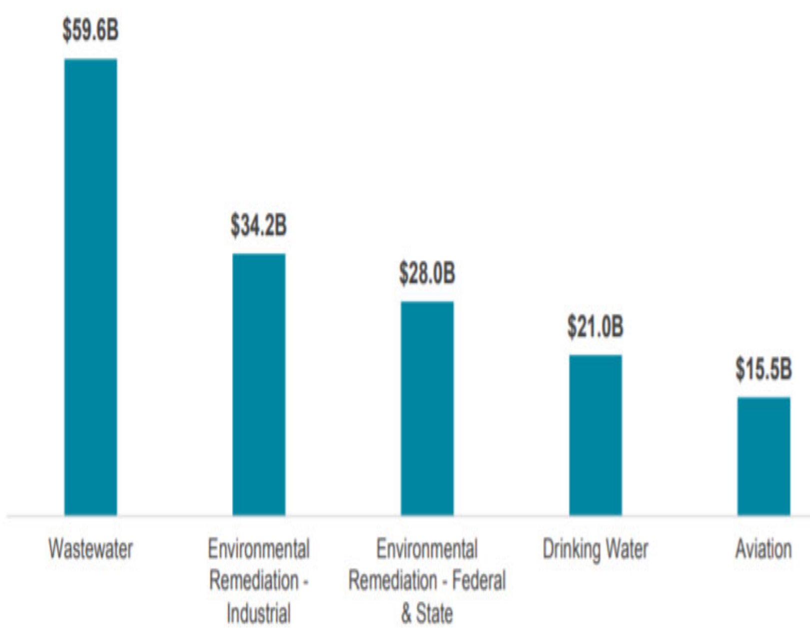
E&C Components: PWR, J, ACM, TTEK, EME, MTZ, MIC, DY, AMRC, FLR, ASTE, ROAD, GVA, PRIM, NVEE, IESC, MYRG, TPC, AGX, GLDD, AEGN, STRL, WLDN, NOA, IEA, STN, APG, MTRX

This group came under a lot of pressure the past few years as a key end-market, Oil & Gas, saw a major cut to capex, but a few names have emerged stronger an enter a new era of projects. It's a group where it is important to pay attention to end-markets for a better idea of potential growth with many focused on Energy, Utility, Civil or Telecom construction. Utilities & Distribution includes installation and maintenance of new and existing natural gas utility distribution systems, and pipeline integrity services. Transmission and Distribution includes installation and maintenance of new and existing electric utility transmission, substation, and distribution systems. Pipeline/Underground is pipeline construction and maintenance, pipeline facility and integrity services, installation of compressor and pump stations, and metering facilities. Civil projects include highway and bridge construction, airport runway and taxiway construction, area paving and facility roadways, demolition, site work, soil stabilization, mass excavation, and drainage projects. Observing capex spending plans across these groups is important for company selection.

One key growing market is Renewable Energy for new projects. Energy Efficiency is a $30B market showing steady growth while distributed energy generation, storage and microgrids a $100B market with sizable growth. Jacob's, a leader in this group, has been focusing more on higher growth and higher margin sectors. The growing demand for data and bandwidth has created an opportunity in Telecom with companies deploying fiber-to-the-home, fiber-to-the-node, and fiber-to-the-building technologies to enable 1 gigabit connections while 5G deployment is in the early innings. The companies focus on environmental solutions are best positioned for future growth.







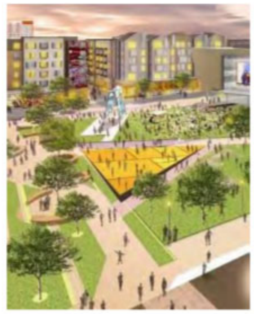
Key Market Trends

Climate change, Urbanization, Geopolitics and breakthrough technology

STRATEGIC GROWTH OPPORTUNITIES

COASTAL RESILIENCE

ECOSYSTEM RESTORATION



SMART CITIES AND URBAN PLACES

ENERGY REMIX

US$24T TOTAL SPEND IN THE NEXT DECADE

↓

US$2T ADDRESSABLE ENGINEERING AND DESIGN SPEND

COASTAL RESILIENCE	ECOSYSTEM RESTORATION	SMART CITIES AND URBAN PLACES	ENERGY REMIX
US $300B[1]	US $9,000B[1]	US $1,700B[2]	US $13,040B[3]

1) United Nations by 2030
2) Navigant Research by 2030
3) IEA by 2025

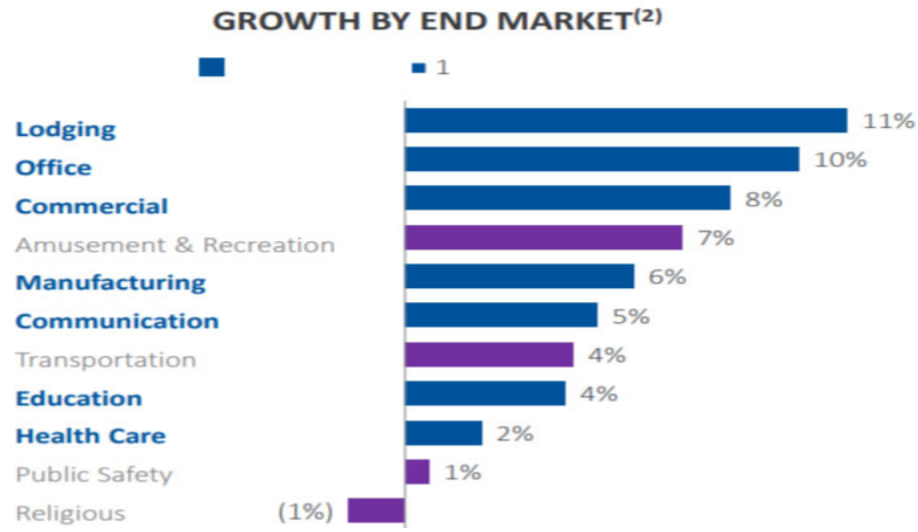
MasTec
Infrastructure That Delivers

	Communications	Clean Energy & Infrastructure	Oil & Gas	Electrical Transmission	Total
Near-term Potential Revenue	$3.5-4.0B ↑	$3.0-3.5B ↑	$1.5-2.0B ↔	$1.0-1.5B ↑	~$10B ↑
Sector Catalysts	5G and Small Cells, Fiber to the Home, Rural Broadband, Spectrum Auctions, Carrier Competition	Carbon Neutral Initiatives, Renewable Portfolio Standards, ESG Push, Industrial Facilities	Pipelines for Cleaner Burning Natural Gas, Pipeline Distribution & Integrity Services, LNG and Mexico Exports	Reliability, Upgrades, Aging Grid, Connecting Renewables, Hardening, Population shifts	Diversified Portfolio with Significant Growth Potential
Trailing 12 Months Revenue (1)	$2.6B	$1.5B	$1.8B	$0.5B	$6.4B

Clearly this is a group that would benefit from any major infrastructure package under the new administration. The US infrastructure base is ageing and there is increasing regulation for fire safety, water quality and pipeline upkeep. The industry is also under consolidation.

End Markets	Select Industry Data Points	Select Customers
Electric Power	+$70B Annual T&D Spend Through 2022	American Electric Power, ATCO, CenterPoint Energy, Duke Energy, Edison International, Eversource, FirstEnergy, PG&E
Pipeline & Industrial	+$22B Est. U.S. Utility Gas Related Capex in 2019	bp, Dominion Energy, Puget Sound Energy, Enbridge, Enterprise Products Partners L.P., Southwest Gas, nationalgrid, Valero, TC Energy
Communications	+$140B Est. Fiber Investment Required in the U.S.	AT&T, Bell, CenturyLink, Charter Communications, Comcast, Crown Castle, Shaw, verizon

Commercial Construction:



Management Commentary

Tetra Tech (TTEK) on its differentiated services: "Our U.S. federal work for us is distributed across civilian agencies, the Department of Defense and international development. For these agencies, we are their high-end consultants, applying data analytics to help advance their most critical programs. Tetra Tech works with more than 500 cities and municipalities across the United States. We provide our state and local clients with our #1 ranked services in water, water supply and desalination design. We address regulatory requirements by using advanced data analytics solutions to optimize water management. And we provide high-end water supply solutions by designing first-of-the-kind water reuse and brackish water treatment facilities. Our U.S. commercial work is primarily focused on differentiated environmental consulting and renewable energy services. We leverage our national reputation and #1 rankings in environmental science, in solid waste and in wind power and providing support to our clients that include the Fortune 500 commercial clients, top energy developers and waste management companies."

Quanta (PWR) on secular growth drivers: "I think when you look at the business and you look the sentiment of carbon-free technology, electric vehicles, I think Quanta is positioned to enable that along with our customers on the infrastructure necessary to deploy wide-scale renewables, our sweet spot. So in general, if we're going to move power from east to west, west to east but the grid is not connected, so large transmission will be necessary. You go to the grids in Europe, they're 3 to 5x greater than we are in the U.S., the corridors, and that's what enables them to go to this carbon-free environment. You've got a 5G. That's -- and it's technology. And as it goes into suburbia as we've seen now with work at home or whatever it may be, we're sitting in the middle of that with the Googles of the world and others where they're moving that forward."

EMCOR (EME) describing its business and secular drivers: "EMCOR is one of the largest electrical and mechanical construction facility services firms in the United States. In 2019, EMCOR had revenues of approximately $9.2 billion. Their services span a broad range of diversified commercial, industrial, utility and institutional customers. EMCOR services demand comes from long-term secular drivers of things like the energy transition, energy efficiency, hyperscale data centers, e-commerce supply chains, industrial and manufacturing, technology advancements, health care facility upgrades, water and wastewater treatment, indoor air quality, a bunch of wonderful things to work on."

OptionsHawk Executive Summary and Top Picks

In the E&C group it may seem uninteresting on the surface but there are several intriguing growth stories particularly in the smaller cap niche plays with some key thematic growth trends being 5G, renewables, and grid modernization. It is also a fragmented industry that could see consolidation and any progress on an Infrastructure spending plan would be a major boost.

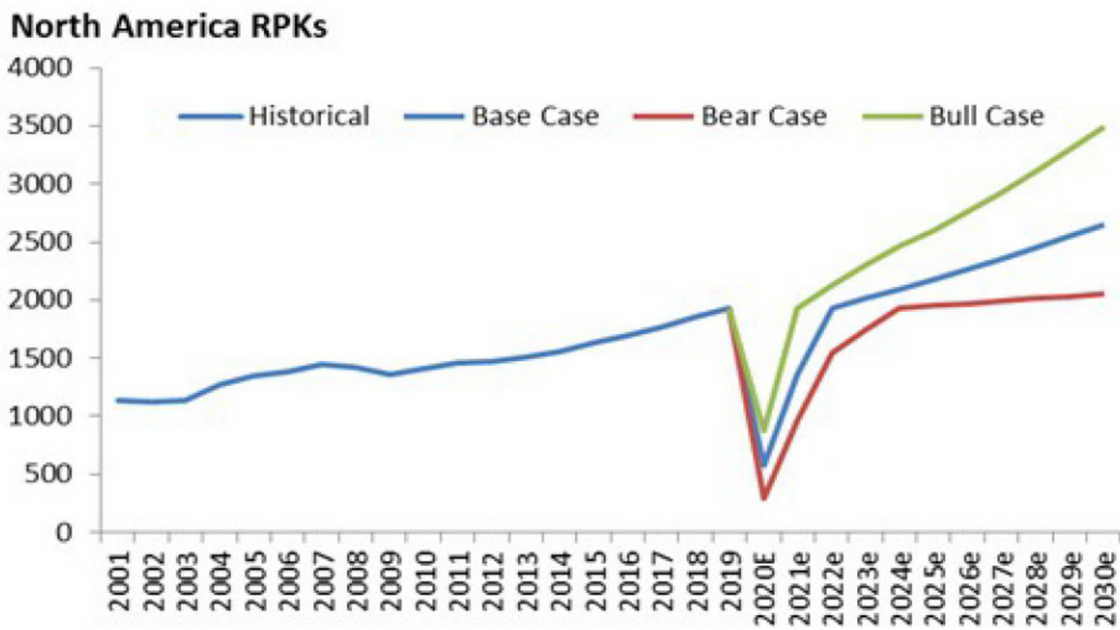
Jacobs (J), is the best value for growth name and has been making a string of great acquisitions and really transforming its business, a top operator. **Tetra Tech (TTEK)** has been a favorite in every annual outlook I believe and continues to perform well, carrying a premium valuation along with best-in-class growth and margins. Moving to the smaller names **Stantec (STN)** really stands out with strong growth, high margins, and strong FCF. **Construction Partners (ROAD)** a discovery from 2019 that trades at attractive valuation with high margins and an outsized growth profile with focus in the Southeastern US and operates in a fragmented industry. Two other very small caps with strong growth and margin profiles are **Great Lakes Dredge (GLDD)** which is benefitting from a growing number of new shipping vessels requiring deeper canals and **NV5 Global (NVEE)** as a leading provider of engineering and consulting services operating with five service verticals, Environmental, Infrastructure, Energy, Construction Quality, and Building Program Mgmt.

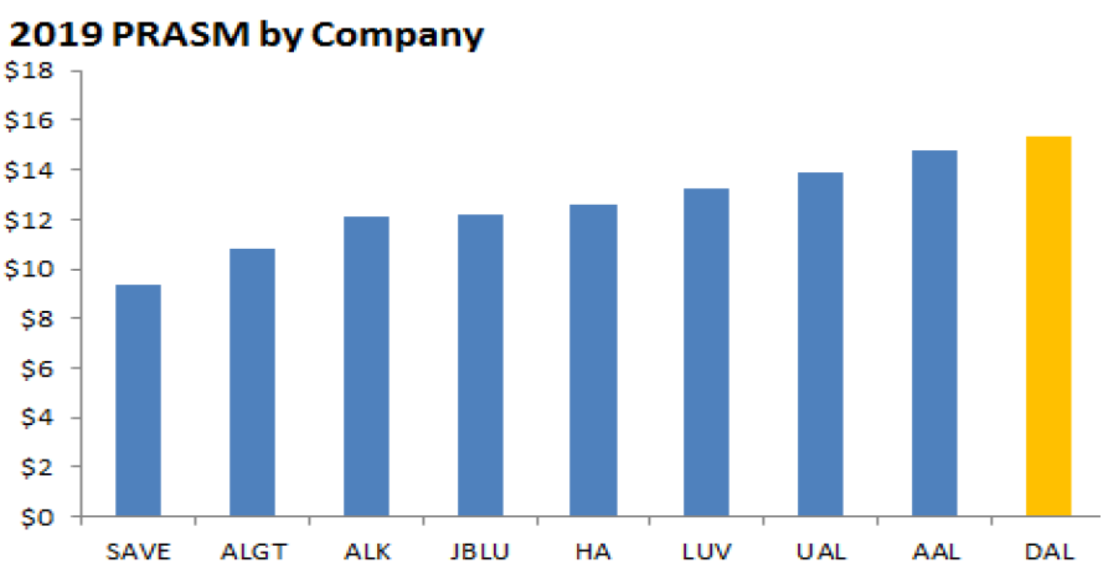
Transports

This group is straightforward in breaking down into groups, Airlines, Rails, and Freight/Shipping/Trucking. Clearly the Transports are closely tied to the economy.

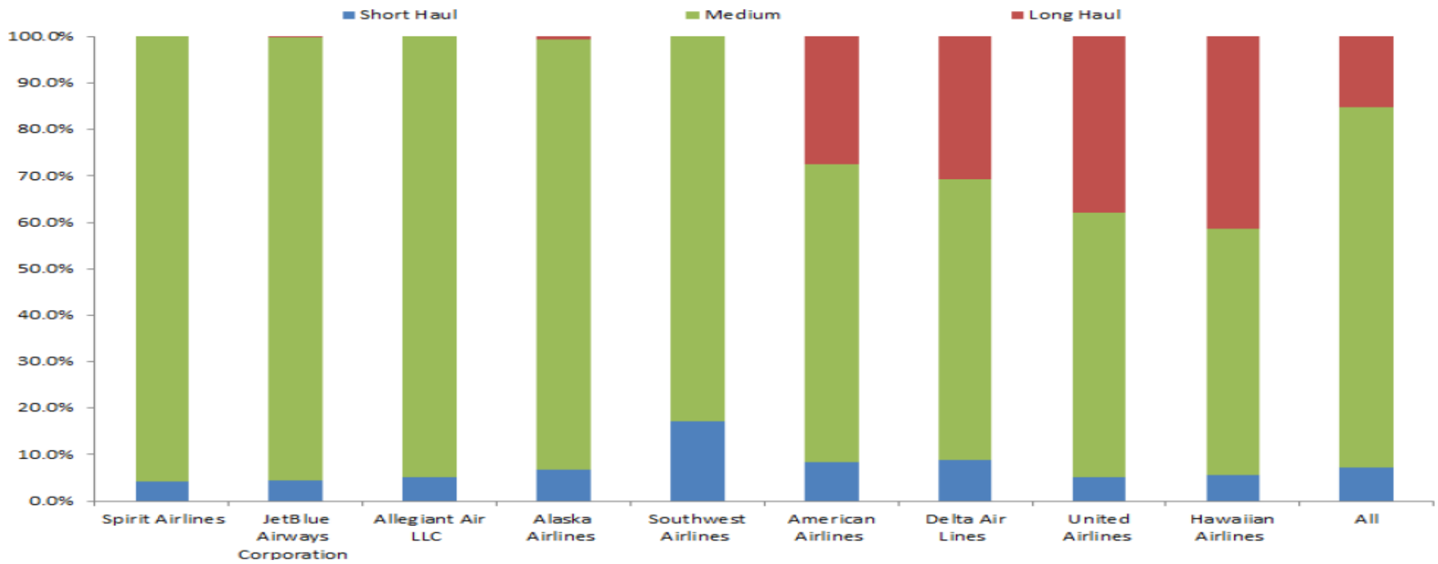
Airline Components: LUV, DAL, UAL, RYAAY, AAL, ALK, JBLU, CPA, ALGT, SAVE, SKYW, AZUL, GOL, HA, CEA, VLRS

The airline group has many of its own metrics that it reports monthly such as Passenger Revenue per Available Seat Mile (PRASM), Revenue Passenger Miles (RPM), Average Seat Mile (ASM), Cost per Available Seat Mile (CASM), and Load Factor. The group has often traded at a steep discount to other Industrials despite much stronger ROE, ROIC, Margins, and FCF/Share while having a strong economic moat protecting it from much new competition. Margins have recovered since the early 2000's as the group as consolidated and added on ancillary fees when traveling, yet sentiment across the group from investors remains fairly negative especially after the pandemic hurt the group badly as travel plummeted and longer term impacts of work-from-home hit the more profitable business travel segment hard.

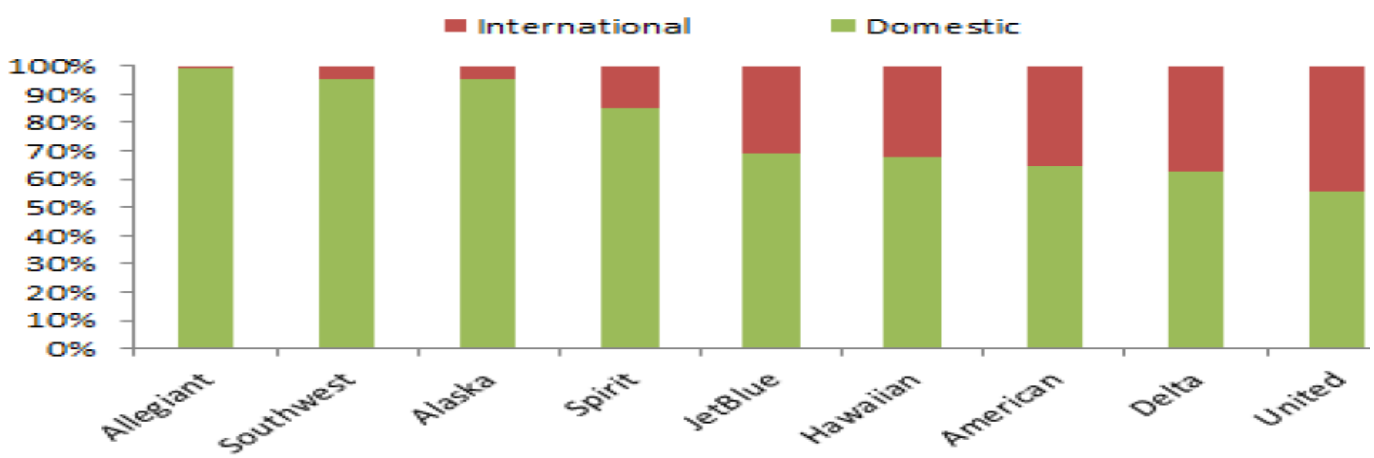




Some long-term structural themes that are likely to influence US Airlines include emissions regulations, ESG principles and competition from next-generation aviation technologies including UAVs (urban air vehicles or passenger drones) for short haul flights and hypersonic aircraft for long-haul flights. There is no strong correlation between Airline valuation and the most important fundamental drivers of earnings. This runs counter to the common perception that airline stocks largely trade solely on jet fuel prices or ASM or PRASM. This means that while a rising or falling industry tide will lift or sink all boats, idiosyncratic catalysts will separate beneficiaries from the challenged players. When the market is risk on, the lower quality stories will likely outperform but when the market is risk off, quality/defense will be preferred.



International vs. Domestic Exposure

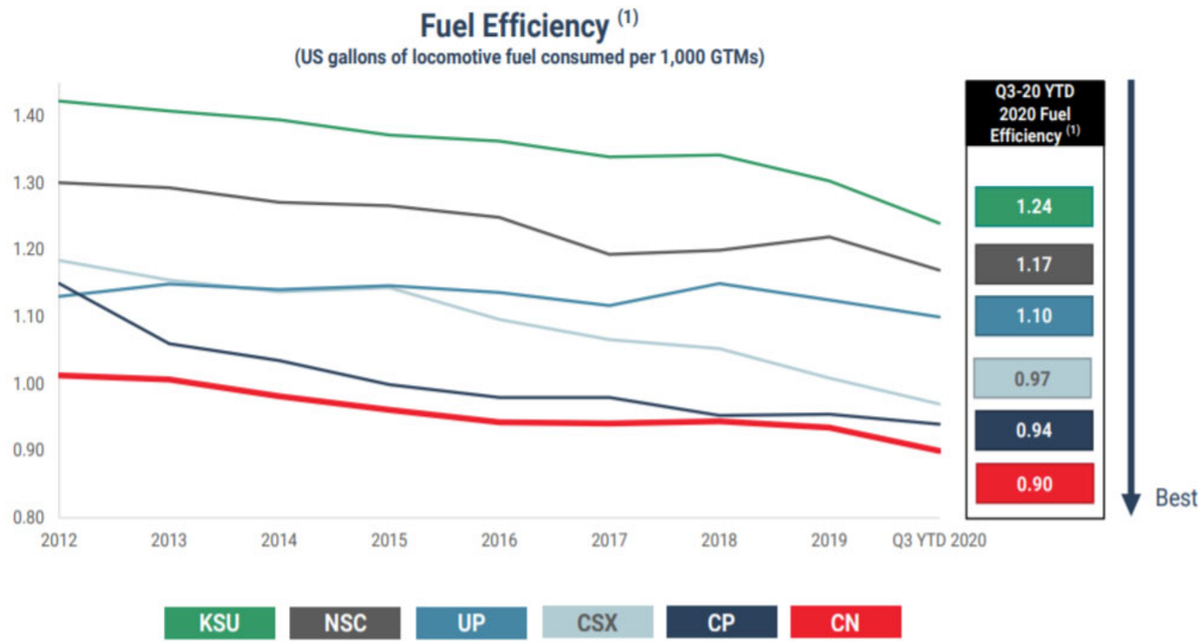


Rail Components: UNP, CNI, CSX, NSC, CP, KSU, TRN

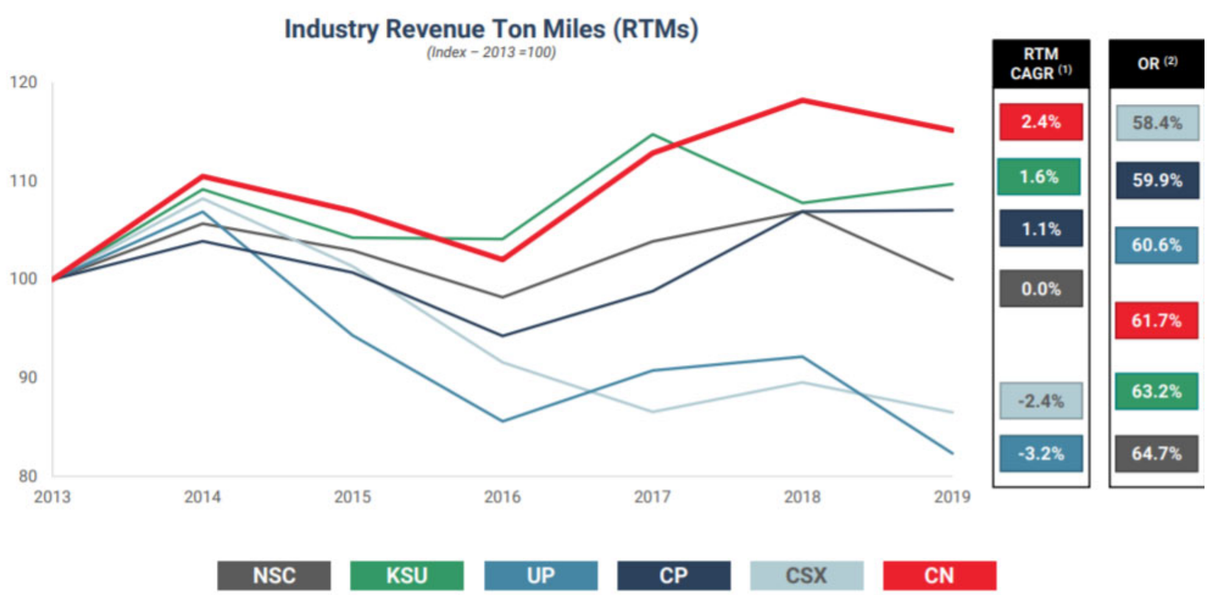
Economic Indicators

	Industrial Production	GDP	Housing Starts (MM)	Light Vehicle Sales (MM)	Imports of Goods	Exports of Goods
2019	0.9%	2.3%	1.30	16.9	0.5%	-0.1%
2020	**-8.6%**	**-4.8%**	**1.26**	**13.6**	**-12.5%**	**-12.9%**
2021	1.9%	3.1%	1.29	14.6	7.3%	9.9%

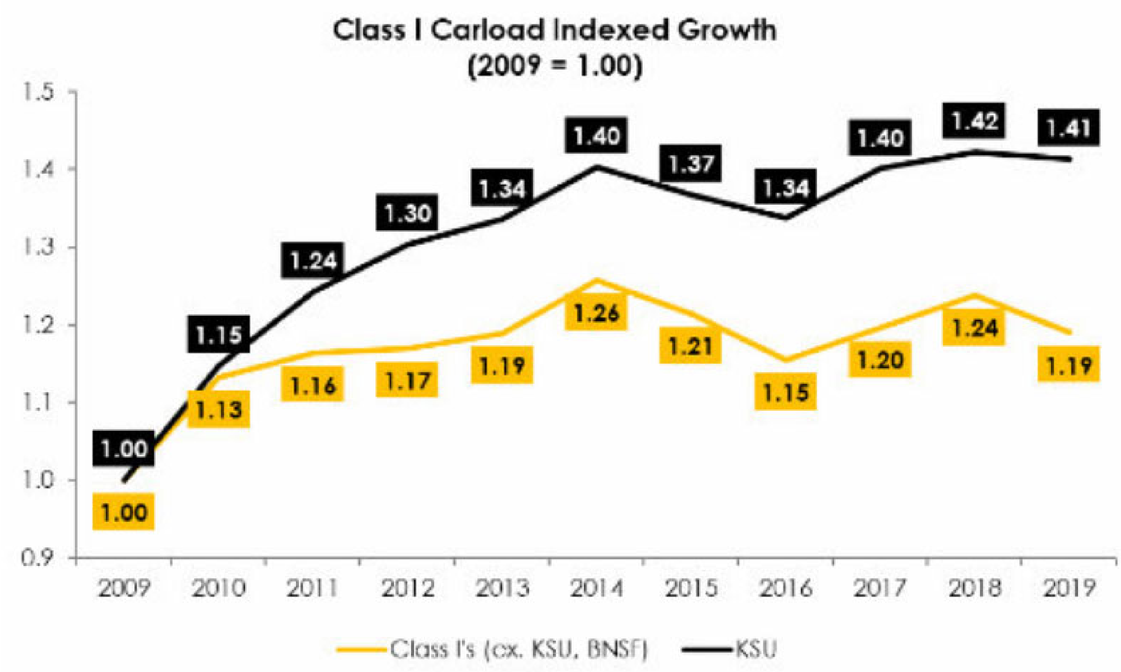
Rail operators enable the efficient flow of goods from producers to consumers and are therefore a vital part of the broad economy. With roots dating back to the 1800s, moving freight by rail is an old-line business that remains capital-intensive and cyclical. The rails haul an estimated 15% of tonnage in America, a fraction of the 70% or so moved by truckers. Fixed networks limit direct competition between railroads, while speed and flexibility often give truckers an advantage on short routes. Rails have the upper hand on long hauls, and can carry bulk freight, such as coal. The rails consume less fuel than trucks (to move equivalent freight loads), while emitting fewer carbon emissions. Running on almost 140,000 route miles, the U.S. freight rail network is widely considered the largest, safest, and most cost-efficient freight system in the world.



Rails saw sharp volume drops with the Q2 recession though Precision Rail continues to drive better efficiency across the group. The industry has seen consolidation over the years starting with Berkshire Hathaway buying BNSF in 2009, Brookfield Infrastructure buying Genesee & Wyoming in 2019, and a recent attempt by Blackstone to acquire KC Southern.

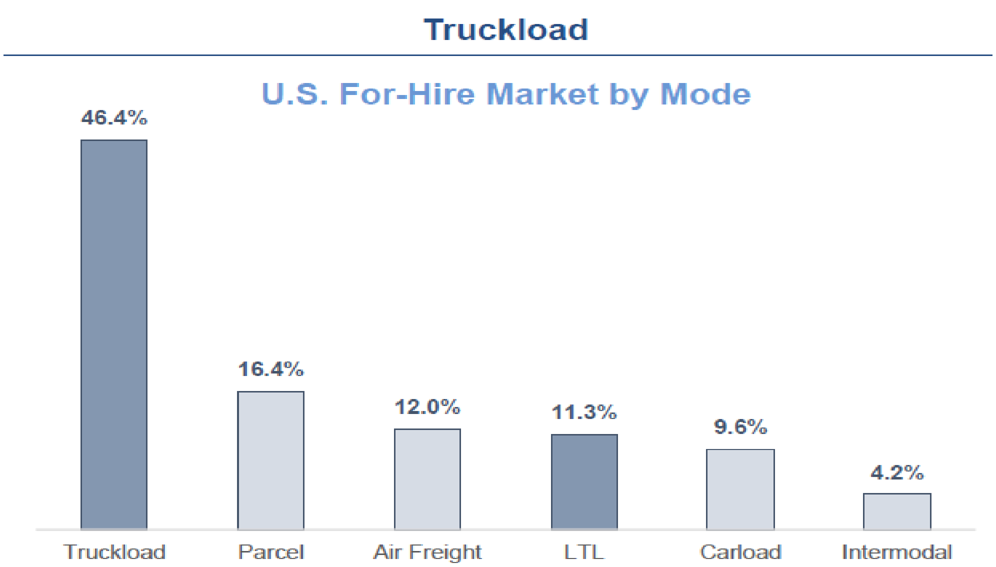


Rail is a group with a lot of great public information via weekly and monthly carloads and the ability to see which end-markets are seeing stronger volumes and relating that to the related rail company. The main groups are Petro/Chemicals, Metals/Minerals, Ag, Coal, Grain & fertilizer, Automotive, and Intermodal. The leading railroads submit weekly results to trade groups (such as the American Association of Railroads), and composite data is released on a regular basis. Operating Ratio is a key metric in this group which has seen a drastic improvement from PSR. Top-line growth is a fairly reliable indicator of underlying freight demand and of the railroad's ability to increase rates.

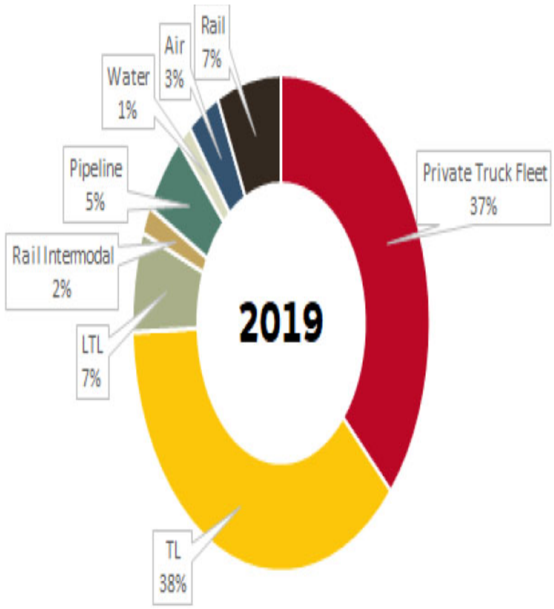


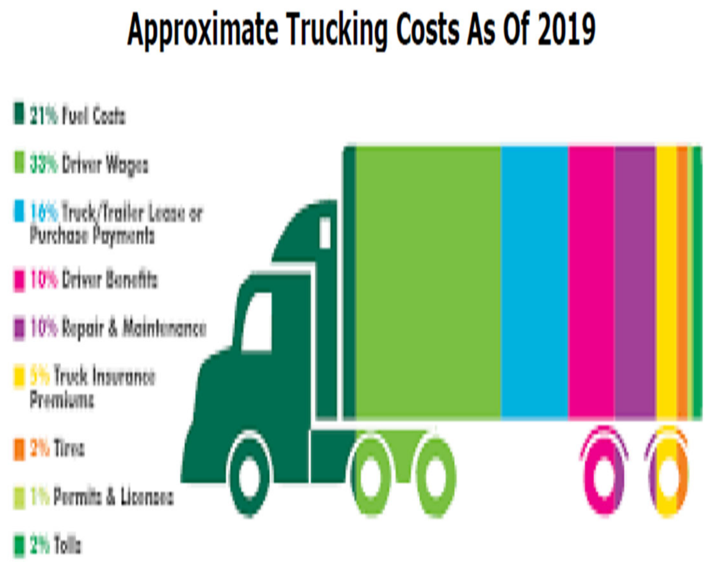
Trucking – Truckload Carriers: KNX, SNDR, USX, WERN, CVTI, HTLD, MRTN, PTSI, ULH, USAK

Trucking has been a strong performer with pricing strength on an improved supply/demand balance while cost cuts enhancing profitability and potential further improvements to come with autonomous & EV trucking trends. Trucking is a group that has a ton of great free resources online to track monthly rates and volumes, Cass Freight Index and ATA Truck Tonnage two of the most widely followed. The Cass Freight Index, which measures the monthly aggregate deliveries of U.S. freight, provides insight into freight trends as they relate to the overall economy and other economic supply chain indicators. The index including all domestic freight modes (including trucks), is derived from ~$28B in freight transactions processed by Cass Information Systems, Inc. annually, and represents a broad sampling of industries, including automotive, chemical, consumer packaged goods, food, heavy equipment, OEM, and retail.



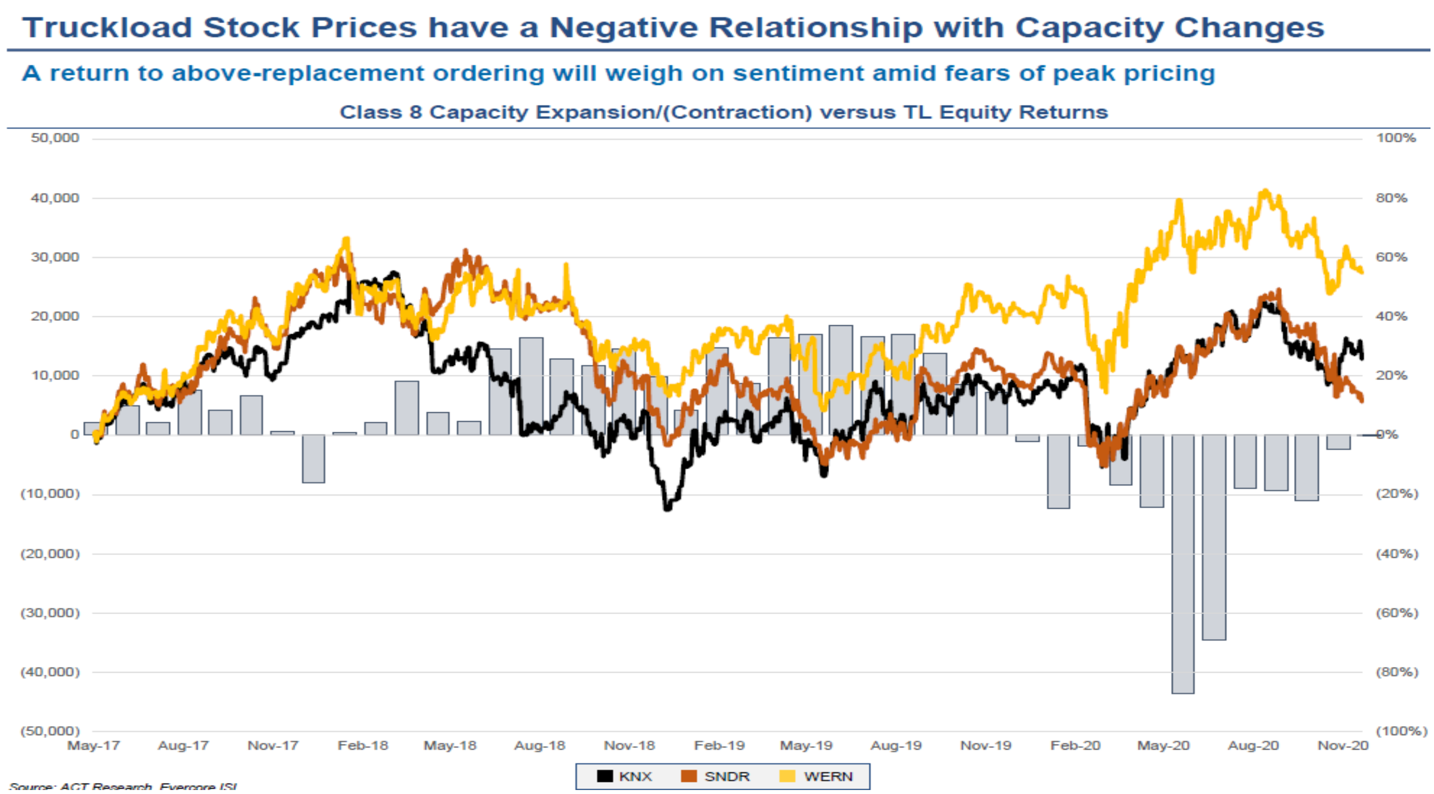
The Trucking & Logistics industry is large and wide-ranging, having generated nearly $800B in revenue in 2019 and moving 11.8B tons of freight. Yet LTL's share of Freight revenue stands at approximately only 6.5%, while private truck fleets still account for approximately 37% of that same Freight revenue mix. Consolidation should rive scale advantages: With larger fleets, both fixed and variable costs will likely be able to be spread and absorbed by a larger network, leading to a lower cost per unit/shipping route. Once economies of scale are established, additional industry benefits will follow, such as higher and structurally more sustainable pricing, as freight is consolidated into fewer fleets with more reliable networks.



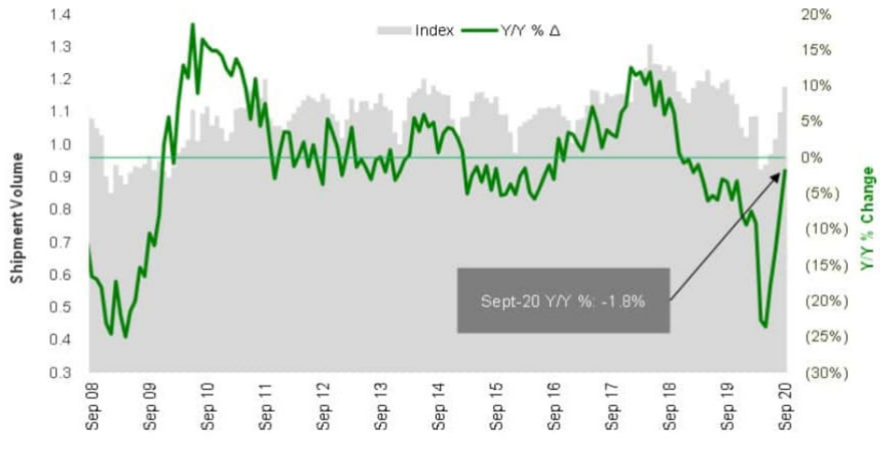


While not always largely recognized, trucking is one of the most essential industries that powers the economy. Transportation by rail, ship, and various other modes has its place in the supply chain, with trucking the most widely used mode of transport. In any given year, trucking represents anywhere from 75% to 80% of the U.S. freight bill. From a tonnage perspective, trucks represent nearly 71.4% of domestic tonnage, which is around 11.5 billion tons of product.

The industry is split into three categories: First is the Parcel segment, in which packages are usually small, weigh less than 150lbs, and usually have only a few items in the shipment. Such shipments typically go through a network of terminals and finally get routed to destination. Second is the Less-than-Truckload segment, which usually consists of more bulk shipments; however, there is usually not enough quantity of freight to require a full load on a truck. While usually less expensive and less capital intensive than Parcel service, LTL usually requires a product to go through at least a few terminals and checkpoints within a hub-and-spoke system. Finally, a full Truckload (TL) consists of shipments that can fill up an entire truck and take advantage of the cost of the transportation. While Parcel and LTL shipments operate more on the hub-and-spoke model, full Truckload carriers typically ship direct to consumer without the need for checkpoints, usually creating the fastest and most efficient segment of the Trucking & Logistics industry.



Cass Freight Index showed a trough in Q2 and acceleration in the following months, giving signs that the worst of the COVID-19 impact to freight transportation companies has passed and it's slowly recovering to pre-COVID levels. The LTL sub-sector has benefitted from the pandemic as volumes have either remained flat or increased as the sector is mostly considered an essential service by global authorities. Intermodal continues to have a modest recovery and is one of the sub-sectors with a healthy demand building into peak season.



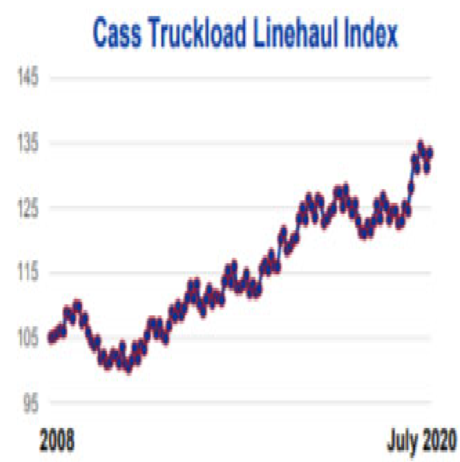
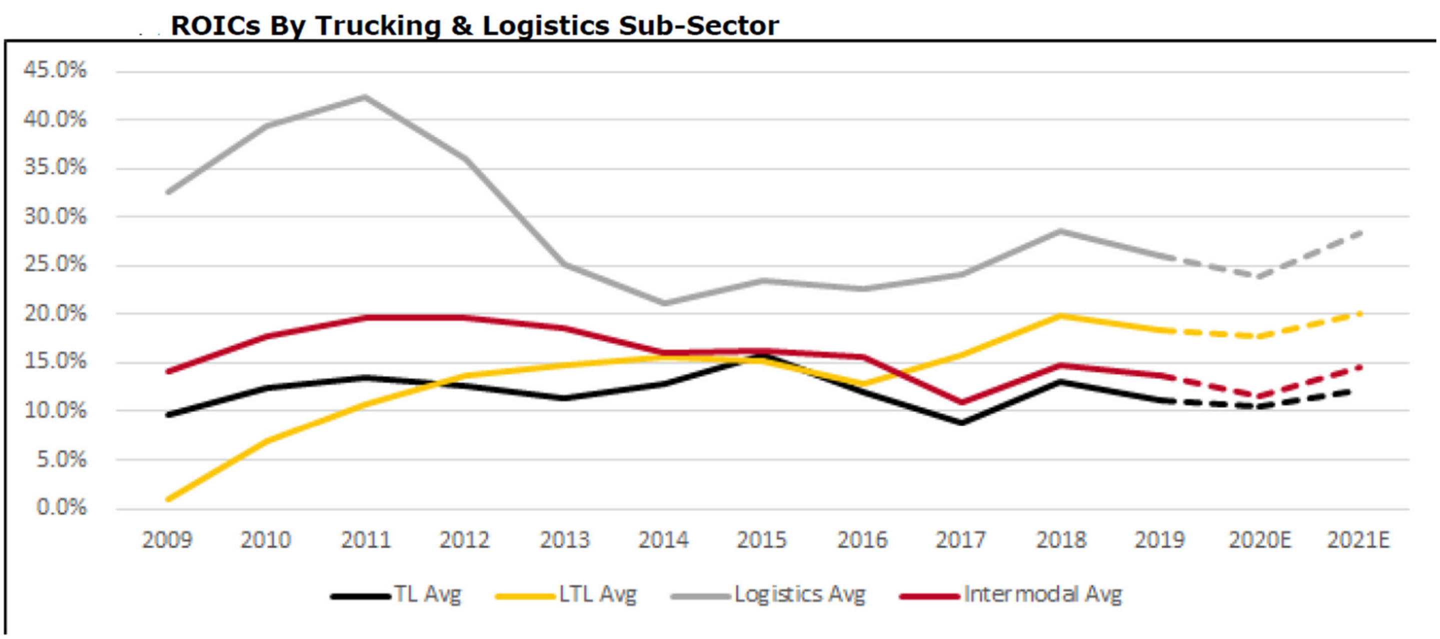


Chart: Cass Freight Index – Shipments (Cass Information Systems and Stifel Research)

ROIC should become an increasingly important financial metric for the Trucking & Logistics industry as the industry matures and becomes more focused on returns.



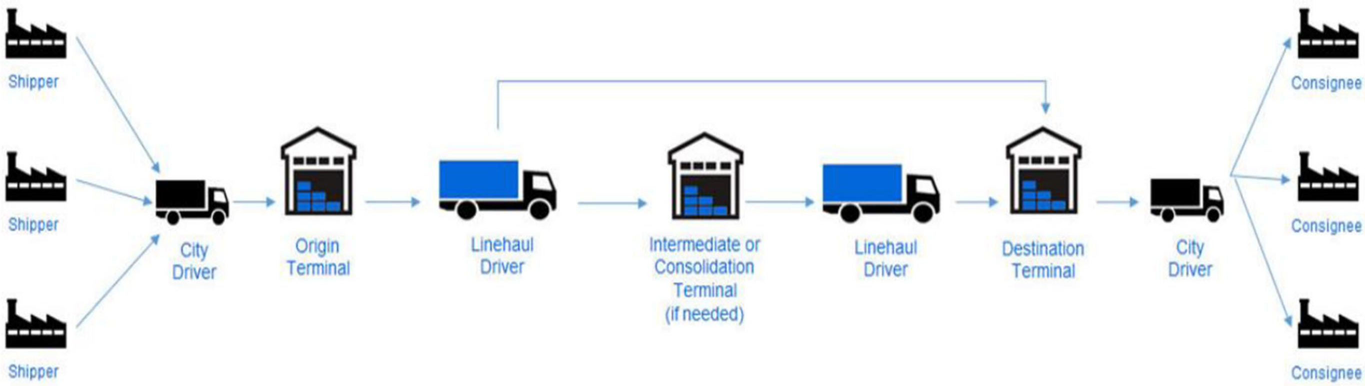
Trucking – Intermodal: HUBG, JBHT

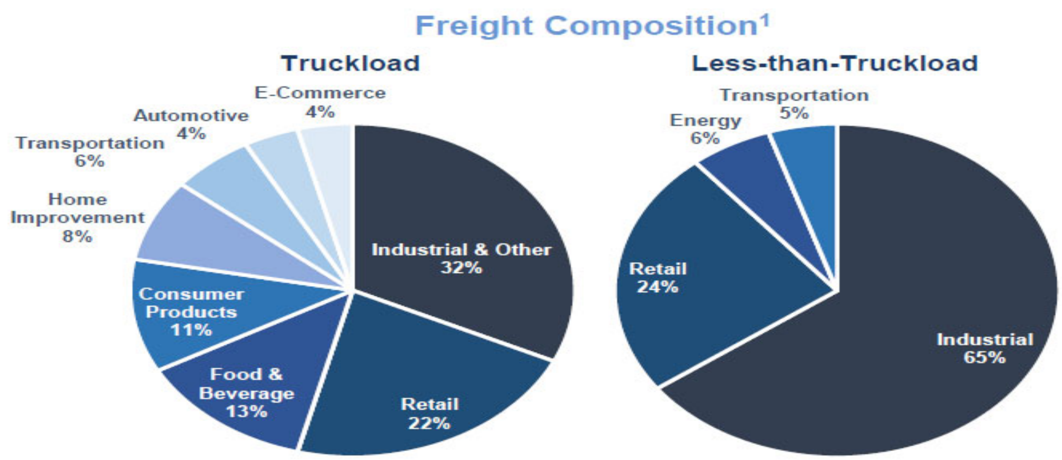
Trucking – LTL Carriers: ARCB, ODFL, SAIA, YRCW, TFII

Freight Brokers, Forwarders & Logistics: CHRW, XPO, LSTR, EXPD, ECHO, FWRD, RRTS, R, UHAL, RLGT, ZTO, CVLG

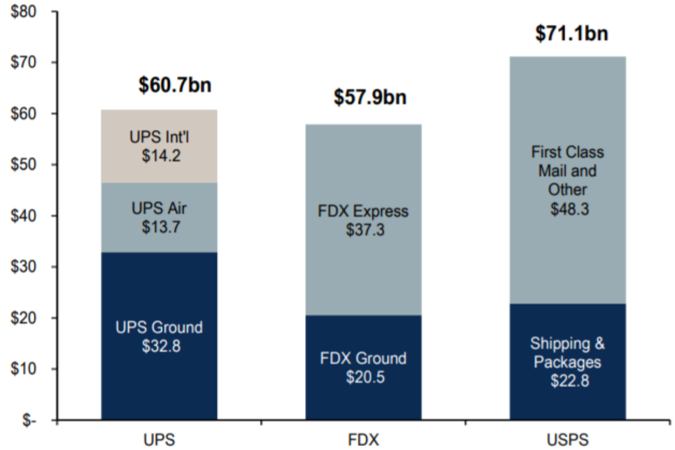
The total U.S. LTL market from a revenue perspective grew by 21% from 2015 through 2019, to $42.5B. Although it's certainly healthy for the industry to see growth over the prior five years, another trend when looking at the top 20 carriers, is revenue has grown 23%. FDX, SAIA, and ODFL have all increased share in this fragmented industry over that period. Strategic investments in warehouses, distribution systems and technology are starting to show benefits across the industry. Salaries, Wages & Benefits account for 44% of operating expenses in this group. The industry has seen multi-year improvements in the key metric operating ratio due to the strategic investments and scale. Industrial Production has a strong correlation with truck tonnage, with an R^2 of 0.78. When the economy is strong and strengthening, truck tonnage and what is being shipped will likely also be strong. LTL stocks are trading at all-time-high multiples, a multitude of growth opportunities and the eventual recovery of the U.S. industrial economy provides a much longer cyclical runway for this segment, with a likely multi-year period of double-digit earnings growth. High barriers to entry, continued network optimization and efficiency initiatives, improving service levels, and ample room for market share growth are attractive characteristics of the group. However, the eventual completion of inventory restocking tailwinds, the end of goods-only consumer spending, and the recent acceleration of Class 8 truck orders indicates that the market backdrop is presently as good as it gets, and that pricing may hit an inflection point soon and begin to ease as early as mid-'21. A more broad-based economic expansion period stands to benefit LTL carriers more directly on a relative basis, given a greater percentage of cargo handling in that segment associated with industrial goods. Industrial-related goods represent roughly 60-65% of the LTL cargo mix versus only 20-25% for TL carriers.

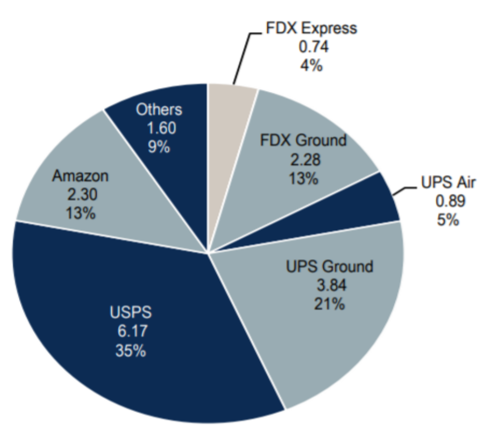
LTL Business Network





Airfreight: FDX, UPS, ATSG, AAWW





Tankers & Dry Bulk: KEX, MATX, EURN, FRO, DHT, GLNG, SFL, CMRE, STNG, CMRE, CKH, GOGL, NAT, INSW, KNOP, TNK, TDW

Global economic expansion is the main driver of world shipping demand as well as a strong global trade environment. The global health and economic crisis triggered by the pandemic has upended the landscape for maritime transport and trade and significantly affected growth prospects. UNCTAD projects the volume of international maritime trade to fall by 4.1 per cent in 2020. Amid supply-chain disruptions, demand contractions and global economic uncertainty caused by the pandemic, the global economy was severely affected by a twin supply and demand shock. At the beginning of 2020, the total world fleet amounted to 98,140 commercial ships of 100 gross tons and above, equivalent to a capacity of 2.06 billion dwt. Gas carriers experienced the fasted growth, followed by oil tankers, bulk carriers and container ships.

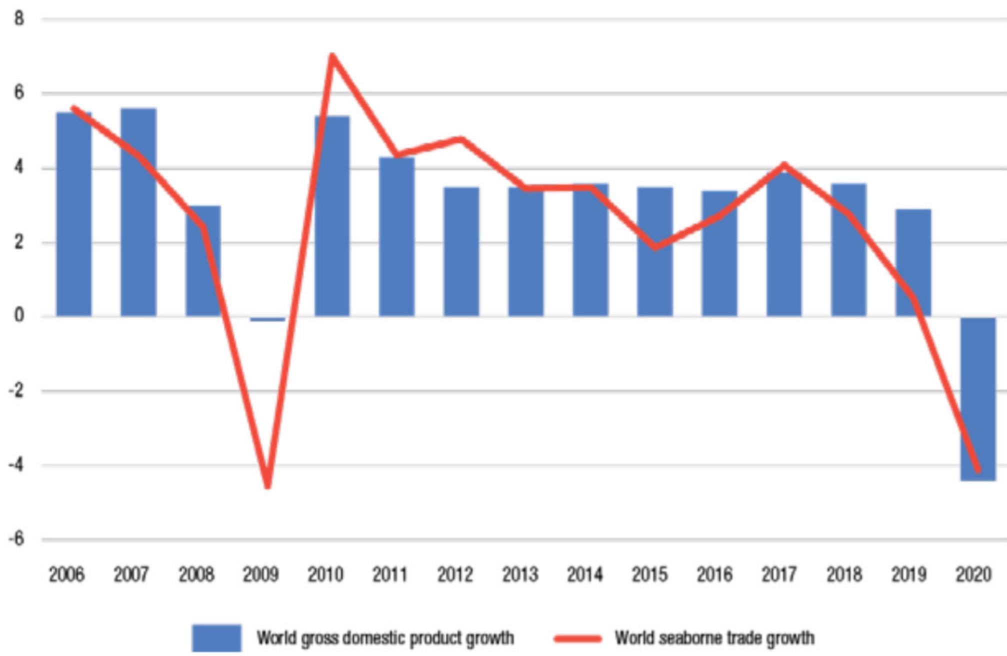
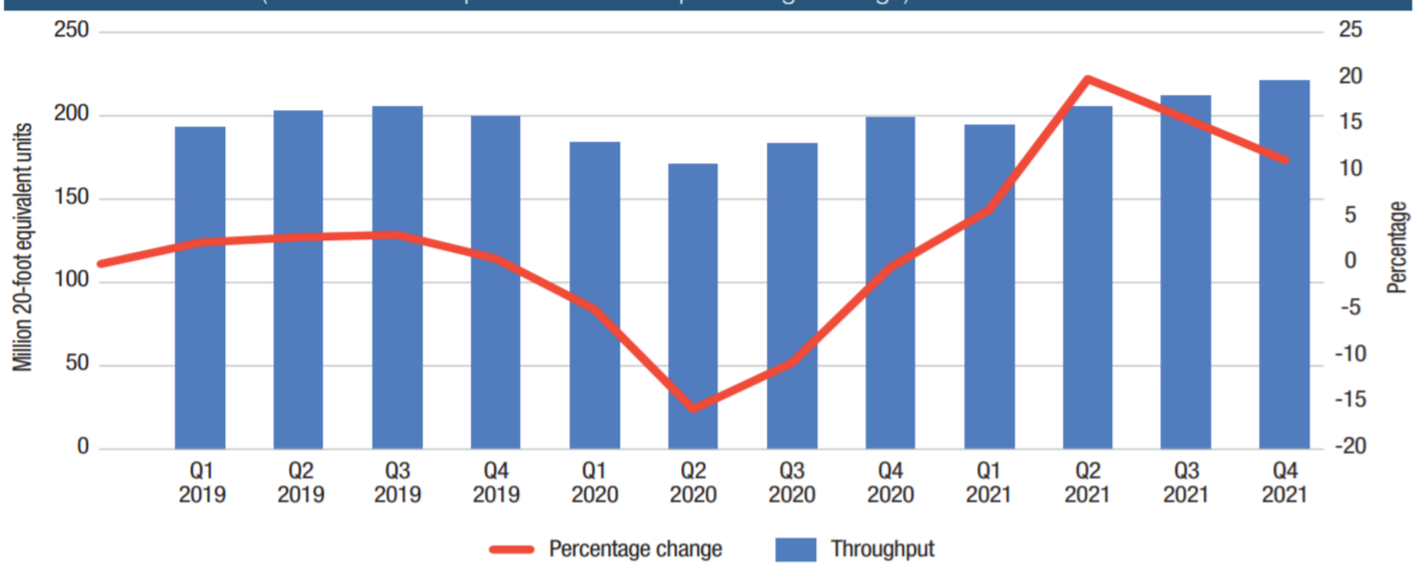


Figure 1.14 World port-handling forecast, 2019–2021
(Million 20-foot equivalent units and percentage change)



Crude oil tankers have a vital role to play within the energy value chain. Their main role is to transport crude oil from production point to refinery, although they are also sometimes used for storing crude oil postproduction. Crude tankers can also be used for carrying oil products such as fuel oil. Any clean products that come out of the refinery are carried on 'clean' or 'product' tankers, which are smaller in size due to the smaller parcel sizes in which these products are traded. Crude oil tankers come in various sizes, the biggest standard size being a Very Large Crude Carrier – or 'VLCC'. These tankers take up to 2 million barrels of crude oil per shipment, while the second largest size is the 'Suezmax' which takes around half of that amount and is the largest size ship that can sail through the Suez Canal fully laden. The smallest size of dedicated crude oil tankers is an 'Aframax' which can carry around 600,000 barrels of oil. The economic lifespan of an oil tanker has historically been 25 years, although more recently this has dropped closer to 20 years. A ship owner chartering his vessel to a customer is paid 'freight'; this is the gross revenue agreed with the charterer to cover the entire voyage from port of loading to port of discharge. This revenue is used to cover the cost for the owner to undertake the voyage, the cost of operating the vessel, any interest payments to loan providers and other costs associated with owning a ship. Certain fixed costs vary between shipping companies, most important the purchase price, and each will therefore have their individual breakeven cost at which it becomes profitable to run the vessels. However once these fixed costs are covered, all additional revenue results in profit. Earnings are reported by companies and market watchers in terms of 'dollars per day' also known as the Time Charter Equivalent (TCE).

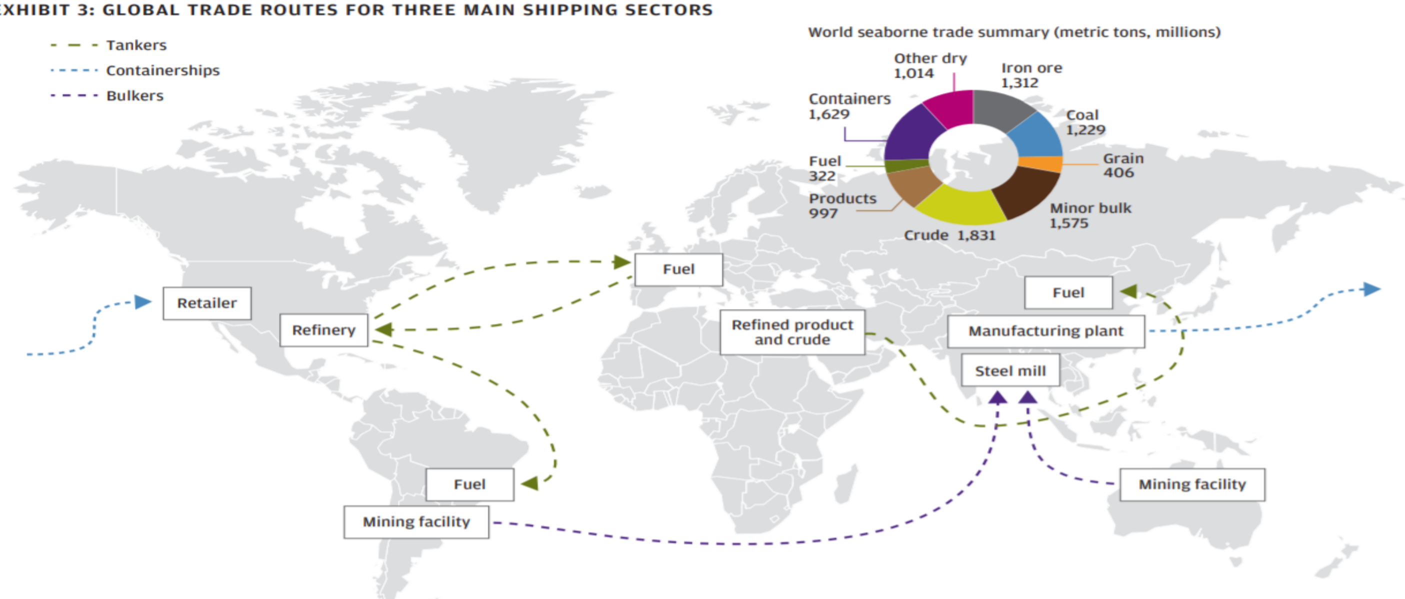
Tanker shipping is a business to business environment with a number of key customers who regard the shipping element as an integral part of their logistical chain. These key customers are the oil majors – both National Oil Companies (e.g. Unipec, Saudi Aramco, Petrobras) and International Oil Companies (e.g. Total, Shell and Chevron) – and there are trading houses such as Trafigura and Glencore, and large refiners. The oil majors generally require ships to take oil or to deliver to or from third party refineries oil to their customers. The demand for oil is an obvious driver of crude tanker demand; the more oil that is needed around the world, the bigger the demand for moving this oil from production to refinery. Clearly for any oil transportation business the supply of oil is critical to the status of its markets. Oil supply dynamics have undergone a transformation in the past decade, away from being very Middle East focused to having a more diverse supply base, in particular with the development of U.S. shale oil. This quick-to-production process of shale oil (less than six months) has made global oil production far more responsive to short-term changes in demand.

Perhaps the key driver of tanker markets is vessel supply. This is the ultimate driver of market fluctuation; when the market is in short supply of ships, the cost of chartering a ship – the freight – goes up but of course down if there are too many ships available. Historically, there has been a visible degree of seasonality in the tanker market as freight rates have tended to perform better during the first quarter and the fourth quarter of a calendar year. With 90% of the global population living in the northern hemisphere, more oil is required during the northern hemisphere winter hence more oil is consumed during these quarters. Tanker rates surged in March and April 2020, reflecting growing demand for floating storage. The oil market was in a state of super contango where front-month prices were much lower than prices in future months, making storing oil for future sales profitable.

Tanker shipping is a highly cyclical business with freight rates driven by numerous factors, but in the medium to long-term vessel supply and demand are the main drivers. Vessel supply is the one factor controlled by the shipping industry and the supply of vessels is impacted largely by capital flows into and out of the sector, but also availability of financing from banks and other investors. A tanker market cycle generally begins with an oversupplied market where too many ships depress any earnings and therefore the capital flows out of the sector.

The maritime network: The web that ties the world together

EXHIBIT 3: GLOBAL TRADE ROUTES FOR THREE MAIN SHIPPING SECTORS



Management Commentary

United (UAL) on consolidation: "Yes, this is a cyclical industry, and we get reminded of that periodically. And nothing healthier for a cyclical industry than to go through a downturn and see some consolidation as a result of it. And I think it is inevitable that you will see consolidation internationally. It's inevitable. It's a question of pacing, and we'll have to see what the recovery looks like and what the shape of the recovery is. But this has been a long time coming. I think the commercial aerospace cycle was in its 12th year of an upturn. So certainly, nobody envisioned a crisis of this magnitude, but we will see consolidation. And one thing that I think is outside of the consensus, Dave, that I think is going to be really consequential on the other side is you'll see more consolidation in the international lanes than I think you'll see in the domestic market. And listen, if the crisis persists through 2021 and dips its tail into 2022, maybe you'll even see some consolidation domestically, certainly among the second- and third-tier airlines in the U.S., but internationally, inevitable. And I would -- you didn't ask this, but I want to highlight it. If you think about the number of wide-body aircraft that have been permanently grounded around the world and what that means to the supply response when demand comes back to those international lanes, you can see a setup for a real nice industry structure for several years."

Union Pacific (UNP) on Q4 volumes tracking: "With Thanksgiving last week and Christmas and New Year is coming up, we do expect to see the normal sequential seasonal impact to our volumes this month. Fourth quarter volumes are currently up about 3% year-over-year as we continue to see growth in the premium sector and improving sequential volumes in both bulk and industrial products. Looking a little deeper to each business team. Premium is currently up 10% versus fourth quarter 2019. That's driven by growth in our Intermodal business, which is up 14%. Intermodal volumes continue to be led by e-commerce or parcel and inventory restocking that's spurred by the holiday shopping season. Automotive volumes are only down 2% quarter-to-date, and that shows a slow industry recovery on their part. Our bulk business is flat as coal continues to be a headwind, down around 17% quarter to date. However, that's been mostly offset by grain exports. That's grain and grain products, are up 18%. Finally, our industrial business was down 6%, demonstrating some sequential improvement. While Energy markets remained challenged, with crude and sand down 40% and 25%, respectively. A strong housing market is driving our forest products line up 10%."

CSX (CSX) on Intermodal: "Yes. Certainly, when you look at intermodal, that's been obviously in the high single digits around 9%, 10%. We're trending right now, it's a testament to what the consumer market is doing right now. We talk about low inventories, the restocking that's taking place. My youngest son won't get his bike from Santa this year because there's no bikes available. But we have -- there's a lot of replenishment. We think -- I think Mark talked about it at the last conference, we probably see some continued momentum into the first quarter. We'll see beyond that where the economy goes. But there's clearly a lot of restocking. You can see the poor data, I know you look at that all the time. It's -- we're hitting record days of volume here on our intermodal side, despite all the things that we've done over the last 2 years when we rationalized some of the lanes. So it's a testament to what we've done. Now we're handling more volume than we ever have. So it makes me -- I think when we look back, we did all the right things before and really optimizing the intermodal network and what Jamie was able to do, creating this point-to-point network was pretty incredible. And I think it's paying huge dividends right now."

Werner (WERN) on market conditions: "The shortest and deepest recession in U.S. economic history in the second quarter was followed by a steep rebound as robust truckload freight demand with our customers, combined with a stubbornly tight driver market, produced strong truckload freight market conditions. While there remain significant uncertainties ahead related to COVID-19 and its effect on the economy, we are increasingly confident that demand for our services will be strong for the fourth quarter and heading into 2021, owing to 2 overarching trends: one, driver supply constraints continue to persist; and two, many of our key customers are generating strong sales that significantly reduced their inventories. Inventory restocking will occur, and we believe this will continue over multiple quarters."

United Parcel (UPS) on ecommerce: "We don't think the penetration of e-commerce retail sales will decline, even after the pandemic, but it isn't just retail. Our customers across all business segments are reinventing the ways they do business. We've heard from customers that speed and ease are most important, so we are focused on delivering the capabilities that matter most to our customers."

XPO (XPO) discussing Logistics industry and market opportunity: "The logistics industry, as you all know, is getting more complex and operators with scale and technology and industry efficacy for that combination have unique opportunity to capture market share and to build incremental profit opportunity. Our own share of the global logistics market, really adjusted in the regions that we operate within, is relatively small, really less than 2%, which creates a very strong market share and revenue opportunity. There are 2 trends driving the industry opportunity today. The first is increased customer demand for third-party supply chain management and that has continued to grow and probably accelerate with the pandemic with brought supply chain visibility to the top of mind for senior management and for many of our customers. Also, there's the increased deployment of tech and data management across supply chains, which is helping companies to price more efficiently and to better manage their fleets and their labor. Now deep diving into e-comm. E-commerce is one of our largest verticals, and it is our fastest-growing vertical. We have exposure throughout our company, but it's focused in 2 lines of business. One is Erik's area of operation currently, our last mile for heavy goods. We are the largest provider of last mile services for heavy goods in the U.S., about 50% larger than our next largest competitor."

OptionsHawk Executive Summary and Top Picks

The Airline group is clearly a mess with the severe slowdown in Travel when assessing the financial numbers so best to take a more qualitative approach, focusing on where the demand will return first and companies with strong operating histories and balance sheets to withstand the downturn. The domestic leisure focused names are likely to see the first demand return and also companies with strong loyalty programs and medium length hauls. **Southwest (LUV)** is the top regional play with an industry-best balance sheet and strong loyalty program. **Delta (DAL)** is the best-in-class legacy airliner. **Alaska Air (ALK)** is a potential consolidation target and screens well to peers. Among the International airlines **Copa (CPA)** and small cap **Controladora Vuela (VLRS)** stand out with strong margins and FCF.

In Rails valuations are so similar across the entire group so really need to focus on the metrics to identify the best names to own. **Canadian Pacific (CP)** has been posting the best numbers in this group during a tough environment and management continues to utilize tech for operational improvements. **CSX (CSX)** looks attractive into 2021 as the cheapest valuation with the highest margins and strongest FCF margin. It will be interesting to see if a deal gets done for **KC Southern (KSU)** after it rejected a Blackstone offer in 2020.

Moving to Trucking in the Truckload (TL) group two small cap names screen best across the group with higher margins, stronger EBITDA and revenue growth, and higher returns on capital, with **Heartland (HTLD)** and **Marten (MRTN)**. In LTL and Intermodal **Old Dominion (ODFL)** is the best-in-class operator in this entire group, its operating ratio far superior to peers and delivers excellent growth and margins, simply the best. **SAIA (SAIA)** has always screened strong and shares have nearly doubled in 2020, valuation now pricey, but still a top combination of bottom/top-line growth with high returns on capital and an excellent balance sheet.

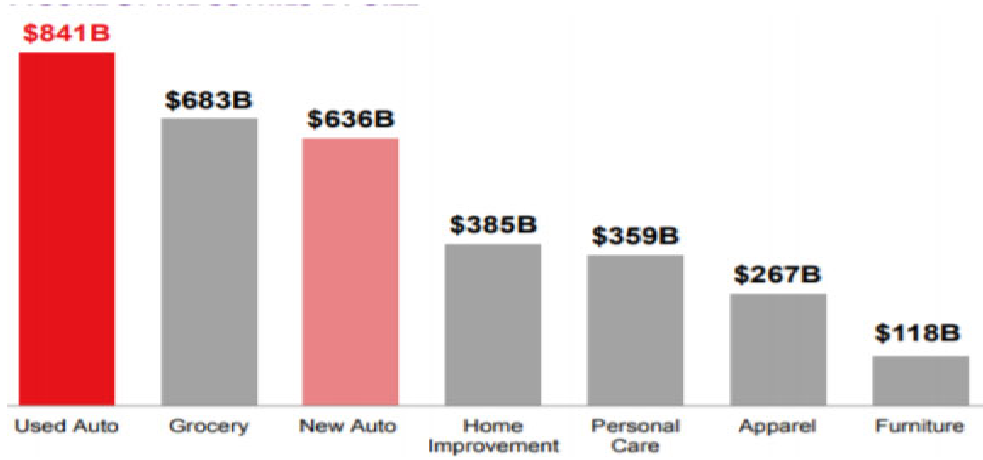
Among the big two Air Freight and Parcel Delivery plays **UPS (UPS)** is clearly the best-in-class operator with higher margins, returns on capital and a stronger balance sheet though **Fed-Ex (FDX)** outperformed UPS shares 2X in 2020 and trades at a 20% discount as it looks to close the margin gap. They are both quality and positioned well in the ecommerce boom and well as having pricing strength and must favor **UPS**. **ZTO Express (ZTO)** is a high-quality Chinese play in logistics with impressive growth and margins. In the mid-cap market cap tier **Expeditors (EXPD)** is the high-quality operator with very high ROIC and strong FCF while **XPO (XPO)** remains a favorite for its positioning in ecommerce & last mile while also undergoing a company split. **AMERCO (UHAL)** is coming off a blowout quarter and should continue to thrive on the major flock out of cities with the work-from-home trend. For the small caps both **Atlas Air (AAWW)** and **Air Transport (ATSG)** are beneficiaries of relationships with Amazon, the former could be a buyout play with Amazon owning a stake, and the latter has delivered much better growth and returns on capital. **Forward Air (FWRD)** a name that screened well last year and did not perform all that great in 2020, slightly positive on the year, but still looks attractive as an asset-light play with exposure to refrigerated and temperature-controlled logistic solutions for pharmaceutical and life-science companies.

The Tanker and Dry Bulk group is full of small cap names, **Kirby (KEX)** the largest and most stable could see a recovery in 2021 with improving energy and chemical markets, but not overly compelling. If I had to choose one, **DHT (DHT)** is a pure VLCC play with best in class cost structure though its results very dependent on volatile tanker rates.

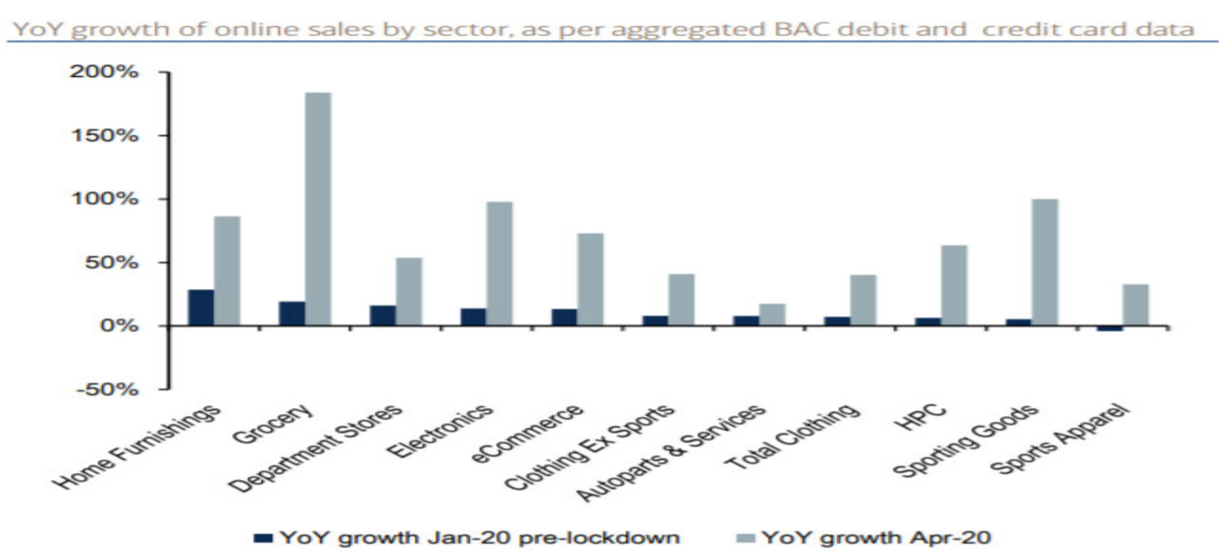
Consumer Discretionary/Services: *The consumer discretionary group as represented by XLY is +25% YTD, outperforming markets, though with Amazon 22% of that ETF, not a great representation. From a broader perspective the consumer was very healthy until the pandemic hit and caused a shift back to things over experiences for consumer spending preferences. We saw a rapid acceleration in ecommerce and Direct-to-Consumer becoming popular across a number of industries, including Media where various new streaming platforms were announced. Restaurants were particularly hit hard but those that invested in technology and were able to quickly pivot to a delivery/takeout model thrived and across a lot of these groups an ongoing theme will be market share gains as many small businesses were forced to closed. Travel & Leisure is a group that saw the harshest impact and with promising vaccines expected in 2021, a return to normalcy may be closer than first thought. This is a group where there are a number of company-specific stories and more bifurcation where stock selection is critical. The discretionary sector is also one that underperforms during Fed tightening cycles, so that is another factor to keep an eye on. Millennials and Generation Z are two groups entering prime earning/spending years that are driving a lot of the favorable growth trends.*

<u>Retail and Apparel Stores</u>

This is a large group that can be broken down into Department/Discount Stores, Apparel, Auto & Home, and Specialty (Electronics, Jewelry, Sporting, and Office). Some industry-specific ratios are often utilized such as same store comparable sales, square footage growth, and looking at revenues/square foot. The group is often broken down into hardline and Softline, referring literally to the merchandise, and basically putting clothing stores into Softline and the rest into Hardline.



Brick and mortar retail was dealt another blow in 2020 as the pandemic shuttered many stores and accelerated the demise of physical stores and the growth in ecommerce. However, retailers with strong balance sheets and cash necessary to make investments in the customer experience are positioned stronger coming out of the pandemic. Retailers with traits such as exclusive products & distribution partners, store experience, niche products, and structural impediments to online competition are the ones able to survive in the era of Amazon.

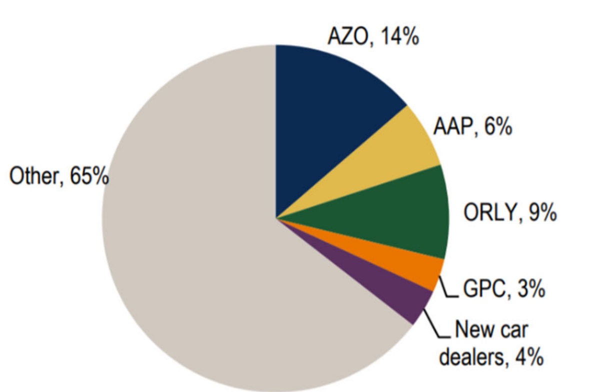


Auto Components: AAP, AZO, GPC, MNRO, ORLY

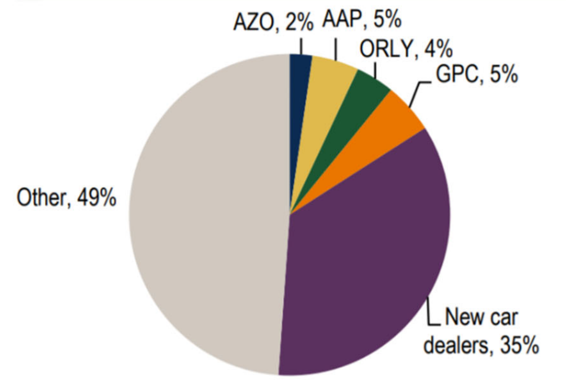
With approximately 281 million vehicles in operation as of 2019, the participants in the auto aftermarket parts & repair industry play a vital role in maintaining the health of the vehicle fleet. The largest companies, which control approximately one-third of the do-it-yourself (DIY) market and about one-sixth of the do-it-for-me (DIFM) market, are AutoZone (AZO), O'Reilly Automotive (ORLY), Advance Auto Parts (AAP), and Genuine Parts Company (GPC).

Brick and mortar auto part retailers have been traditionally focused on two types of customer: "Do it Yourself" (DIY) and "Do it For Me" (DIFM Professional Providers). The top three companies have had competitive advantages from the threat of disruptive online retailers primarily through relationship networks with professional DIFM providers, and efficiencies with fully scaled nationwide same-day delivery. This segment has been able to capitalize on larger profits on auto parts by up-selling different warranties on store aftermarket parts.

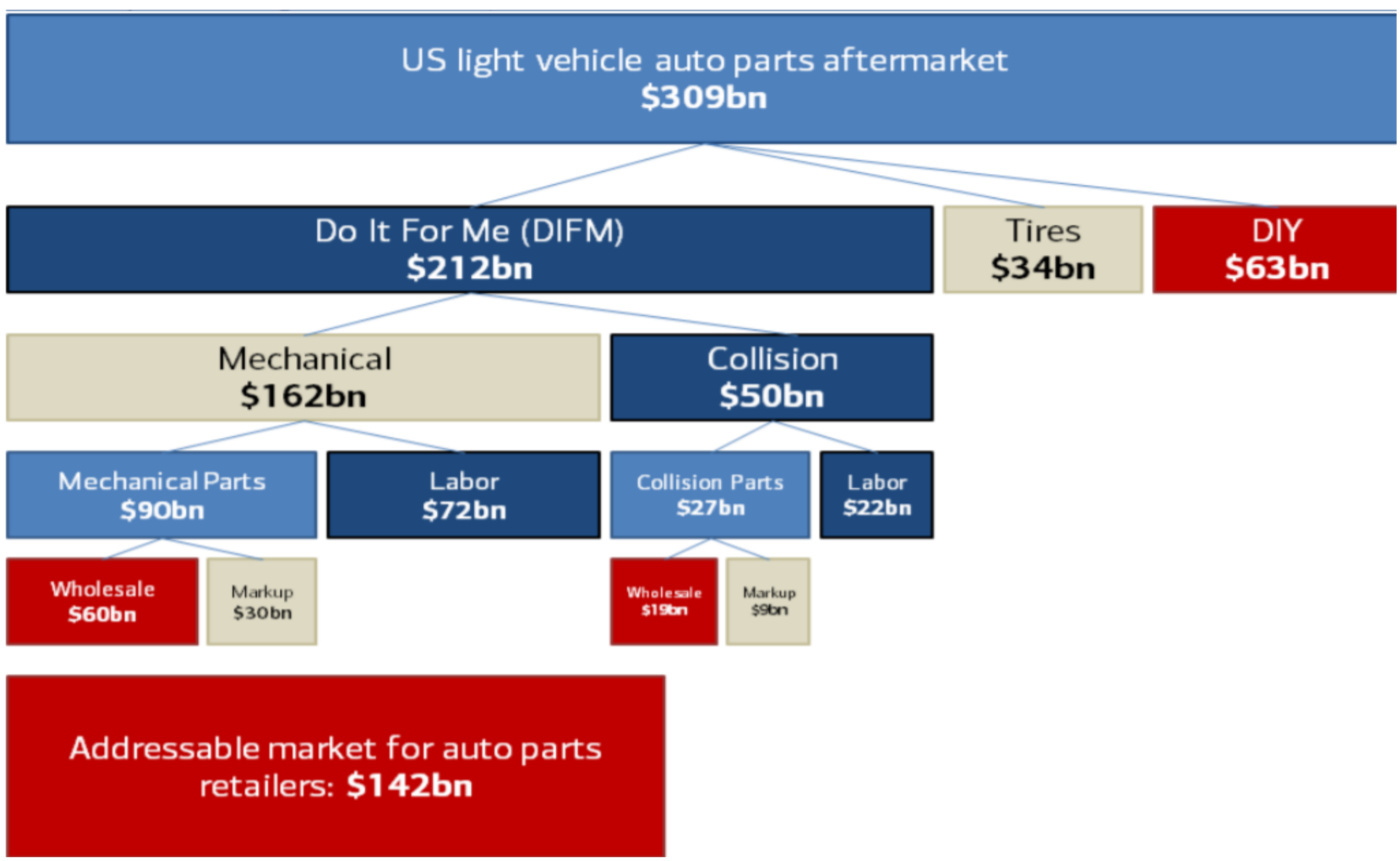
Market share of the $63bn US DIY auto parts retail market



Market share of the $117bn US DIFM auto parts market

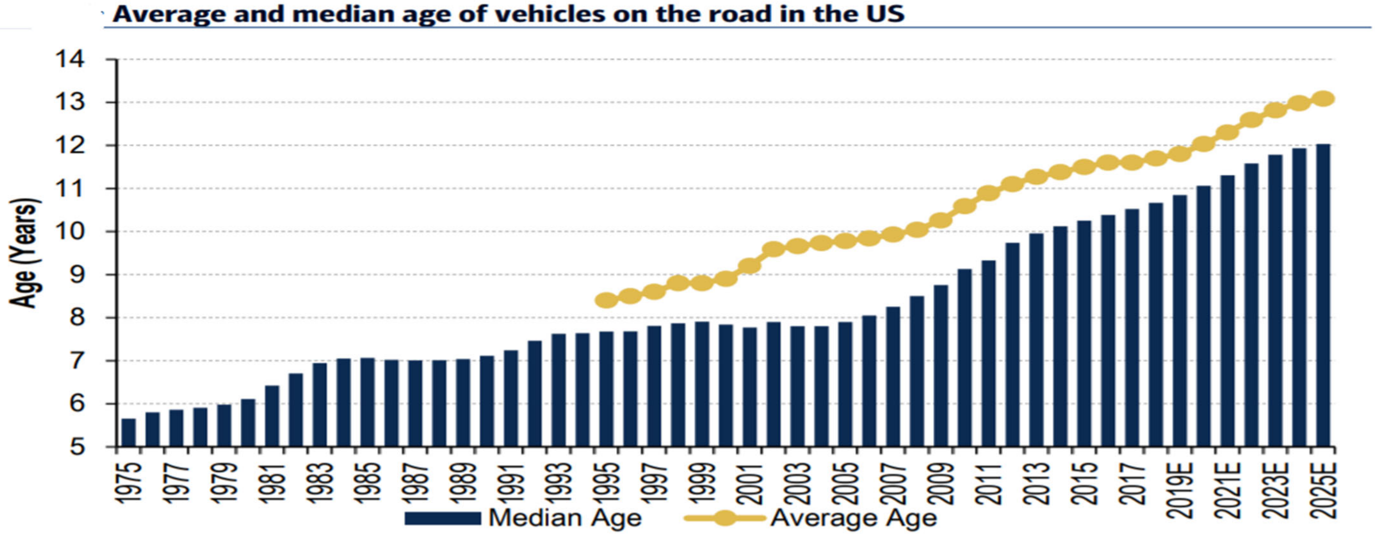


Aftermarket auto parts and repair represents a market opportunity of over $300B in the US, with the do-it-for-me (DIFM) market accounting for about $212B (including labor, approximately $117B excluding labor), do-it-yourself (DIY) at $63B, and tire sales of $34B.



A significant majority of the demand in the automotive aftermarket is nondiscretionary and the group has tended to perform well in recessionary environments. Total Miles Driven and Ageing Vehicles are two tailwinds in the $300B aftermarket automotive market. As vehicles become older, they require more frequent maintenance and repairs, which bolsters demand for industry products. Miles driven is an important indicator for aftermarket parts demand in general, as many vehicle components wear down with use. US vehicle miles traveled is reported by the Federal Highway Administration (FHWA). The FHWA estimates that US miles driven has grown at a CAGR of 1.1% over the last 30 years, with two notable downturns: the Great Recession, and COVID-19. Online penetration in auto parts retail is accelerating, favoring retailers that can offer buy-online-pickup-in-store (BOPIS) and other e-commerce options. The DIFM segment looks better positioned moving forward with a secular shift to more complex vehicles harder to self-serve as well as trends in average ages of the vehicle fleet. The group faces some headwinds moving forward with work-from-home trends resulting in less miles driven and Generation Z overall not interested in vehicle ownership or driving.

Average and median age of vehicles on the road in the US

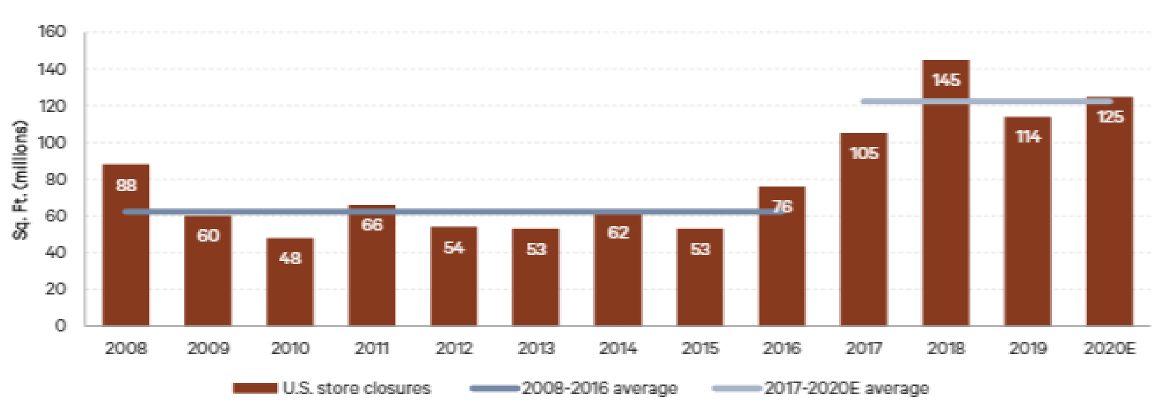


Department & Discount: BURL, DDS, KSS, M, TGT, WMT, BIG, BJ, COST, DG, DLTR, FIVE, HOME, OLLI, PSMT, ROST, TJX

This group can be broken down further into Off-Price (BURL, ROST, TJX), Discount/Bargain (OLLI, FIVE, DG, DLTR, BIG, PSMT), Warehouse (BJ, COST), Department (KSS, DDS, M) and Multi-Line (WMT, TGT)

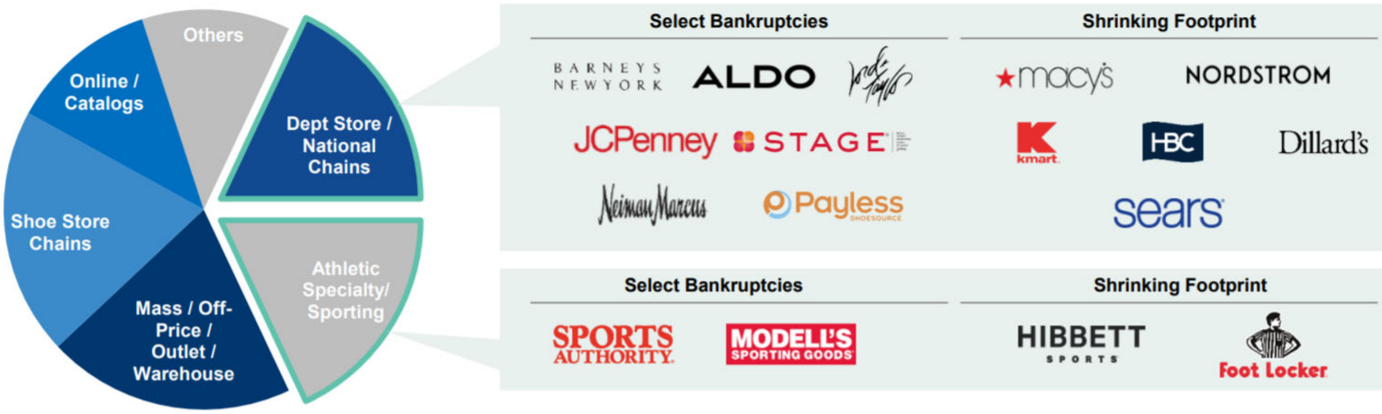
Department stores were one of the hardest hit with closures the last few years with the growing presence of Amazon but large players took a focus on building out ecommerce channels and now are competitive. Many of these names benefitted from consumer stimulus in 2020 and a shift to goods from experiences while the off-price discount retailers operating a "treasure hunt" model have been able to withstand pressures from ecommerce. The number of brick & mortar retail stores expected to close in the US continues to rise, led by JCP & mall-based retailers, which should continue to fuel market share gains for discounters and other retailers in strong positions. There has been an interesting strong correlation with US new home sales and TGT/WMT sales growth the past decade. Younger consumers will continue to reshape the retail landscape, Gen Z and Millennials are increasingly shopping omnichannel, are less price sensitive, care more about sustainability, and will try apparel rental.

U.S. retail store closures (2005-2020E)

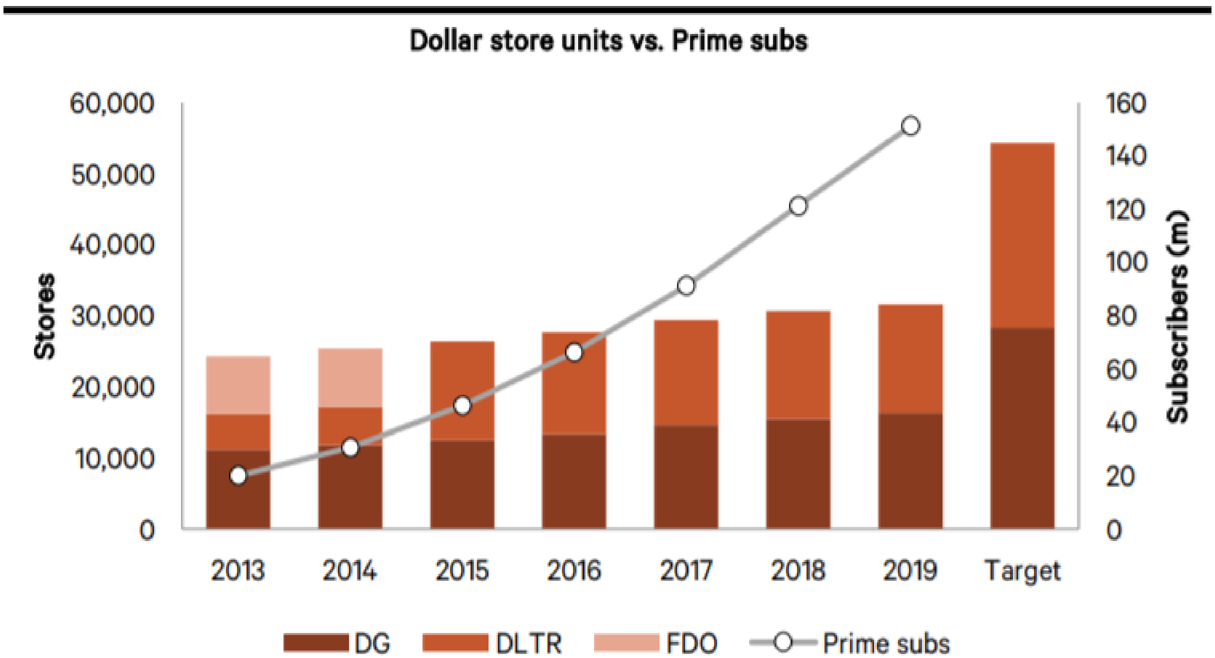


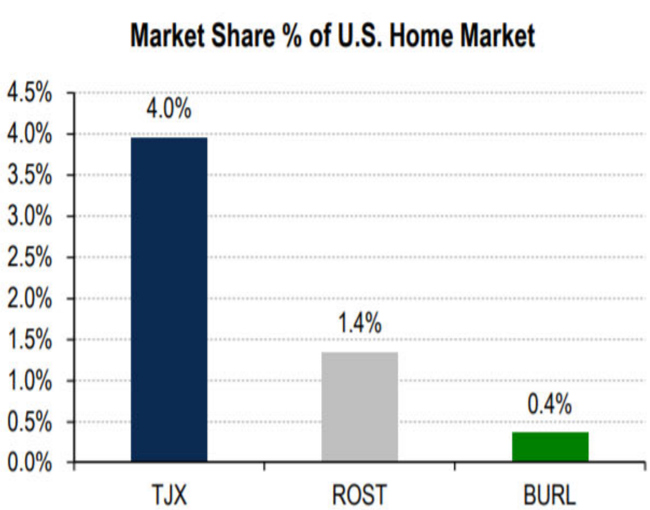
Key metrics in this group include sales comps, FCF yield, ROIC, P/E, and sales per square foot.

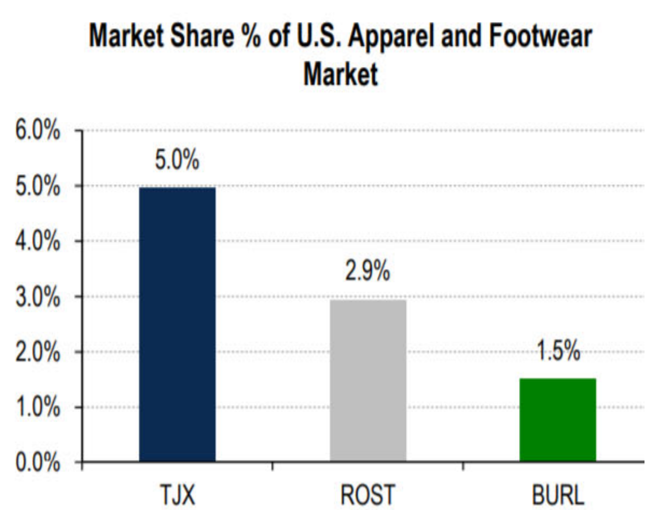
STRUCTURAL CHANGES IN DEPARTMENT STORE CHANNEL DRIVES CONTINUED RATIONALIZATION



Discount stores do look positioned well with multiple positive drivers moving forward, a strengthening US home sales cycle, continued competitor store closures, and omni-channel momentum. Further, the combination of demographic drivers as Millennials enter household formation years and retirees on fixed incomes contribute to spending growth. Off-price continues to be a favorite area for further market share gains across Home & Apparel markets.

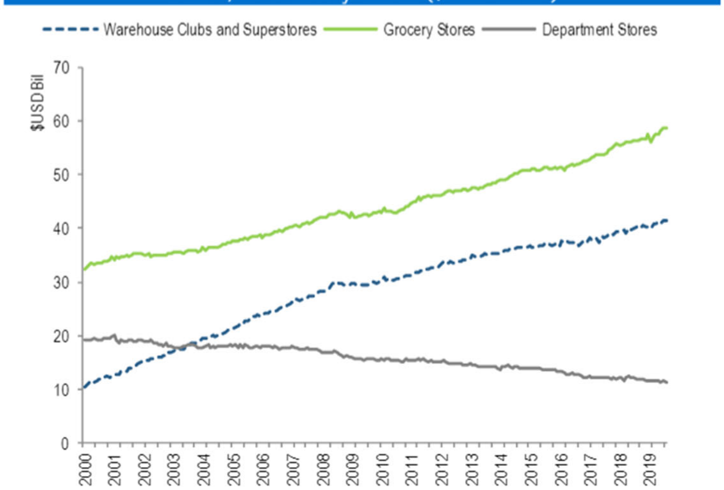




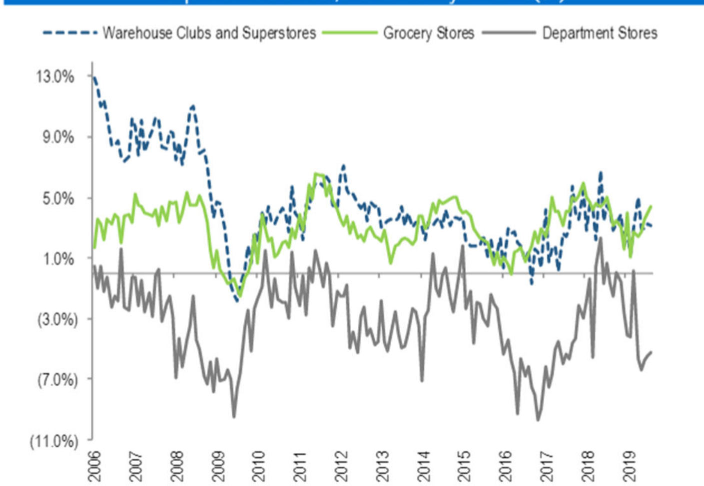


Warehouse Clubs employ a unique operational model where a limited set of products are merchandised at low prices in large pack sizes. Labor and distribution efficiencies in both distribution centers and in stores, coupled with an annual membership fee that breeds loyalty, yield respectable operating margins for consumables retail and solid cash flow generation. Warehouse clubs are uniquely insulated from the "bricks to clicks" conversion happening across retail near-term, and an expanding omnichannel rollout should beat e-comm pure-plays to the punch. Large pack sizes, a "treasure hunt" shopping experience, limited advertising, and highly discounted prices continue to drive physical traffic into club doors; but the sunk cost of a membership fee makes slightly higher prices in warehouse clubs' online offerings worthwhile. At the same time, warehouse clubs are in the early innings of capitalizing on the infinite shelf opportunity that online operations provide. Also in the digital realm is the fact that warehouse clubs, due to their membership requirements, capture 100% of their transactions on a loyalty card and know exactly who bought what. This is the holy grail for brands looking to push their products to particular customer cohorts. The warehouse clubs don't monetize this data to any meaningful extent today, but this could be an area of focus down the line. Euromonitor forecasts a 5%+ growth CAGR over the coming years, materially ahead of most sub-sectors of U.S.-based brick-and-mortar retailers. The U.S. is by far this retail channel's largest market, but rapid sales growth in Asia, Australia, and Latin America is expected to tilt global revenue share further toward international markets in the coming years. Warehouse Clubs enjoy the highest per-trip spend or basket size by a factor of 2X versus the broader industry, with the average basket size being nearly 50% bigger than the average supercenter basket and over 2x as large as the average grocery store basket. Warehouse Club business model dictates a lower gross margin relative to most staples retail competitors, but also a lower SG&A margin. This reduced overhead rate is a result of non-union labor, limited SKUs, pallet presentation, and fast and efficient inventory turnover and distribution.

U.S. Sector Sales for Warehouse Clubs and Supercenters, Department Stores, and Grocery Stores ($USD Billion)



U.S. Sector Sales YoY Growth for Warehouse Clubs and Supercenters, Department Stores, and Grocery Stores (%)

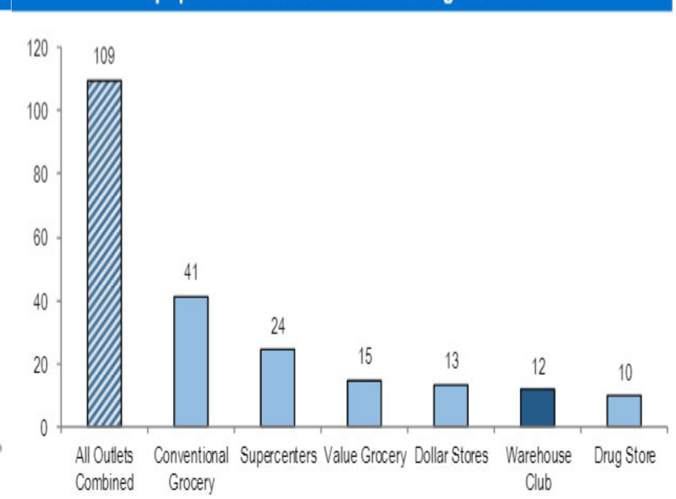


*Grocery excludes C-stores and Forecourt Retailers

Source: U.S. Census Bureau, Euromonitor

Basket Size ($ per Trip)

Trips per Household Purchase in Rolling 52 Weeks

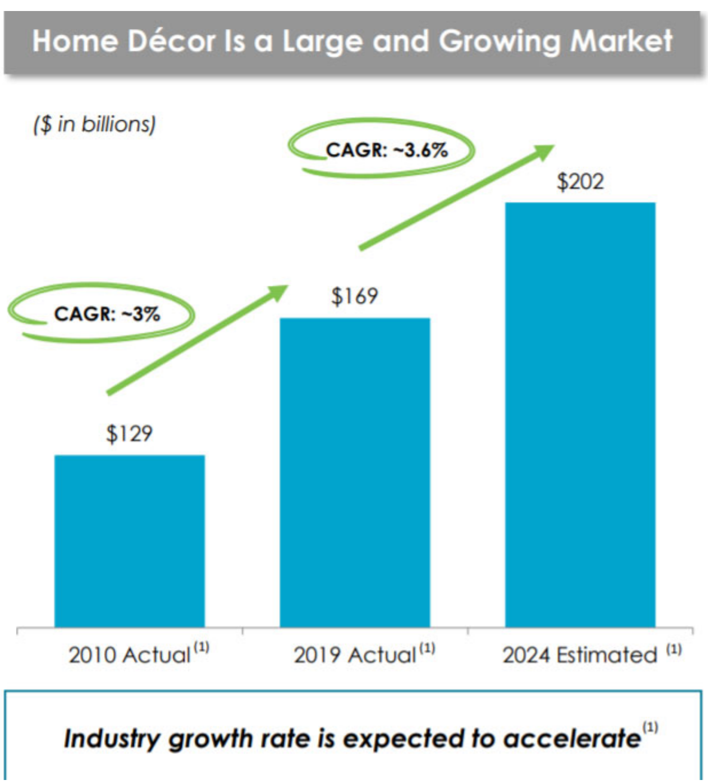


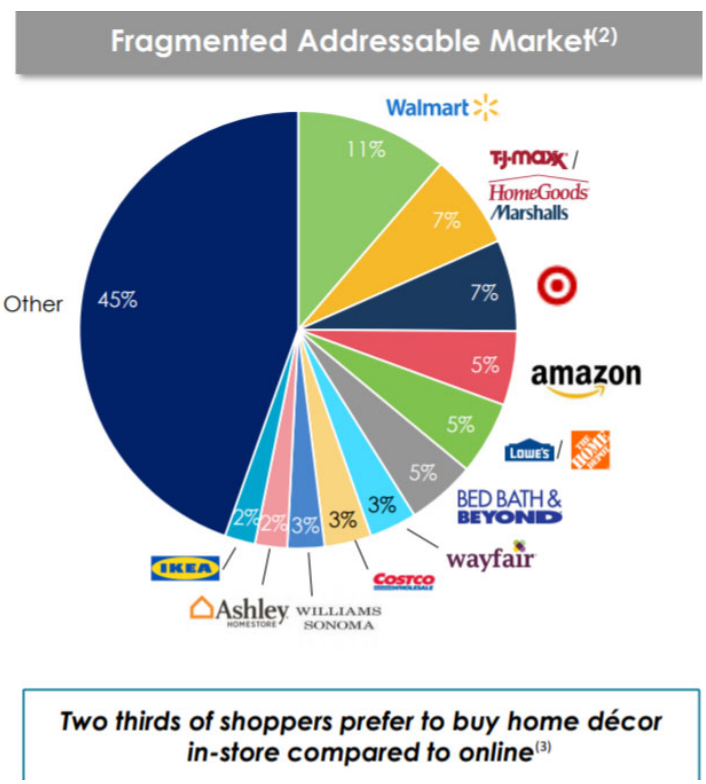
Electronic, Health & Home Components: BBY, CONN, FPAY, PRG, GME, WBA, BBBY, HVT, RH, WSM, AAN, CENT, CENTA, FND, HD, LL, LOW, RCII, TSCO, HOME, TCS, LESL

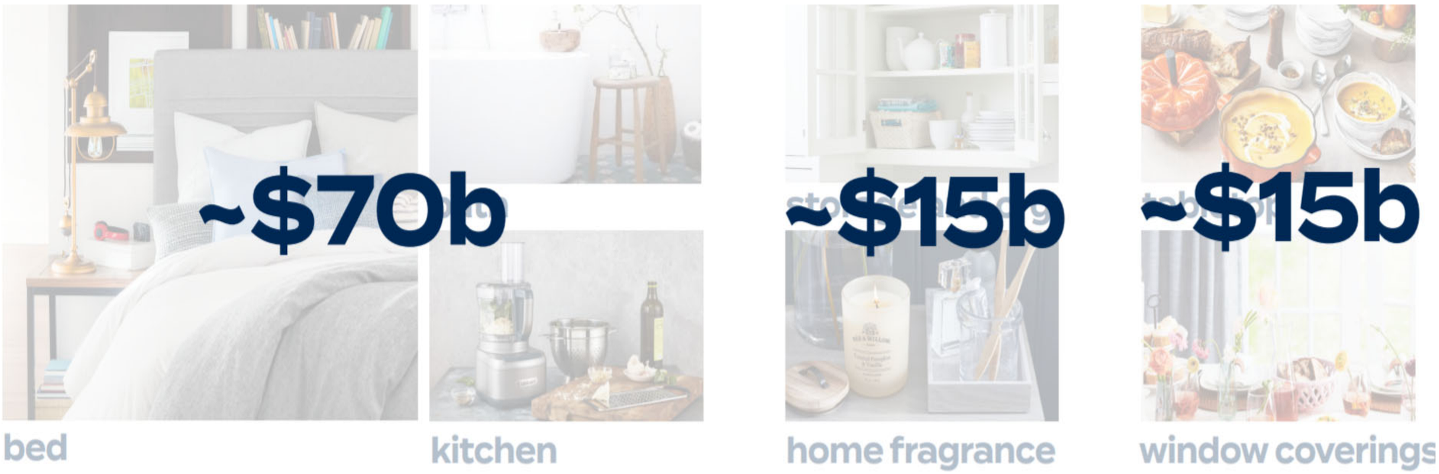
Inside of this group we have Electronic (BBY, GME), Home Goods (RH, CONN, WSM, HVT, BBBY, HOME, TCS), Healthcare (WBA), Home Improvement (HD, LL, LOW, TSCO, FND), Outdoor/Pet (LESL, CENT/CENTA), and Rental (AAN, RCII, FPAY, PRG).

The consumer electronics store industry is valued at $76B in 2020 with Best Buy the main pure-play name (WMT, AMZN other large electronic retailers) and has been a strong performer heading into a strong consumer electronic product cycle with the new iPhone and videogame console releases. BBY is seeing strength in products that help people work, learn, connect and cook at home. The Consumer Electronics Stores industry, which largely relies on discretionary purchases has faced fierce online competition the last few years.

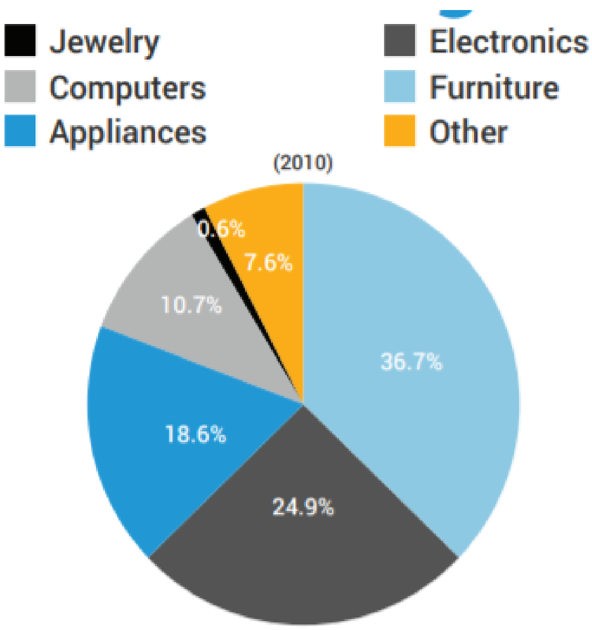
The US home goods industry is valued around $311B with furniture growing faster than décor, kitchenware and small appliances. This group is seen as a top beneficiary of the growing home ownership and demographic trends discussed earlier and ecommerce is very important with online penetration currently low at around 14%. Home Improvement remains immune to the Amazon threat and HD/LOW/FND continue to perform well. The drivers of the strength were presented in the Housing section previously with remodel/renovation strength as well as benefits from demographics via Millennial household formations.

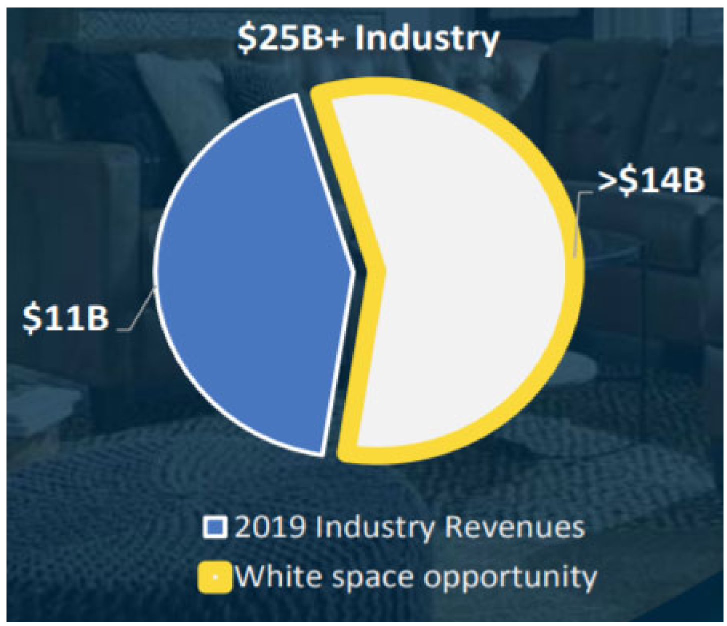






Then rent/lease-to-own market is composed of dealers who rent furniture, electronics, appliances, computer and other goods with an option to buy. It is estimated there are approximately 9,200 stores in the US, Canada and Mexico serving 4.8M customers per year. Aaron's, one of the two large players, estimates a market opportunity of $25-$35B at 25-35% of the US population with < 700 FICO scores.

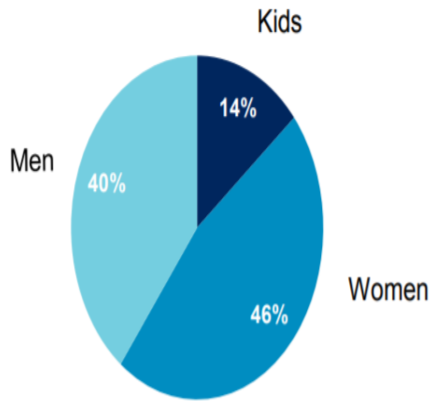




Apparel & Footwear Components: CATO, GES, JWN, LB, TLRD, BOOT, CAL, DBI, FL, GCO, SCVL, AEO, ANF, BKE, GPS, LE, TLYS, PLCE, URBN, DLTH, ZUMZ, CTRN

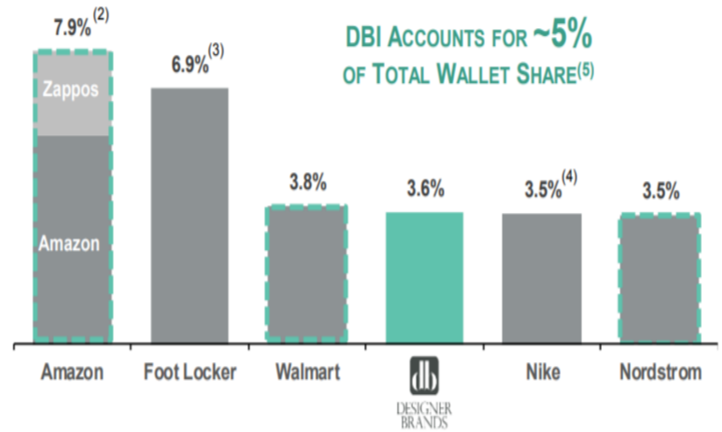
According to Euromonitor, the global apparel & footwear industry was valued at $1.77 trillion in 2019 and has grown at 1.5% CAGR over the past 10 years. Current estimates for the US Footwear market are at $72B growing at a 3% CAGR while US apparel market at $194B. As in the rest of retail omnichannel and ecommerce are seeing much stronger growth and is the focus for most of the companies. COVID-19 is expected to result in a four-year pull forward in online penetration of the global apparel market, reaching 40% by 2025. A 15% CAGR I seen for online apparel revenues through 2025 driven solely by volumes. Monetizing social media through shoppable ads is enabling a new vector of interaction for retailers with consumers that has less purchasing friction and better conversion rates. Augmented reality could speed up the shift from store to online by measuring fit. Gen Z is already earning $7tn in 2020 and is set to account for $30tn or 23.6% of global income by 2030; given this different attitude to technology, their methods of shopping and retail differ – even from Millennials.

~$72B U.S. Footwear Market Growing at 3% Historically[1]

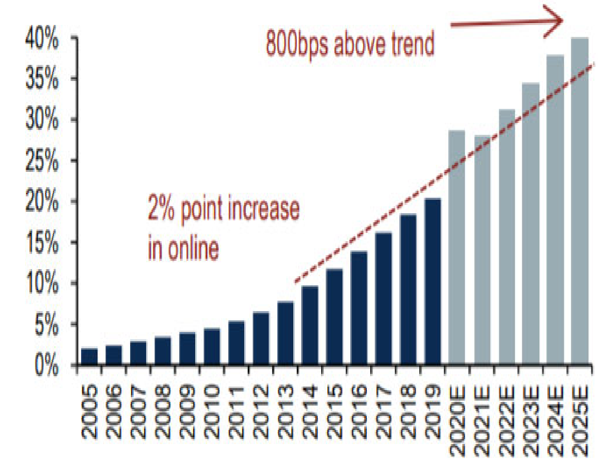


Fragmented with Top 10 Players Commanding ~40% of Share

(% Total market share)

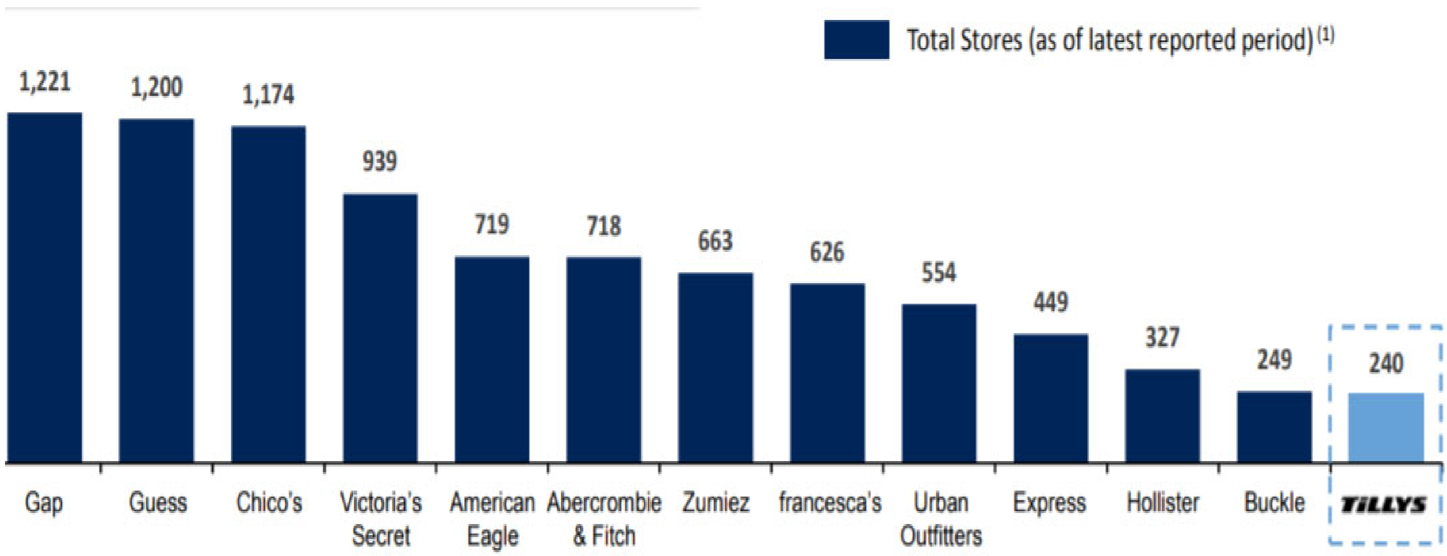


Global apparel and footwear online penetration, Dec YE



Value of the industries impacted by higher online penetration in apparel retail and food

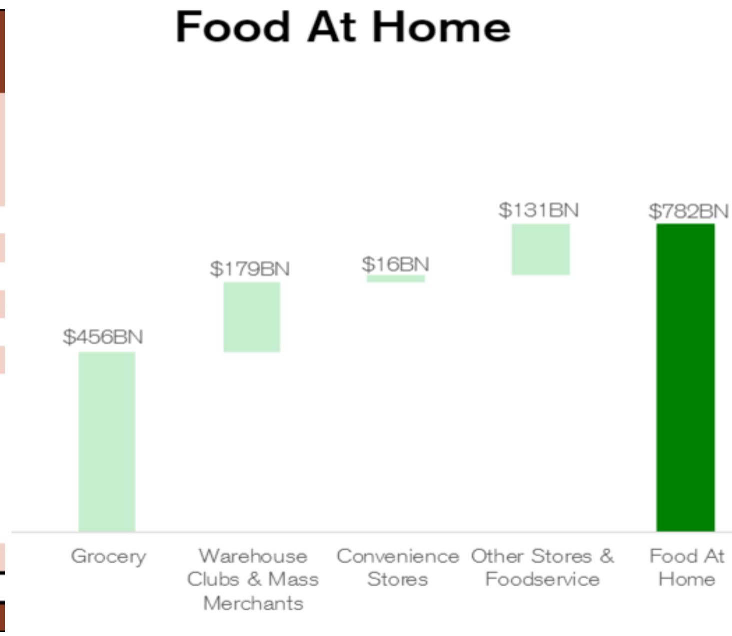
$bn, Dec YE	2019	2025	Change
Brick & Mortar Apparel	1,413	1,208	-206
Online Apparel	361	841	480
Express & Parcel Delivery	383	608	225
Paper & Packaging	530	600	70
Brick & Mortar Grocery	6,693	7,185	492
Online Grocery	266	705	439
Online Food Home Delivery	160	650	490
Retail Real Estate	400	310	-90
Logistic & Warehouse Real Estate	100	125	25
	10,307	12,231	2,105

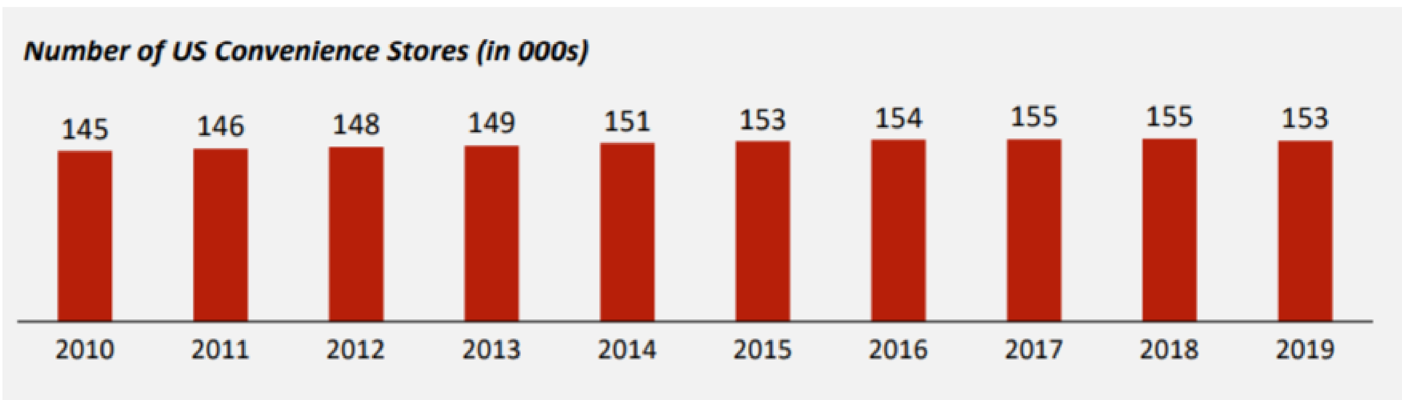


Grocery: CASY, GO, IMKTA, KR, NGVC, SFM, ACI, WMK, VLGEA

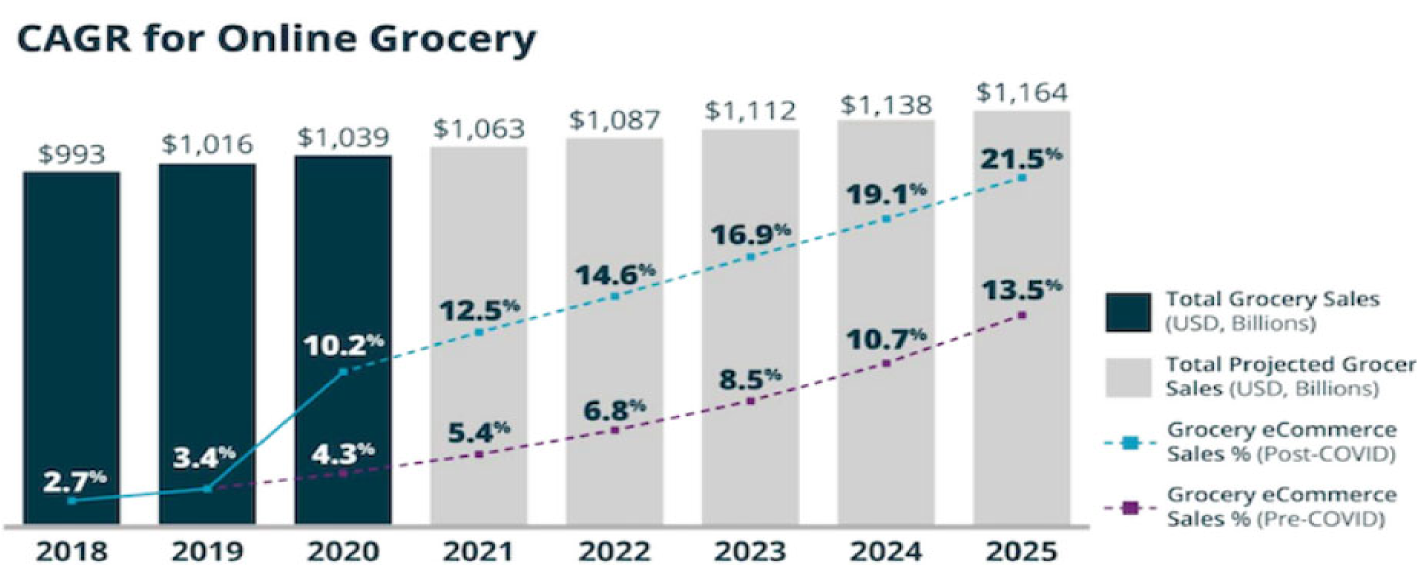
The grocer pure-play group is a small one with a lot of foreign-owned and private players as well as the multi-line giants like Walmart, Target and Costco taking market share. Like the rest of retail it is also being disrupted by ecommerce, pick-up and delivery models. In 2019, total sales from grocery stores amounted to nearly $700B although a low growth and low margin business. The U.S. grocery retail market is dominated by chain supermarkets. In 2018 there were around 31,669 chain supermarket locations in the United States, compared to only 6,638 independent supermarkets. Overall this is a a highly fragmented sector with a large number of companies competing locally and a growing array of companies with a national footprint, including traditional supermarkets, pharmacies and drug stores, convenience stores, warehouse clubs and supercenters. a highly fragmented sector with a large number of companies competing locally and a growing array of companies with a national footprint, including traditional supermarkets, pharmacies and drug stores, convenience stores, warehouse clubs and supercenters. The industry has also seen the widespread introduction of "limited assortment" retail stores, as well as local chains and stand-alone stores that cater to the individual cultural preferences of specific neighborhoods. Despite this, large, national grocers have increased market share over time as scale remains an important advantage in offering customers a modern and attractive shopping experience. Between 2013 and 2018, the share of the top 10 food retail companies 44% to 55% on the basis of industry retail sales.

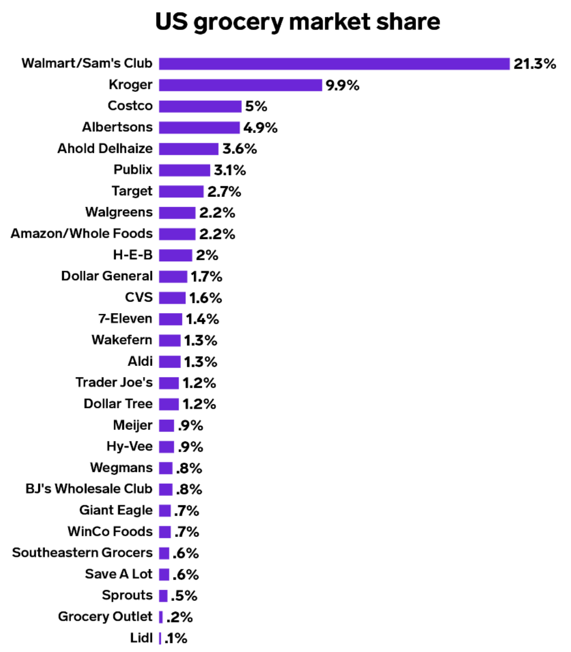
	Stores	Sq. Ft.	Avg. store size
Walmart U.S.	4,756	703.3	147,880
Supercenters	3,571	634.3	177,622
Discount stores	376	39.6	105,205
Neighborhood markets	809	29.5	36,433
Kroger	2,757	180.0	65,288
Ingles	198	11.2	56,803
Albertsons	2,252	112.3	49,867
Weis	198	9.7	49,000
Publix	1,239	58.4	47,135
Whole Foods	500	19.9	39,787
Ahold Delhaize (U.S.)	1,973	63.3	32,095
Stop & Shop	413	17.0	41,193
Food Lion	1,029	26.0	25,274
Giant/Martin's	186	8.0	42,916
Hannaford	182	6.0	32,894
Giant	163	6.3	38,868
Sprouts Farmers Market	340	9.8	28,959
Total (ex-WMT)	**9,117**	**454.9**	**49,892**
Grocery Outlet	**347**	**6.2**	**18,000**

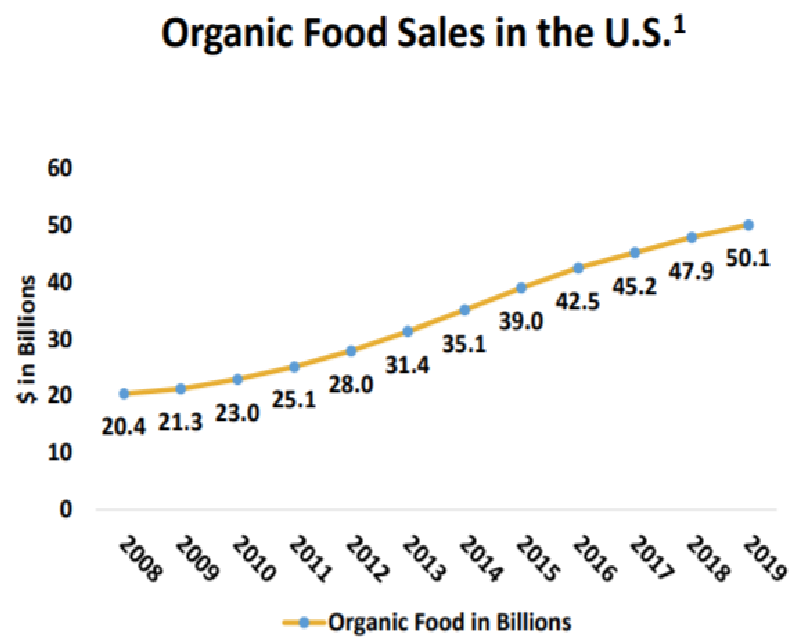




Estimates call for online grocery to rise to 21.5% of total US grocery sales by 2025, more than doubling the current share. The pandemic also led to pantry hoarding and change in consumer consumption trends with eating at home more popular which sets up for a tough 2021 in terms of comps especially with a vaccine rollout. Organic food sales is another growth theme in this group and still accounts for just 5.8% of total food sales. Consumers are increasingly focused on health and wellness and are actively seeking healthy foods in order to improve eating habits. This overall demand for healthy products is driven by many factors, including increased awareness about the benefits of eating healthy, a greater focus on preventative health measures, and the rising costs of health care.







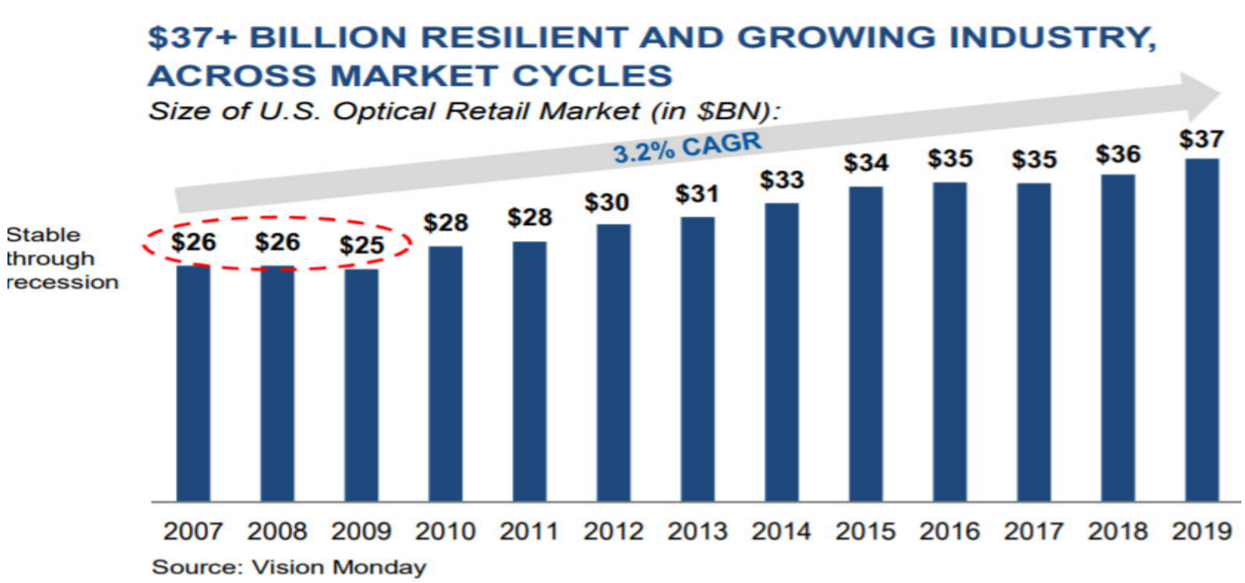
Specialty: EZPW, FCFS, DKS, ASO, DLTH, EYE, FLWS, HIBB, HZO, MIK, MUSA, PRTY, SIG, SBH, ULTA, TCS, SPWH, TITN

The remaining "specialty" retailers that did not fit into the other categories include Beauty (ULTA, SBH), Sporting Goods (DKS, HIBB, BGFV, ASO, SPWH), Pawn Shops (EZPW, FCFS), Gas Station Stores (MUSA), Optical (EYE), Jewelry (SIG), Gifts (FLWS), Crafts (MIK), Boating (HZO), Party (PRTY), and Ag/Construction Equipment (TITN). Without many clear comps the group basically has to be looked at individually per company.

The US beauty products and salon services industry is approximately $150B in sales. The approximately $89B beauty products industry includes cosmetics, haircare, fragrance, bath and body, skincare, salon styling tools, and other toiletries. The approximately $61B salon services industry consists of hair, skin, and nail services. Beauty cycles are impacted by demographics, trends, and product innovation.

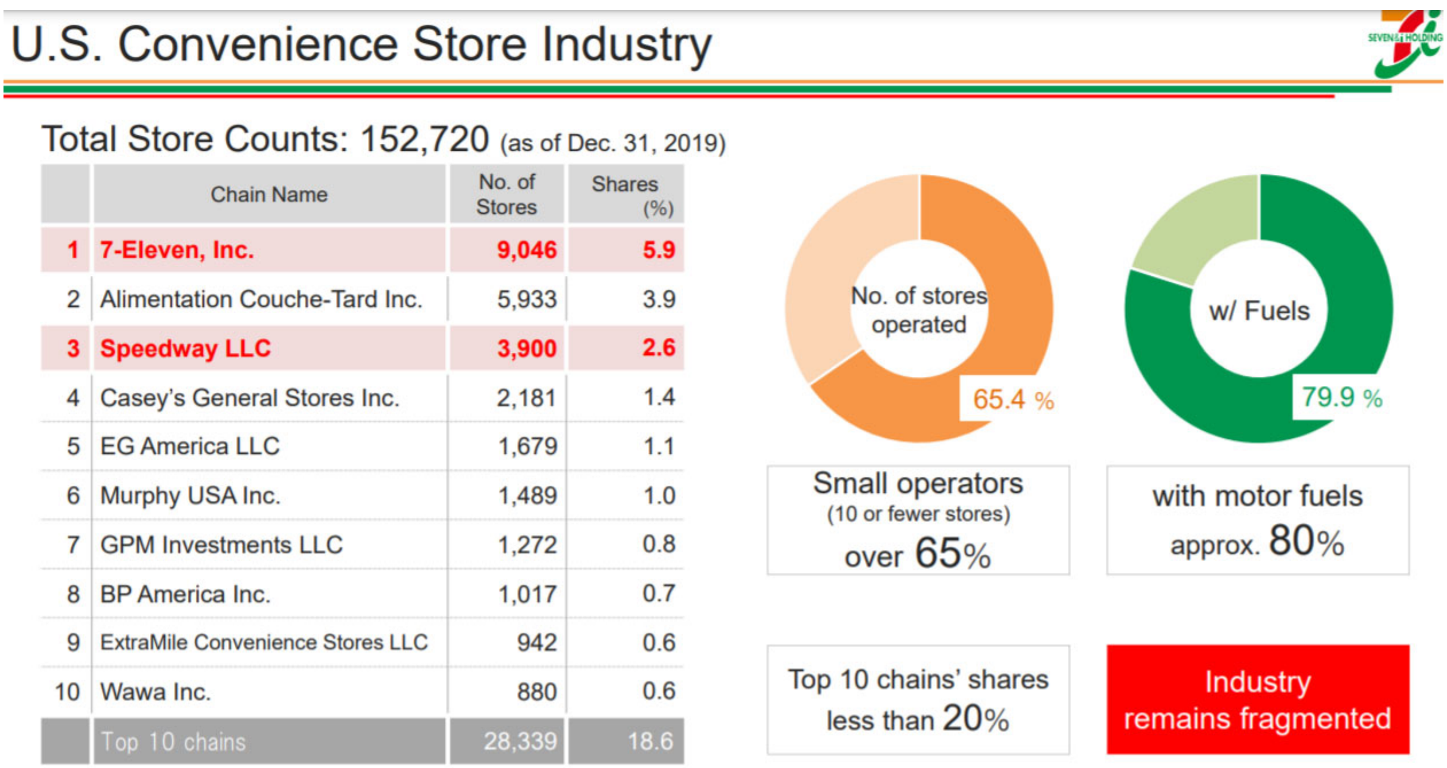
The sporting goods industry is valued at $70B, a fragmented market of retailers that sell sporting goods, outdoor recreation products, fan shop, apparel, footwear and other nontraditional sporting goods and general merchandise, such as casual and work apparel, barbecue and cooking equipment, patio furniture, outdoor games, severe weather supplies and pet care. The market for sporting goods retailers is highly fragmented and intensely competitive. Modell's, Cabela's, Bass Pro Shop, and REI are other notable competitors in this space.

The US Optical Retail market is a $37B market growing at a 3.2% CAGR with large retailers gaining share from independents. The largest operators are Essilor Luxottica, Walmart, National Vision, Costco, and Visionworks.



Pawn stores are neighborhood-based retail locations that buy and sell pre-owned consumer products such as jewelry, electronics, tools, appliances, sporting goods and musical instruments. Pawn stores also provide a quick and convenient source of small secured consumer loans, also known as pawn loans, to unbanked, under-banked and credit-challenged customers. The pawn industry in the U.S. is well established, with the highest concentration of pawn stores located in the Southeast, Midwest and Southwest regions of the country. The U.S. pawn industry, although mature, remains highly fragmented. The two publicly traded companies in the pawn industry, which includes the Company, currently operate approximately 1,600 of the estimated 12,000 to 14,000 pawn stores in the U.S. The key players in the pawn shop market include First Cash Financial Services Inc. (U.S.), EZCorp Inc. (U.S.), Cash America International Inc. (U.S.), Pawngo (U.S.), UltraPawn, LLC (U.S.), Gold & Silver Pawn Shop (U.S.), American Jewelry and Loan (U.S.), Dollar Financial Group Global Corporation (U.S.), Browns Pawnbrokers (UK), and New Bond Street Pawnbrokers (UK).

The US retail fuel and convenience store industry is large, growing, and highly fragmented. Key trends include Sensitivity to gas prices among cost conscious consumers, and increasing customer demand for low-priced fuel and high levels of consumer traffic around supermarkets and large format hypermarkets, supporting complementary demand at nearby and cross-promoted retail fuel stores. The retail gasoline industry in the United States is highly competitive due to ease of entry and constant change in the number and type of retailers offering similar products and services. Convenience stores sell the majority of gasoline purchased in the country — approximately 80 percent of all fuel sold in the United States. A total of 126,658 convenience stores sell motor fuels. U.S. convenience and fuel retailing industry in 2019, in-store sales increased 4.4% ($251.9B in 2019 vs. $242.2B in 2018), according to newly released NACS State of the Industry data that reflects a pre-coronavirus pandemic climate. Total industry sales, which include $395.9B in total fuel sales, declined by 1.0% ($647.8B in 2019 vs. $654.3B 2018), largely reflective of a 4.7% decrease in the price of fuel in 2019. The decline of cigarette smoking, the rise of GPS-enabled smartphones, the development of more fuel-efficient vehicles, and other factors, are forcing gas stations and convenience stores to rethink how they draw customers in. The gas and convenience businesses that are thriving are investing in food and more specialty retail. Regional chains such as Wawa, Sheetz and RaceTrac are now competing with coffee shops and restaurants to protect themselves against changing consumer tastes.


U.S. Convenience Store Industry

Total Store Counts: 152,720 (as of Dec. 31, 2019)

	Chain Name	No. of Stores	Shares (%)
1	7-Eleven, Inc.	9,046	5.9
2	Alimentation Couche-Tard Inc.	5,933	3.9
3	Speedway LLC	3,900	2.6
4	Casey's General Stores Inc.	2,181	1.4
5	EG America LLC	1,679	1.1
6	Murphy USA Inc.	1,489	1.0
7	GPM Investments LLC	1,272	0.8
8	BP America Inc.	1,017	0.7
9	ExtraMile Convenience Stores LLC	942	0.6
10	Wawa Inc.	880	0.6
	Top 10 chains	28,339	18.6

The party supplies market is estimated at $18B including a $9B Halloween market and seen growing at a 4.9% CAGR through 2026. The party goods industry includes decorative paper and plastic tableware, costumes, decorations, accessories and balloons, all of which are supported by a range of suppliers from commodity paper goods producers to party goods manufacturers. The retail landscape for decorated party goods is comprised primarily of party superstores, mass merchants, e-commerce merchandisers, craft stores, grocery retailers, and dollar stores. The party superstore is a preferred destination for party goods shoppers, similar to the dominance of specialty retailers in other categories such as home improvement. Sales of party goods are fueled by everyday events such as birthdays, baby showers, weddings and anniversaries, as well as seasonal events such as holidays and other special occasions. As a result of numerous and diverse occasions, the U.S. party goods market enjoys broad demographic appeal.

Crafting activities continue to enjoy broad based popularity and market size has been stable, valued at approximately $36B. It is a highly fragmented market with competition across multi-store chains, mass merchandisers, local specialty and internet retailers. Hobby Lobby and Jo-Ann Stores are two notable competitors to Michael's.

The total jewelry and watch market was approximately $78B at the end of 2019, and Signet (SIG) with a 7% market share, estimates of 19,800 jewelry stores in the US in a highly fragmented market. The jewelry industry generally is affected by fluctuations in the price and supply of natural diamonds, gold and, to a lesser extent, other precious and semi-precious metals and stones. The retail jewelry industry is competitive. Signet's competitors are specialty jewelry retailers, as well as other jewelry retailers, including department stores, mass merchandisers, discount stores, apparel and accessory fashion stores, brand retailers, shopping clubs, home shopping television channels, direct home sellers, online retailers and auction sites.

Management Commentary

AutoZone (AZO) on following up a record sales growth year: "Last quarter, I reminded folks, the strongest periods we experienced of outsized sales growth over the last 3 decades have been the early '90s, '01, '02, '09, '10 and '11, all coming out of recessionary periods. Therefore, we remain optimistic on the industry this upcoming year. Interestingly, after each of these outsized growth periods, they have never been followed by equivalent declines in the years that follow. We believe consumer behaviors change during these recessionary periods, allowing us to showcase our skills and capabilities to new customers. And we've retained many of those customers in the years that follow. I would be remiss if I did not thank our AutoZoners for their exceptional efforts."

O'Reilly (ORLY) on the driver of its business: "The color I would add to your comments is in aggregate, miles driven are the long-term driver of our business. The more people drive their cars, the more parts wear, the more maintenance you have to do, it drives demand. But what we would really like to see if we could dissect and [turn it around] statistic would be miles driven on cars outside of warranty. Cars that are inside of warranty, you're still doing regular maintenance, but anything that's failure related or really parts related isn't covered or is -- I'm sorry, it isn't those items that's covered. So if your water pump goes out in 3 years, you're going to go back to the dealer, and they're going to fix it. If your water pump goes out in 7 years, which is the average, then you're going to come to O'Reilly, and we're going to sell you a remanufactured water pump that's got a new bearing in it, and it's going to be -- run like [it has]. So with new car sales being down, we know miles driven on cars outside of warranty aren't down as much. The other thing we would tell you is that within our industry, and not surprising, is there is a tremendous amount of maintenance that is either underperformed or unperformed. Trying to get your arms around exactly what that number is, but our industry says it's about $50 billion. So fluctuations in how people look at their vehicles vis-à-vis, am I going to get in a new vehicle next month? Or do I need to fix the one I have now? When we go into recessionary or tough economic times, people say to themselves, gosh, I might keep this car for a while. I better maintain it. Or people who buy a new, a new to them car -- used car, will we do additional work to it. And when you look at the price of used cars, which have skyrocketed, people are holding off and they're valuing their existing car more, which means they're doing more maintenance, less reduced, less underperformed or unperformed maintenance, and that's a big support for our industry."

Target (TGT) on sales per square foot: "As we said in the past, sales per foot is a useful proxy for throughput. So let's consider how that has progressed so far this year. As a baseline, for the full year in 2019, average sales per foot at Target were about $320. And so far this year, that metric has grown about 19% compared with last year. So just as a thought exercise, if you assumed we were going to grow our sales productivity at that same pace for the full year, we'd end 2020 at about $380 per foot. So the critical question is after growing sales per foot from the lower end of the $300 range into the upper 300s, do we have any more capacity in our stores? The answer is certainly yes. Last year, in our second quarter call, I mentioned that our top quartile stores averaged well over $400 a foot back in 2018 and that number has grown to nearly $500 since then. If we can average nearly $500 a foot on nearly 500 of our most productive stores, I think it's clear we have capacity to grow the chain average well beyond where it is today. And that capacity would be there even if we kept doing what we're doing today. But of course, we continue to find ways to improve throughput. And one of our newest options is to deploy sortation centers in markets where delivery density is high. To better assess this concept, we recently opened our first sortation center here in Minneapolis, which will allow our teams to test, learn and assess its ultimate potential before determining whether to roll out the concept further."

Burlington (BURL) on the post-pandemic World: "Firstly, the consumer desire and need for value; and secondly, the growth of e-commerce at the expense of full-price bricks-and-mortar retailers. We expect these trends to drive further rationalization of full-price bricks-and-mortar retail over the next several years. As these physical stores close, we expect that some shoppers, especially more affluent time-stopped shoppers, will migrate more of their spending online. But we anticipate that other shoppers, value-oriented shoppers, will find their way to off-price. This is consistent with what has actually been happening over the last several years. E-commerce has been growing rapidly and bricks-and-mortar off-price retail has been growing in parallel. In the categories where we compete and at the low price points that we offer, e-commerce is much less effective or competitive in meeting the needs of value-oriented shoppers. As the store closings that I have described play out, there will be an opportunity for bricks-and-mortar off-price retail to gain significant share."

TJX (TJX) on expanding store base: "Fourth, we see a significant opportunity to continue our global store growth over the long term. We are in an excellent position to take advantage of real estate availability to open new stores and relocate existing stores. Further, we plan to continue remodeling stores to further upgrade the shopping experience. As we look to capitalize on opportunities to attract more new customers in the future, we want them to have a positive shopping experience when they visit us to keep them coming back. Lastly, we see a great opportunity to capture additional share of the home category, which has been strong for us for many, many years. In the short term, we have been increasing our home mix at all our banners to capture our piece of the incremental demand that is out there."

RH (RH) on 2021: "And so we feel very good at next year -- about next year unless if something big happens, unless we have a stock market crash and the bottom falls out of the home business. But for the most part, I like how next year is shaping up because of the decisions we've made. I think we're very excited. I think there's tremendous new product in the pipeline, almost too much. You got to make sure we're being disciplined about our investments from an inventory point of view and our risk on newness, but it's a lot of great newness. And I think RH Contemporary is going to open up an entirely another new layer in the market, right, for us. It's going to bridge the gap between kind of the -- kind of updated classics of interiors and more harder edge, modern and fill in with some aesthetics that we just hadn't pursued before in a very RH way, right, through our own unique point of view."

William Sonoma (WSM) on the B2B opportunity: "We believe that we are one of the few retailers best positioned to take market share in the years to come. Not only is our value proposition relevant and compelling, our multiyear growth strategies and investments are working. We will continue to prioritize e-commerce growth and push the natural shift in our channel mix. We will also expand into product whitespace and aggressively support the growth of new businesses and opportunities within our brands and cross-brand. For example, our business-to-business opportunity. We believe that Williams-Sonoma, Inc. business-to-business will be our next $1 billion business within the next 5 years. The B2B market is large and highly fragmented with a market size of $80 billion in the U.S. alone. Our competitive advantage is that we have 8 unique brands, in-house product development capabilities and a sustainable supply chain, which allows us to simplify the customer experience for our B2B customers. Since the launch of this business in 2019, we have gained traction in all areas with average order size and repeat purchases both growing double digits, and major project wins in residential, commercial, education, health care and hospitality verticals. Our number of contract accounts are up 50% versus last year. We are aggressively pursuing this growth opportunity and are on track to drive over $300 million in sales this year, which represents strong double-digit growth compared to last year. Another key growth driver that we believe is underappreciated is our global opportunity. Our expansion to date has proven that we can grow profitably and with low capital investment, further supporting the viability of profitable growth in this business for us, and the estimated $450 billion global home furnishings market."

Floor and Décor (FND) on sustaining comp growth: "Simply said, we think even our most mature stores, our stores that have very high volumes. As long as you're not being cannibalized, those stores should be able to grow 3%, 4%, 5%, 6% a year. You then add to that the new stores, we're going to get back to 20% unit growth. We have a lot of stores and half of our storerooms were not even close to maturity yet, and you start adding 20% more stores again next year. That gets you an upper-single digit, mid- to upper-single-digit comp. And again, that could be a little bit higher with a better backdrop. And that then leads to kind of mid-20% sales growth and earnings growth at a faster rate than that. So I think on a long-term basis, we still think the hard surface for the industry is going to do well. And because of our uniqueness, all investments we're making in assortment and e-commerce and product and supply chain, distribution, all those things we think will allow us to grow at or above the industry. And then again, when you add on the new stores, that's when you get to that mid- to upper-single-digit comp."

Nordstrom (JWN) on opportunities to gain share in luxury: "So luxury, I think it's important to kind of get on the same page of what that means. For us, luxury and really a true designer business, it's a big, profitable business for us. When I say true designer, it's not just cosmetics and sunglasses. It is mostly really separating by having shoes, handbags and apparel. That area, our designer business has been the fastest-growing merchandise area for us for the last several years. It's a vital ingredient of what we're trying to do overall to have a legitimate, big, powerful luxury business. Our customer base, we have a very attractive customer base. It tends to be younger than a lot of the traditional luxury venues. And it's a very attractive place for brands, these big designer brands, for new customer acquisition. One of, I think, the most clarifying stats that we have is that we are the #1 spot for a customer to make their first designer purchase. And I think it's a good example of kind of how the breadth of our inventory and our merchandise offering comes together. So we think that separates us from a lot of the other luxury players and has for a while, frankly. And we solely have gained distribution over these last number of years. We think there's opportunities to continue to gain distribution from the very best designer brands in the world, but we also think there's opportunities to grow our designer business as there is with the rest of our business through the growth strategies that we're embarking on."

Gap (GPS) targeting the distressed apparel retail landscape: "As we share our vision of Gap Inc.'s future with you, let's take stock where we are today. Old Navy at $8 billion, with 9 out of the past 10 years of growth, has always stood for the democracy of style; GAAP at $5 billion, standing for modern American optimism here and around the world for 51 years; Banana Republic at $2 billion with a North Star of working for a better Republic; and Athleta, our fastest-growing brand at $1 billion, embodies the power of she. Women and girls, empowering each other. This means taking all inputs and remaining flexible as we look to gain share in the roughly $200 billion U.S. apparel market. We have a clear eye on the economic outlook. GDP, single-digit recovery over the next few years. Unemployment is expected to stay high. Unprecedented store closures and a shift out of mall-based real estate. We also see discretionary spending shift from entertainment and travel to apparel and home. And we are zeroing in on the distressed apparel retail landscape that represents $15 billion of the market opportunity. This retail disruption, combined with our unique direct-to-consumer vertical omni model at scale and with speed, allows us to aggressively take market share. For us, we believe this is a once in a generation opportunity. We have led the casualization of the American wardrobe where comfort, fit and quality matter. Our assortment is 95% pointed at the use occasions that are most relevant today. Our active and fleece business is $3 billion, and our kids and baby business is $4 billion. In tough economic times, kids keep growing, and we have the recession-proof assortment that meets the needs of families everywhere."

L Brands (LB) outlining Bath & Body Works market opportunity: "So when it comes to thinking about our market positioning. Again, I think it's important to understand we're in 2 big market segments. Obviously, there's the bath, beauty, fragrance market, which at a total U.S. market size, is about a $75 billion business. Within that, we're really concentrated on the body care and the fragrance portion of that, which is about, I'm using round numbers here, about a $20-billion industry. And our market share within that, our body care and fragrance portion is about 10% of that addressable market. So that's a big portion. The other part that we play within there is the soap and sanitizer business, a sub portion of that $75 billion of about $3 billion and that's actually the market where we have the largest market share at between 25% and 30% of that addressable market. And then the other big segment we play in is the home fragrance market, which is between a $9 billion and $10 billion total industry. And our share within that sits right at about 20%. And certainly, again, those who have followed the company for a while know that, that has been the fastest-growing portion of our business on a longer-term basis over the last 5 to 8 years."

American Eagle (AEO) growth brand numbers: "Although mall traffic continues to be a challenge, we are seeing a meaningful acceleration online. Aerie's digital revenue rose 83% to last year, and stores were up modestly. Across the board, our metrics were positive. The AUR was particularly strong as we were significantly less promotional. Merchandise margins expanded to last year, and Aerie saw a meaningful improvement in overall profitability, which hit record levels, fueled by strong growth. Customer acquisitions were up 15% in total and 62% in our digital channel. We continue to engage with our customers through social media and grassroots efforts to build a community of Aerie loyalists. In fact, we've had some of our most incredible brand moments on TikTok, which fuels demand and brings new customers to Aerie. Across the board, our key categories rose in the double digits with higher merchandise margin. I'm thrilled to report that our new OFFLINE activewear brand has had an incredible debut. In October, we opened our first store with a very strong customer response, and now we have 4 stores up and running. OFFLINE offers something unique and different in an exciting growing category and has a big opportunity ahead of it. I can't wait to share more details on our future plans for both Aerie and OFFLINE in January."

Albertson (ACI) on growth drivers: "And 2 things that we see growing fast for us. One is Drive Up & Go, tremendous growth in Drive Up & Go. And the other side of the coin, we think, will last in eCommerce is shorter delivery cycle. So we are experimenting both our first-party and third-party. Third-party already provides shorter delivery cycles. We're also developing short delivery cycles in the first party. Because in both Drive Up & Go and in short delivery cycles, the customer's in a better control."

OptionsHawk Executive Summary and Top Picks

The Retail group is closing the year strong and seen a big boost from stimulus checks and a shift in spending to goods from experiences which could set up for tough comps as a return to normalcy nears. The large retail names still set up well to continue taking market share and expand ecommerce capabilities. In Auto, **O'Reilly (ORLY)** is superior to peers on nearly every metric and at 19X earnings is still attractive. Among the large cap big box retailers **Target (TGT)** remains cheap to peers despite having equivalent growth, higher ROA, higher margins and stronger FCF, so it looks like a value while **Costco (COST)** is just a phenomenal company with no signs of slowing. In the Off-Price retailer group **Ross Stores (ROST)** screens as the best-in-class operator across all key metrics. In the Discount group, **Five-Below (FIVE)** screens the best on growth, margins, and capital returns despite **Dollar General (DG)** being a long-time leader with a big valuation discrepancy between the two. None of the small cap names screen particularly well and despite big moves on **BJ/BIG** in 2020 neither compare favorably to larger peers.

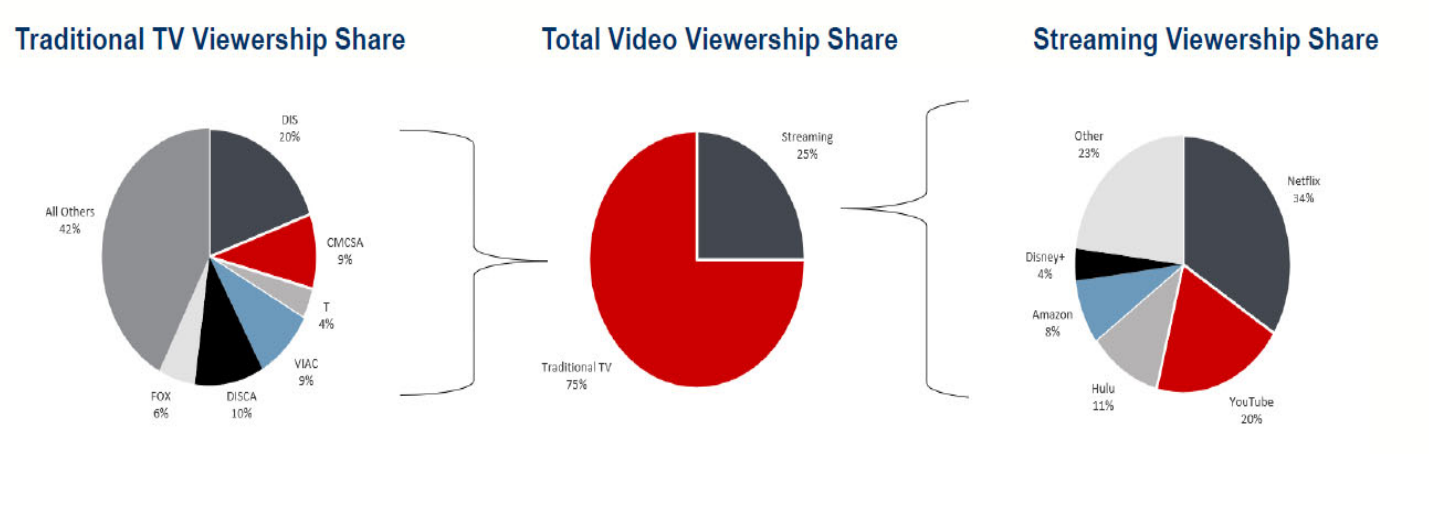
In Home Improvement, **Home Depot (HD)** remains best-in-class with higher comps, higher, margins, and better Inventory Turnover & ROA. In Home Furnishing although **William Sonoma (WSM)** is a solid story, **RH (RH)** remains one of the best value for growth stories in all of Retail and screens well across all metrics. **Tractor Supply (TSCO)** is attractively valued delivering strong numbers, high ROA, high FCF and an overall high-quality operation that should benefit from stronger farmer incomes. **Floor & Décor (FND)** is the high-growth story and shares have nearly doubled in 2020, pricey on valuation, but still a nice opportunity to grow from its current $9B market cap. **PROG Holding (PRG)** is an intriguing new small cap from a spin-off, a leader in the virtual LTO market that has a long runway for growth.

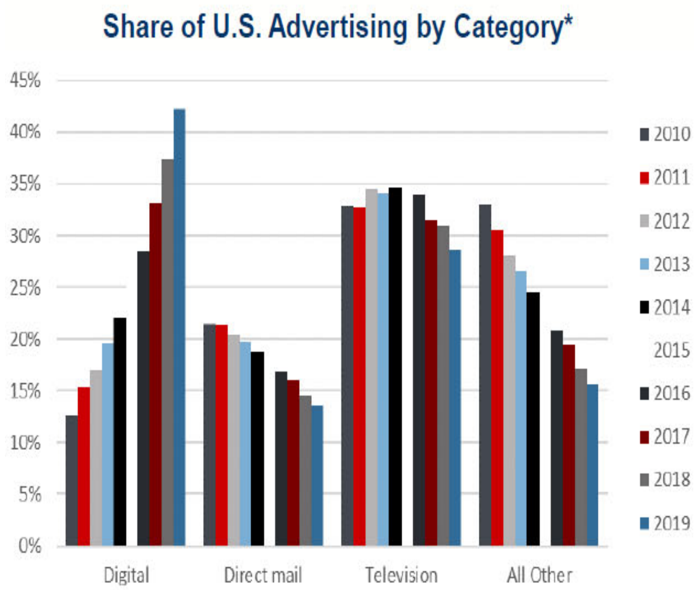
In the Apparel & Footwear group it is tough to get overly excited for brick & mortar plays even with the improvements shown in ecommerce and many have seen some sizable bullish options positioning through 2021. Of the three larger names **L Brands (LB)** screens the best and has the best opportunity as it separates its two divisions. In the Teen group small caps **American Eagle (AEO)** has strong margins and returns on assets/capital and the growth opportunity for Aerie and OFFLINE are compelling. **Zumiez (ZUMZ)** surprisingly screens very strong across all metrics in the small caps, and sees a big opportunity in international markets. Lastly, **Boot Barn (BOOT)** was a great find for me in 2017 and I continue to like the western wear niche and potential for major store expansion, a top small cap retailer. In the Grocer group I prefer **Casey's (CASY)** due a preference for the convenience store industry positive attributes. **Grocery Outlet (GO)** is an intriguing small cap comp growth story with a lot of room for unit growth.

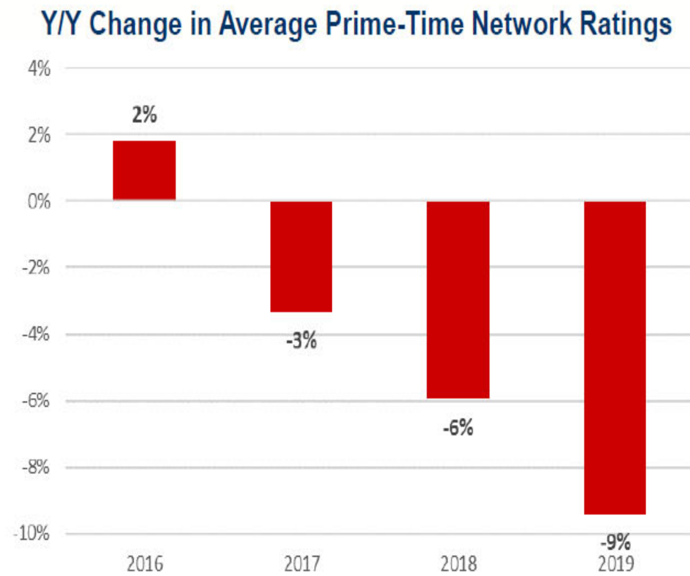
In Specialty the only non-small cap is **Ulta (ULTA)** which is a top operator and positioned well in the resilient beauty space. **National Vision (EYE)** continues to be an under-followed consistent comp growth story with high margins. **1-800 Flowers (FLWS)** also screens as a solid business generating high returns on capital/assets with a higher margin profile. **Marine-Max (HZO)** is another niche winner in the boating industry. Lastly, in Sporting Goods, **Hibbett (HIBB)** has been a strong story caught earlier in 2020 with an in depth write-up and screens best on growth, margins, and returns.

Media & Entertainment

Streaming Media Components: DIS, HUYA, IQ, NFLX, SPOT, TME, SIRI, CMCSA, FUBO, ROKU







Traditional Cable Components: AMCX, VIAC, DISCA, FOXA, MSGN, LGF-B, GTN, NXST, SBGI, QRTEA, TV, TGNA, WWE, SSP

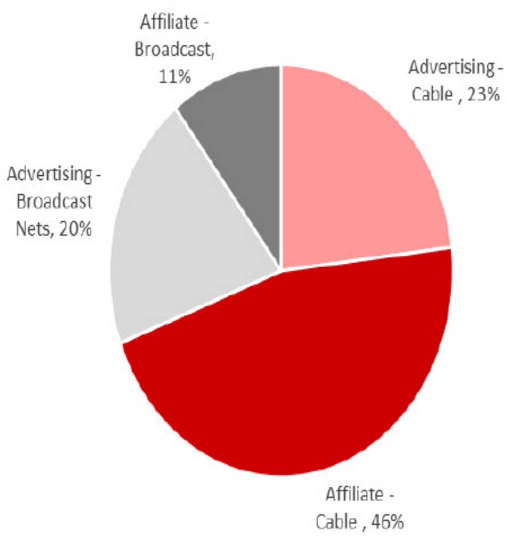
The U.S. media and entertainment (M&E) industry is the largest in the world; represents a third of the global M&E industry; and contributes more than $717B to the economy. This includes filmed entertainment, radio, music, publishing, and video games. For the most part these companies make money off advertising revenues, an industry shifting budgets to digital formats.

AMCX	AT&T	Comcast	Discovery
AMC	CNN	CNBC	Animal Planet
BBC America	DC Entertainment	DreamWorks	Discovery Channel
IFC	HBO	E!	Eurosport
Sundance	New Line Cinema	MSNBC	Food Network
WE tv	TBS	Sky Group	HGTV
	Turner	Telemundo	Travel Channel
	Warner Bros	Universal Pictures	Science Channel

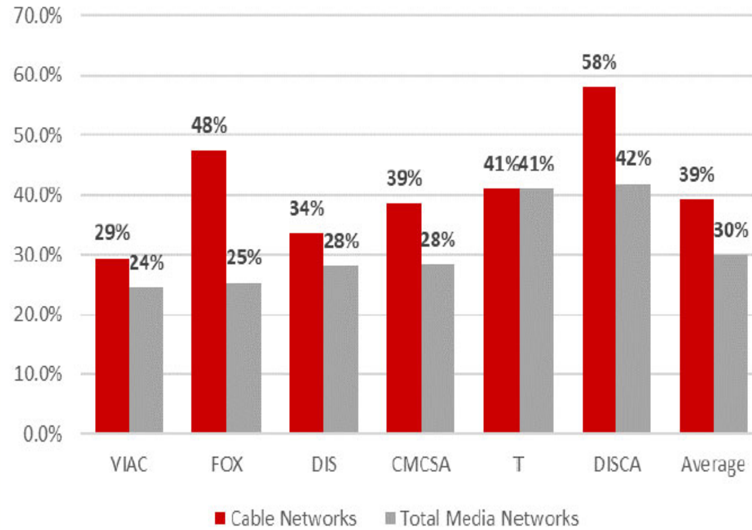
Disney	Fox	Lionsgate	ViacomCBS
A&E Networks	Fox Entertainment	Lionsgate	BET
ABC Broadcast	Fox News	Starz	CBS
ESPN	Fox Sports		Comedy Central
FX Network	Fox TV		MTV
Lucasfilms			Nickelodeon
Marvel			Paramount
National Geographic			Showtime
Pixar			TV Land
Walt Disney Pictures			
20th Century Fox			

The cord-cutting theme accelerated in 2020 and we saw a bunch of new streaming launches from media companies, most notably Disney+ while Comcast launched Peacock as well. The industry has also undergone a few years of consolidation with AT&T/Time Warner, Discovery/Scripps, and CBS/Viacom. Nearly every company now offers some version of a streaming platform as shown below. At an industry level, pay-tv subscribers have declined on a y/y basis every quarter for the last eight years from a peak of 101M in 1Q12 to 89M in 1Q20. The opportunity for streaming remains immense with it still just accounting for ¼ of total TV usage. It also has resulted in MVPDs (multi-channel video distributors) and vMVPDs focusing more on cash flow than subscriber growth and raising prices to offset less gross additions. Live Sports remains the main reason consumers still subscribe to traditional pay-TV services but we are seeing early signs of streaming providers making inroads. The return of the box office in 2H21 and into 2022 should be important to this group with plenty of pent-up demand.

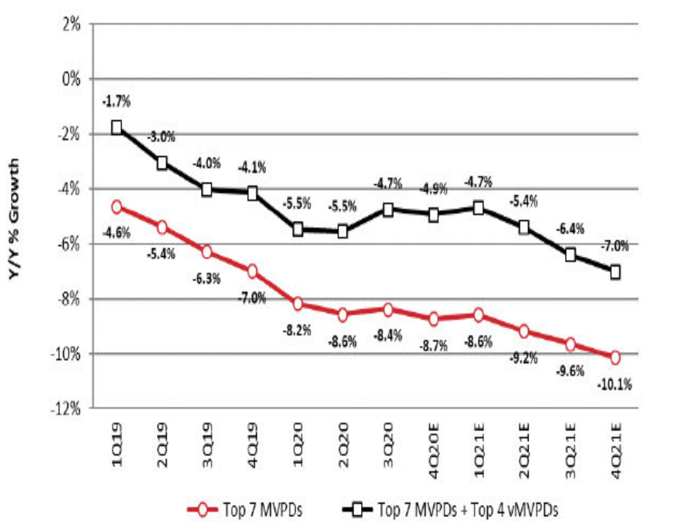
Media Networks Revenue Profile



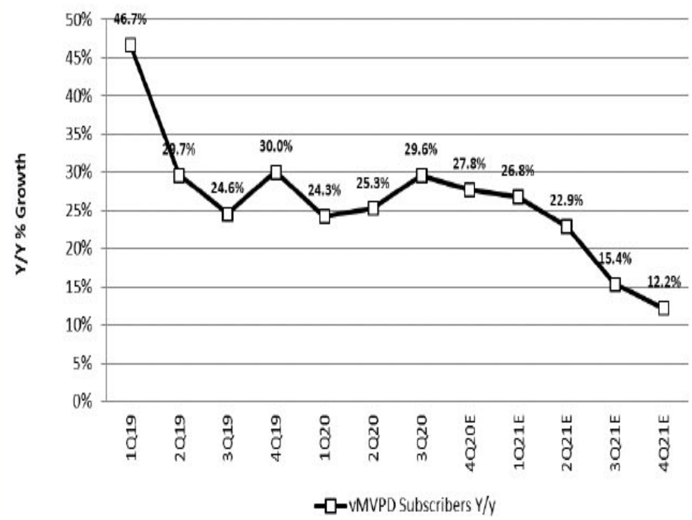
Media Networks EBITDA Margins



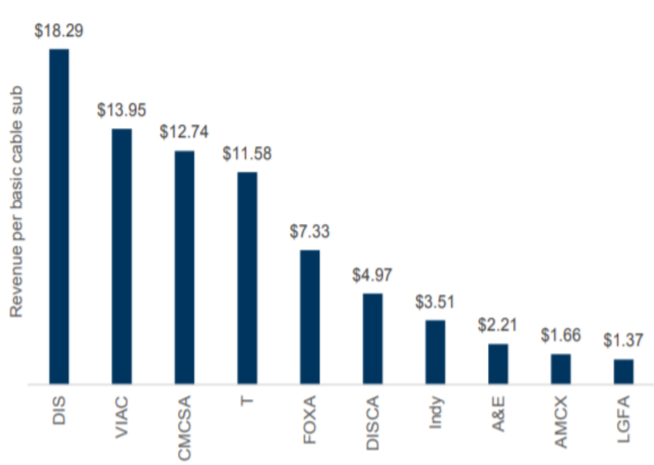
U.S. PayTV Subscriber Growth for Top MVPDs and vMVPDs



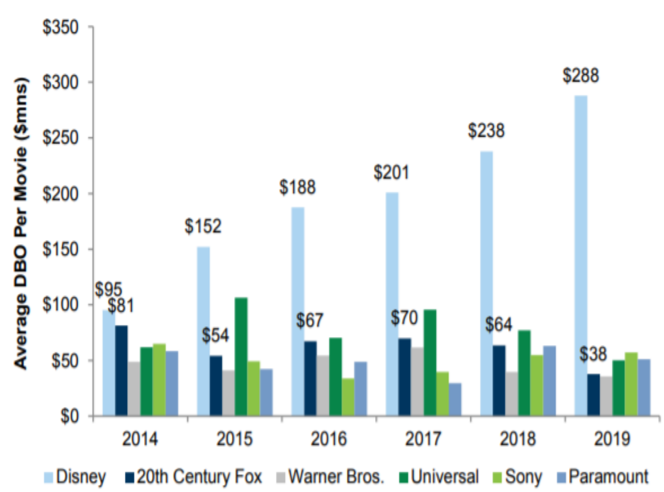
U.S. PayTV Subscriber Growth for Top vMVPD



Average monthly revenue per basic cable subscribers (2019)

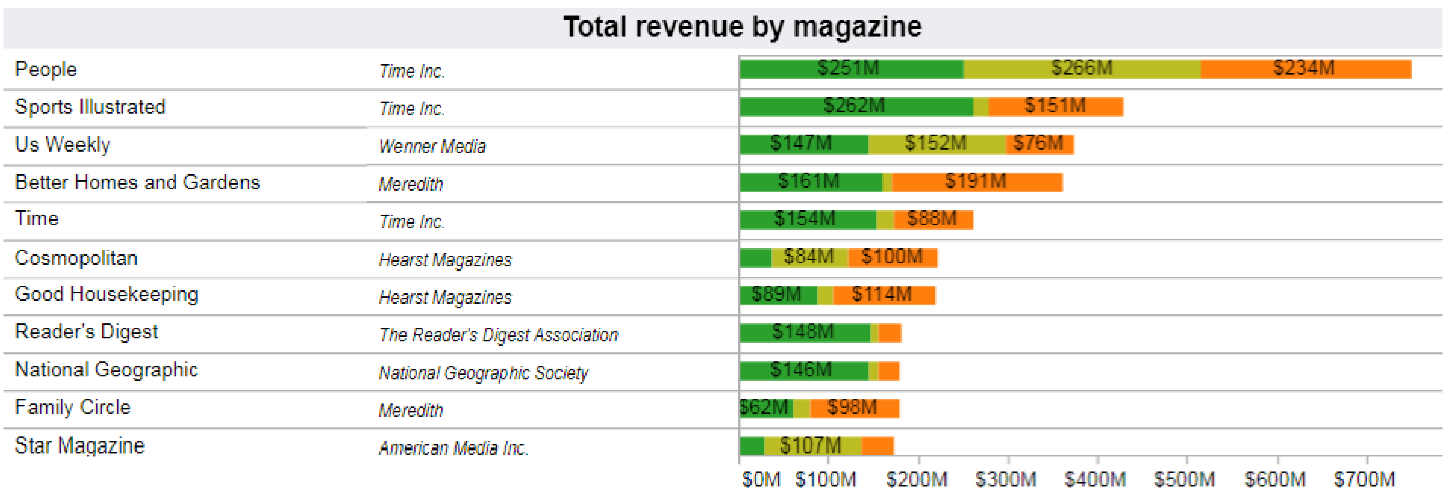


Average domestic box office (DBO) per film for major studios

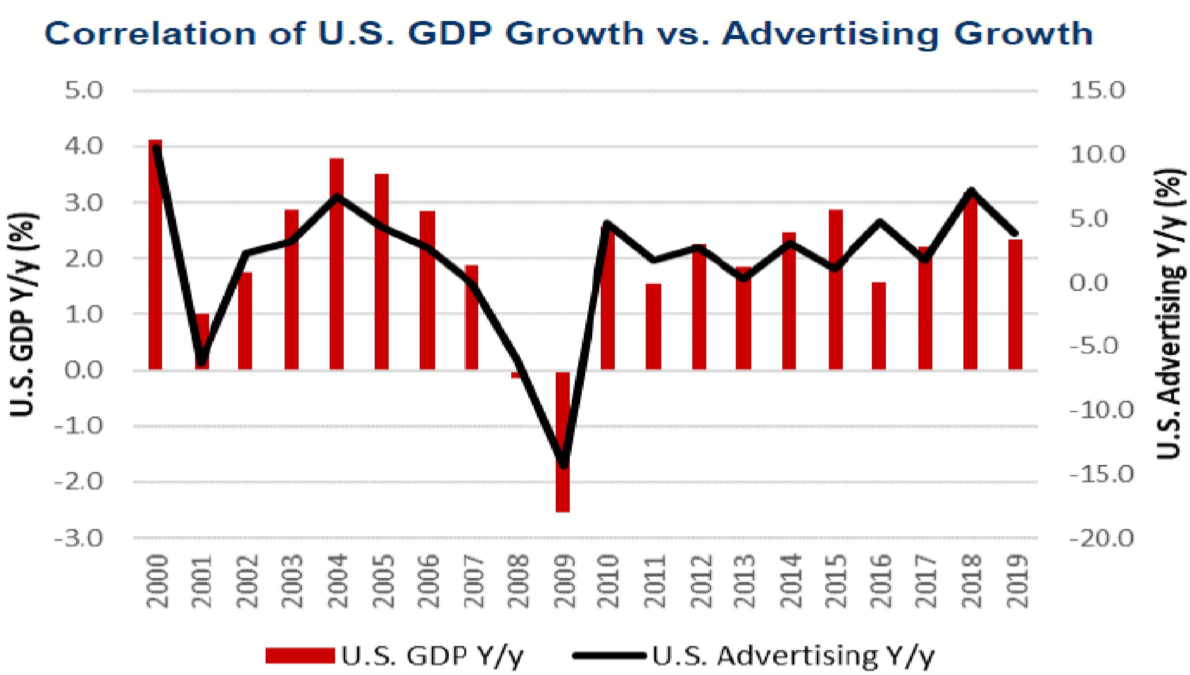


Print Media Components: NYT, PSO, SCHL, NWSA, MDP, GCI, JW.A, DJCO, IH, TPCO

The US printing and publishing industry is a $243B market that includes books, newspapers, periodicals and commercial, the latter the largest at 30% of volumes. The newspaper publishing industry is a $20B market with revenues falling at a 7.2% CAGR the last few years. The commercial print industry is also highly fragmented. According to the August 2019 *Printing in the U.S.* IBISWorld industry report, the United States commercial printing industry, in the aggregate, generates an estimated $77 billion in annual revenue, employs over 420,000 people and is comprised of approximately 46,000 companies. The demise of print-media is well known, and these companies are pivoting to digital means of content delivery which opens up operating leverage as subscriptions grow. The secular shift of how content is consumed, including the ubiquity of mobile platforms, has led to increased competition from a wide variety of new digital content offerings, many of which are often free to users. Besides price, variables impacting customer acquisition and retention include the quality and nature of the user experience and the quality of the content offered. Competition for subscription revenue and readership is generally based upon platform, format, content, quality, service, timeliness and price, while competition for advertising is generally based upon audience levels and demographics, advertising rates, service, targeting capabilities, advertising results and breadth of advertising offerings.



With advertisers shifting their budgets to digital it has been tough to offset the losses from the print side of the business. The names in this group own a set of powerful brands and have massive scale to enable an eventual successful shift to digital, so there is some value hiding in this group, and no better example than NY Times (NYT) which has been a top performing stock the last few years, so a strong digital strategy goes a long way.



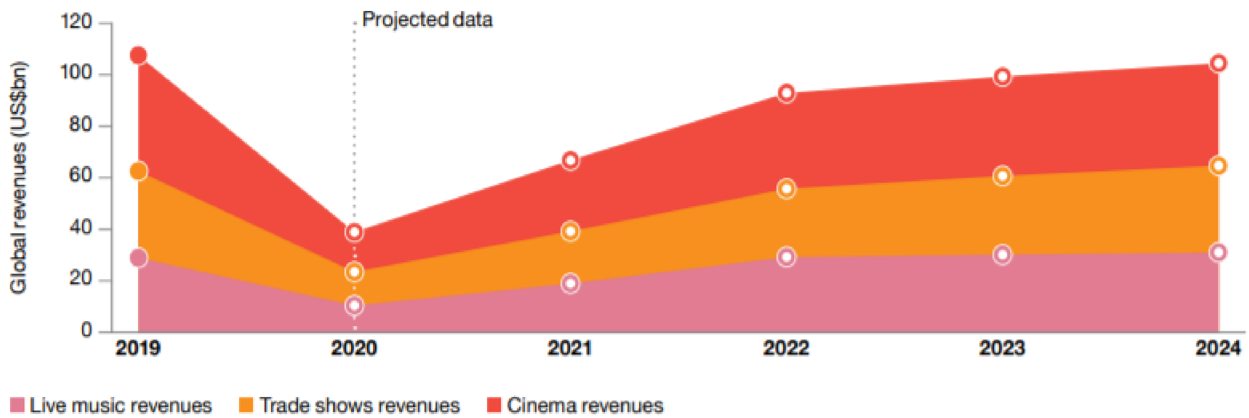
Sports: FWONK, MSGS, FWONA, BATRK, MANU

Theaters & Venue: AMC, CNK, IMAX, MCS, NCMI, LYV

The movie theater industry was already struggling and the pandemic was a major challenge with theaters closing and box office release delays. The industry never really had much attractiveness in an age of streaming media. Live Nation is the most interesting play in this group on a return to normal as concerts and other events have plenty of pent-up demand.

The show must go on

Hit hard by COVID-19, live events struggle to regain their footing.

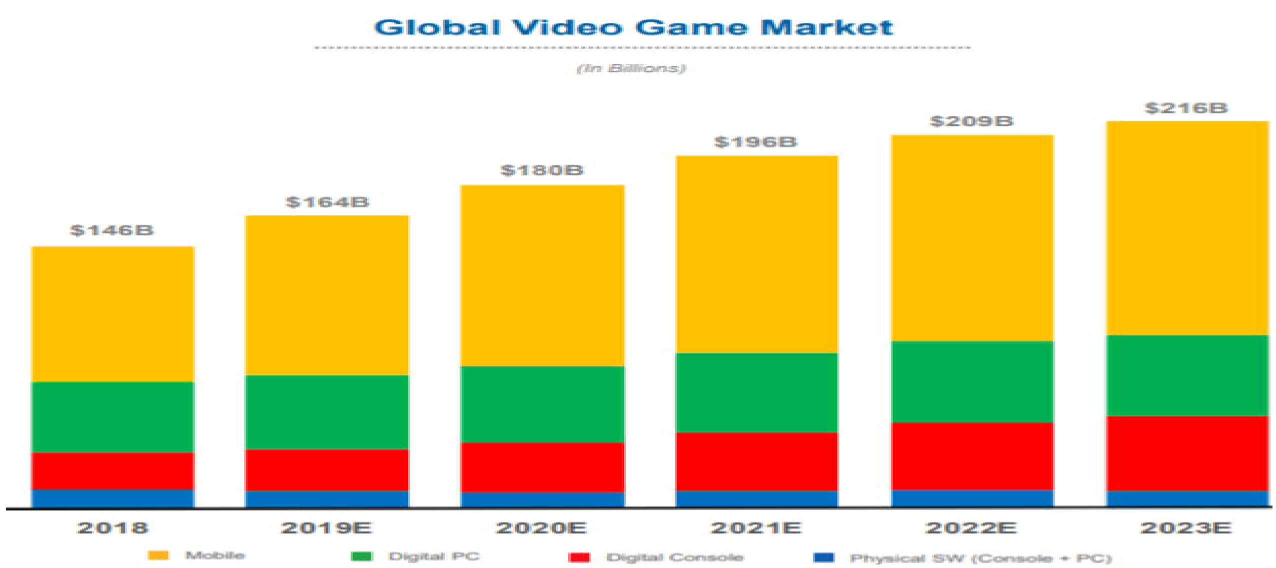


Note: 2019 is the latest available data. 2020–2024 values are forecasts.
Source: *PwC Global Entertainment & Media Outlook 2020–2024* (www.pwc.com/outlook), Omdia

Videogame Components: ATVI, BILI, DOYU, EA, GLUU, SCPL, GRVY, TTWO, NTES, ZNGA

The gaming group received a lot of attention in 2020 with engagement numbers strong as people were stuck at home. There were other major secular tailwinds already in play including digital, mobile, esports, and in-game purchases driving record revenues for the industry. As 2020 nears a close the industry is set up well in 2021 despite facing tough comps with new consoles launching and esports continuing to surge in popularity. Esports already has a considerable market size, surpassing many traditional sports in terms of both revenue and viewership. Globally, the industry hit $950 million in revenue in 2019 and is expected to reach $1.1 billion in 2020. Most of the revenue (58 percent) is forecast to come from sponsorships, which grew an estimated 17 percent compared with 2019. Another positive for the group is increased bandwidth and connectivity penetration globally.

The videogame makers also have strong pipelines for new launches and Microsoft did a $7.5B deal for game-maker Bethesda earlier this year. There are several large international players like Nintendo, Sony, Tencent, and Ubisoft. The NPD Group releases informative monthly stats across the videogame industry.



Management Commentary

Roku (ROKU) on monetized ad impression growth: "Before COVID for -- I think it was 6 or 7 quarters in a row, we talked about that Roku monetized video ad impressions was growing at 100-plus percent. In Q2, you saw that decrease to 50% year-over-year as a lot of these marketers reflexively pulled the emergency brake on a chunk of their ad spend. And then it bounced back in Q3 to 90% year-over-year. So it's up significantly on relative between Q2 and Q3 year-over-year growth rates, but it's not quite back to the pace that it was growing pre-COVID. And so I'm encouraged that it's bouncing back, but it's not really quite back to normal, although certainly, we do believe that we're outpacing the market significantly as folks lean into Roku. In terms of what's the proxy, I think we're we continue to be a premium CPM ad buy, but that's more than justified given the better ROI for that. So we largely focus on moving advertising budgets over from traditional TV to Roku. And that's, by far, the biggest lever we can in terms of driving future growth and penetrating a massive opportunity as this $70 billion in the U.S. alone of TV advertising follows viewership streaming. Just one thing on that, just to give you a comparison point, there is a pretty incredible stat -- I think it's from Nielsen, where for 18 to 33 or 34 year olds, a key demo, roughly half of their TV viewing in the quarter was streaming versus, you look at the advertising budgets and market data is a little harder to come by there, but you probably are in the mid-single-digit range for the percent of advertising budgets that have shift over -- shifts over. So even the fact that people are leaning more into OTT advertising in Roku, in particular, there's still a massive gap where they greatly trail the amount of viewership that's moved over, and we think they need to rightsize that over time."

Spotify (SPOT) on monetizing podcast usage: "So the obvious is simply like we have podcasts. The more podcasts grow, the more ad inventory there is to sell across podcasts. From a business perspective over the long term, it's a lot more fixed-price content, which is great for us. And so as we sort of grow it, we'll have the ability to grow advertising on top of a different type of cost structure, which is really interesting to us. And so for us, it's really about -- from that one side, it's what's the overall bucket of cost we're going to spend and what's sort of the advertising revenue. That's sort of the obvious side. And then the second side is sort of what you talked about in your first question, which is what does it actually do for user growth, what does it do for subscriber growth, how does it help with retention, how does it help with engagement. And those are all the things that we're working to track right now and to understand the value of each piece of content we put on the platform. What is that overall value to us? How can we measure it in both the concrete way of what does it drive specifically for advertising, but also what does it drive for new users, new subscribers? Do they retain more?"

Live Nation (LYV) on demand outlook: "We also continue to see strong fan demand across the board. Our sales and survey data tell us fan demand will be there when the time is right. Our refund rate on rescheduled shows remained consistently low with 83% of fans globally keeping their tickets. Our recent global survey indicates that 95% of fans are planning to return to live events when restrictions are lifted, the highest point of confidence since the start of the pandemic. Festival on sales for next year have been strong, with EDC Las Vegas 2021 selling out in 24 hours at a higher capacity than last year, and ticket sales for Redding, Creamfields and Isle of Wight festivals pacing ahead of last year. And we are encouraged by the enthusiasm for recent events and gatherings that have started to take place, including our first sold out arena tour with 20,000 fans in New Zealand, where business is headed back to normal."

NY Times (NYT) on market potential: "But much of what we are doing represents a continuation of the strategy we've now had for some time, and that is to be the definitive leader in quality, independent journalism for the English-speaking world and, particularly, to be the definitive leader in running that as a digital subscription business. And we're even more optimistic today than we were at any point that I've been here in the size and the strength of the addressable market for quality, independent journalism. We think there's at least 100 million people in the English-speaking world who will pay for journalism through subscription. We're more confident in that than we've been for some good reasons and some not so good reasons. I think willingness to pay is generally going up in the world for journalism. I think, unfortunately, ad-supported journalism continues to be under pressure and I think at all points in the direction of The Times succeeding in subscriptions. And I'll say, we also increasingly like our position in the market at 7 million and change subscriptions. We've got a small percentage of the market today. It's not hard to imagine us having 2, 3, 4, 5x that percentage. And oh, by the way, there's plenty of room for other journalism outlets to succeed there as well."

Take Two (TTWO) on the evolution of the industry: ""I think we're on the threshold of massive growth driven by technology and media and communications, and that the next 30 or 40 years are going to be most exciting yet. Specifically with regard to interactive entertainment. This is still a nascent business. It's about 35 years old. And our average consumer is 37 or 38 years old. And people consume for the rest of their lives, that wish, that entertainment that they fell in love with when they were 17. So every year that goes by, our cohort grows as new people come into the business, and our older consumers stay with us, but they're not so old that they're leaving the earth. So I think that math tells you that our cohort should grow for the next 20 or 25 years, giving us massive industry tailwinds. In terms of the specific question you raised about, what does the business look like, I'm guessing that the business in 10 years looks very different than it does today in the same way that it looks very different today than it did 10 years ago when there was no mobile business and no recurrent consumer spending. And I can't quite say what that will involve. But I think what you're going to see is, first, technology will allow us to -- our creative folks to do things they've never been able to do before, including make games that look exactly like live action. What we do now looks a lot like live action but it's still animation. In 10 years, you'll have the option if you want to make things that look completely realistic, all done inside a computer. Never mind all the other advances that technology will enable. I also think that as more and more consumers realize what interactive entertainment allows, which is an incredibly robust entertainment experience with all the normal attributes of an electronic entertainment experience. So characters, stories, graphics. However, we add this concept of Gameplay and then you overlay it against the social aspects, your ability to play often in an online world with other people, to talk to those people, interact with them, even though they're halfway across the globe. So you get to not only consume great entertainment, you get to consume it with other people and have a social experience at the same time. And of course, the consumption of entertainment has always been a social experience. It is rarely a solitary experience. So all of those things lead me to believe that there'll be massive moves in our business, many of which we can't entirely predict, massive growth in the business, and there'll be a lot of dynamic opportunity, both in terms of what we can do creatively and what we can do on the business side to exploit that creativity."

Bilibili (BILI) on its user base: "In August, our MAUs exceeded 200 million milestone, marking a new monthly record. Total MAU for the third quarter was up 54% to 197 million, and DAU were up 42% to 53 million, both on a year-over-year basis. Mobile users also continue to grow at a faster pace. Mobile MAUs were up 61% year-over-year to 184 million in the third quarter. Our users are highly engaged, spending an average of 81 minutes per day on our platform, making Bilibili one of the stickiest video communities in China. The quality growth of our users is not only reflected in the high engagement levels, but also in the paying user conversions. MPUs were up 89% year-over-year, reaching 15 million in the third quarter. While Bilibili has become a household name among young generations, there are large groups of potential users who are just beginning to learn about us. The Gen Z community acts as our anchor as we begin to cast an even wider net. Today, we are gaining traction with more diverse demographics than ever before."

Electronic Arts (EA) on forward growth drivers: "Looking ahead, I want to offer a few thoughts on our growth drivers for FY '22 and beyond. Each previous console generation has grown in the global market, and we expect this transition will be the same. We plan to launch at least 6 new games on the next-gen consoles in FY '22. These will include a new Need for Speed game that is bringing some astounding visual leaps developed by the Criterion team who have launched some of the most highly rated games in franchise history. DICE is creating our next Battlefield game with never before seen scale. The technical advancements of the new consoles are allowing the team to deliver a true next-gen vision for the franchise. We have hands on play testing underway internally, and the team has been getting very positive feedback on the game as we've begun to engage our community. The next Battlefield is set to launch in holiday 2021, we're excited to share a lot more about the game in the spring. Our live services are positioned to be a long-term growth driver. Having built Apex Legends into an amazing live service with a deeply engaged community, the talented Respawn team in Los Angeles has expanded Apex development to include a full team in our Vancouver location, so that we can continue delivering more great content. Japan is now our second largest market for Apex Legends, and we have strong plans to continue growth in that region. In addition, Apex mobile development will be complete in the new year and ready for launch in FY '22. Our business has expanded significantly this year. Our pipeline of new games and live services is robust, and we're positioned well for sustained growth."

ActiVision (ATVI) discussing International growth opportunities: "Now in terms of future growth, we do still see strong potential for Call of Duty Mobile. China, obviously, we believe, can become a significant contributor to our overall franchise revenues. And we talked about how the title has been approved and now it's in final testing. So again, we expect to see it soon. Hope to see it soon, but we think can have great impact in the region. And it's really not just China. For example, Mexico and Brazil are top 5 markets for us in terms of both installs and revenue. And so we see a big opportunity to further expand geographically in other markets through mobile through increased marketing and accessibility initiatives over the coming quarters. Now we also see a big opportunity to further connect the mobile experience to what's happening on console and PC. And to your point, that includes Warzone. As you know, Warzone for us is a very important strategic initiative. I just don't have any announcements that we're going to share today on it, but certainly, Warzone is an important piece for us across the franchise."

OptionsHawk Executive Summary and Top Picks

The Streaming group contains a few high growth story stocks capitalizing on the shift to digital. **Disney (DIS)** not only will see rapid growth from streaming but its Film & Parks businesses should rebound nicely the next few years. **Spotify (SPOT)** is one of the most incredible stories in the market with an amazing CEO and a very sticky customer base while growing its Podcast business nicely. **Roku (ROKU)** is becoming a dominant force in the digital advertising shift. **Netflix (NFLX)** continues to have ample International growth opportunities, pricing power, and a very strong content slate that will keep churn low. **Fubotv (FUBO)** is an intriguing small cap posting robust key performance metrics that can really grow as it scales. On the flip-side I still do not see a compelling reason to own the Traditional Cable names, even though they are trying to move to streaming they lack the scale to effectively do it as well as the original programming/content and valuations are cheap for a reason, they are in secular decline. Meanwhile the Local TV names will face difficult comps as we come off an Election Year for advertising. I prefer to stick with the aforementioned streaming media leaders for the growth and market share gains. I also would avoid (or short) Theaters as we are seeing the early stages of major Films shifting more to home streaming and see very little future for Theaters even after the pandemic. **Live Nation (LYV)** is a quality name that came under hard times, but I do expect a strong rebound in live music and entertainment, so it is the focus name in that group to be positive on. In Print Media we have another dying business but seeing some strong efforts to shift digital with **NY Times (NYT)** a winner the last few years and continues to post solid metrics, while **News Corp (NWSA)** I see a lot of potential to unlock value particularly in its digital real estate assets, so its an attractive value. **iHuman (IH)** a speculative high growth Chinese maker of physical and digital educational products is an intriguing name in this group.

The last media group is Videogames where there were multiple big winners in 2020 and continues to have plenty of secular growth drivers. Among the three large US plays **Electronic Arts ((EA)** screens the best for consistent revenue growth, high margins, high returns on capital and very strong FCF. **ATVI, TTWO** are both solid across the board of metrics as well and **ATVI** in particular with margin expansion and its mobile business attractive. In the Chinese heavyweights both stories are attractive in their own way, **NetEase (NTES)** is a FCF generator with strong profitability and ROIC while having emerging growth segments in Education and Music, while **Bilibili (BILI)** is just a rapid growth play on Generation Z with insanely strong user metrics. **Zynga (ZNGA)** continues to screen favorable across all metrics and has a very strong game pipeline with potential to scale and expand margins the next few years. **Gravity (GRVY)** is a thinly traded small cap discovery from a few years ago that continues to generate outsized returns without anyone noticing. M&A remains hot in the videogame space for key assets and most companies intend to be acquirers but **SciPlay (SCPL)** would make an attractive M&A target on mobile gaming and social casino games.

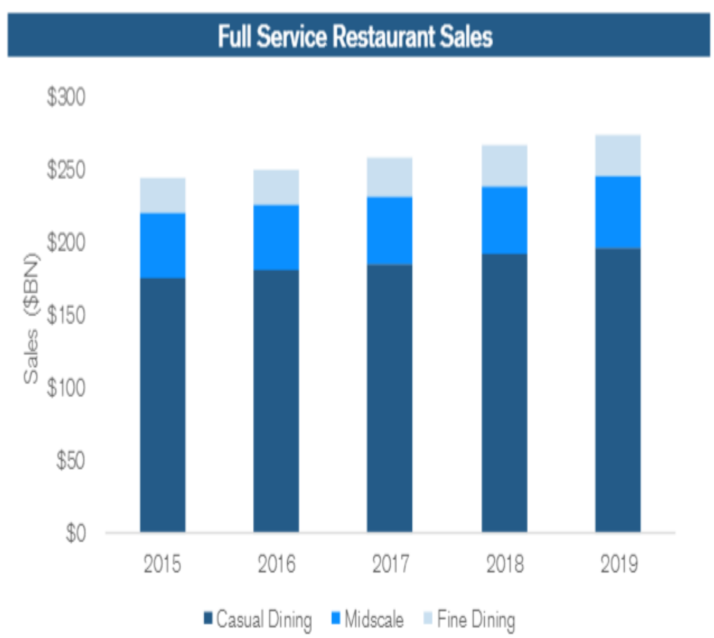
Restaurants

Quick-Service: MCD, SBUX, CMG, YUM, YUMC, QSR, DPZ, PZZA, WEN, WING, SHAK, JACK, ARCO, LOCO, NDLS

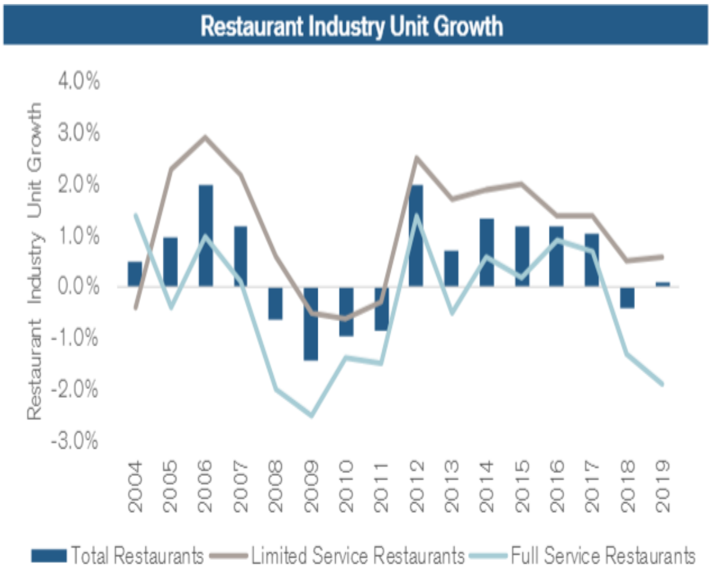
Casual Dining: DRI, TXRH, CNNE, CBRL, EAT, CAKE, BLMN, PLAY, DIN, DENN, BJRI, CHUY, RUTH, BH

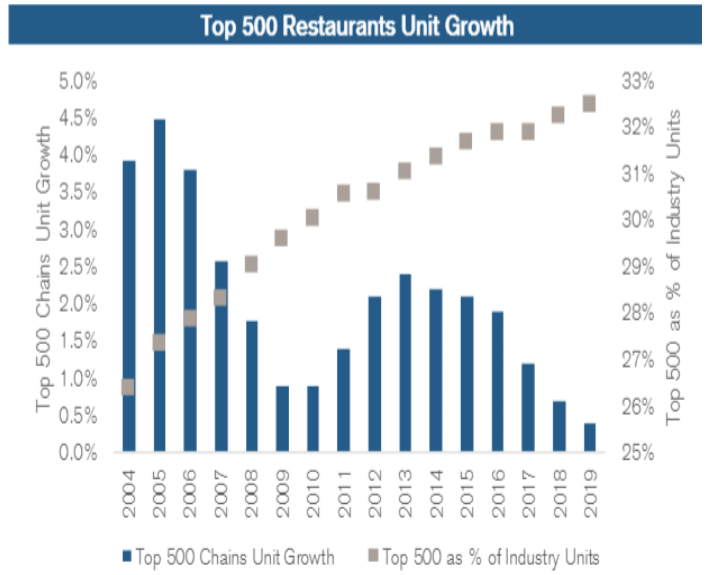
Full Service Restaurant Subsegments

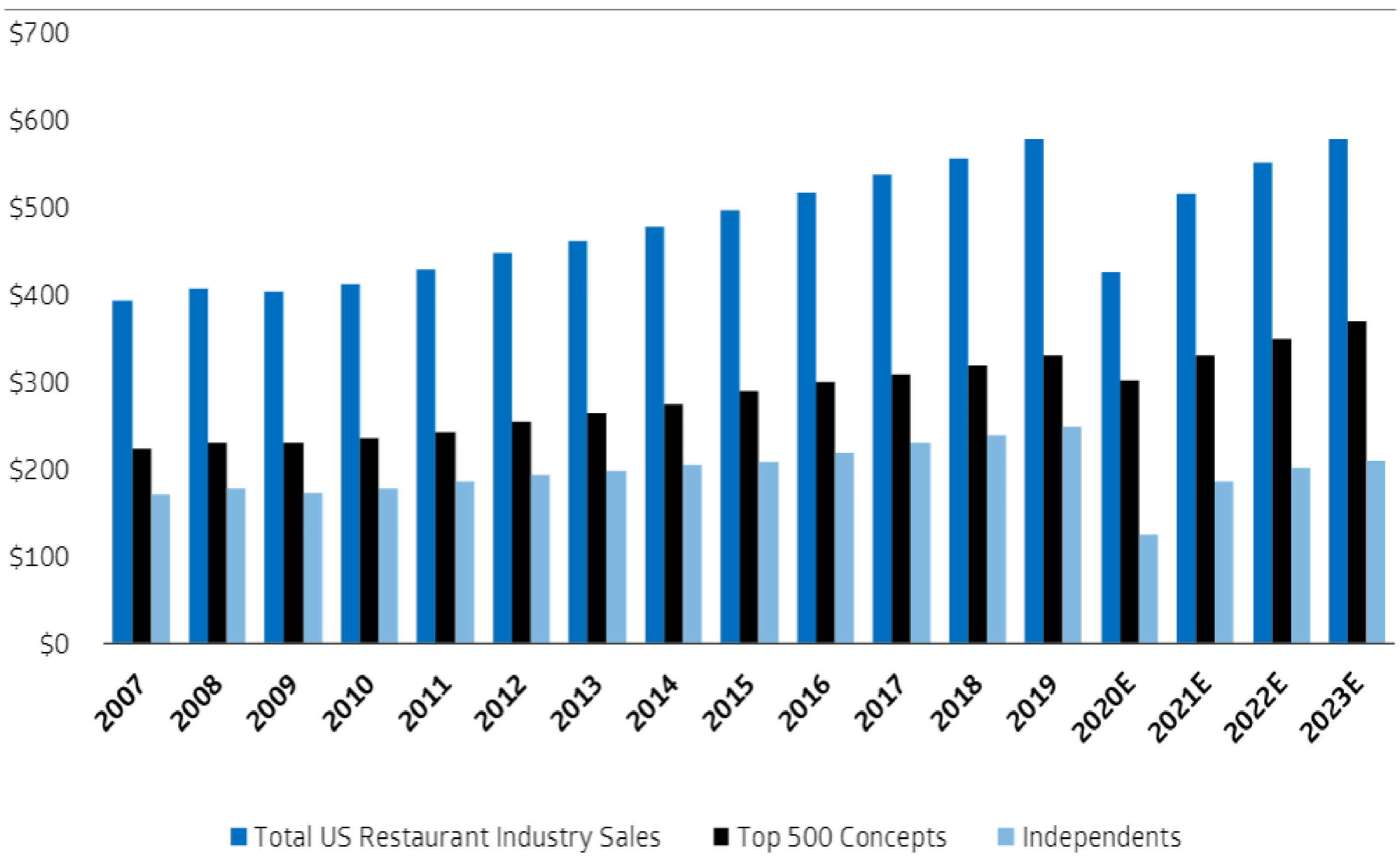
	Casual Dining	Midscale	Fine Dining
Segment	Full service segment; also includes upscale & polished casual dining restaurants	Full service segment; primarily family style restaurants	Full service segment; commonly known as white-tablecloth restaurants
Average Check	~$12-50	~$8-12	$50+
On-Premise vs Off-Premise	~5-15% off-premise & 85-95% on-premise	~10% off-premise & ~90% on-premise	All on-premise
Daypart	Generally lunch & dinner (heavier dinner mix)	Breakfast orientation	Primarily dinner
Alcohol	~10-20% alcohol mix; generally offers full bar	Alcohol not generally offered	25~30%+ alcohol mix; generally offers extensive beverage program
Occasion	Target middle-class consumer & family occasions	Target middle-class consumer & family occasions	Target higher-income consumers & business occassions

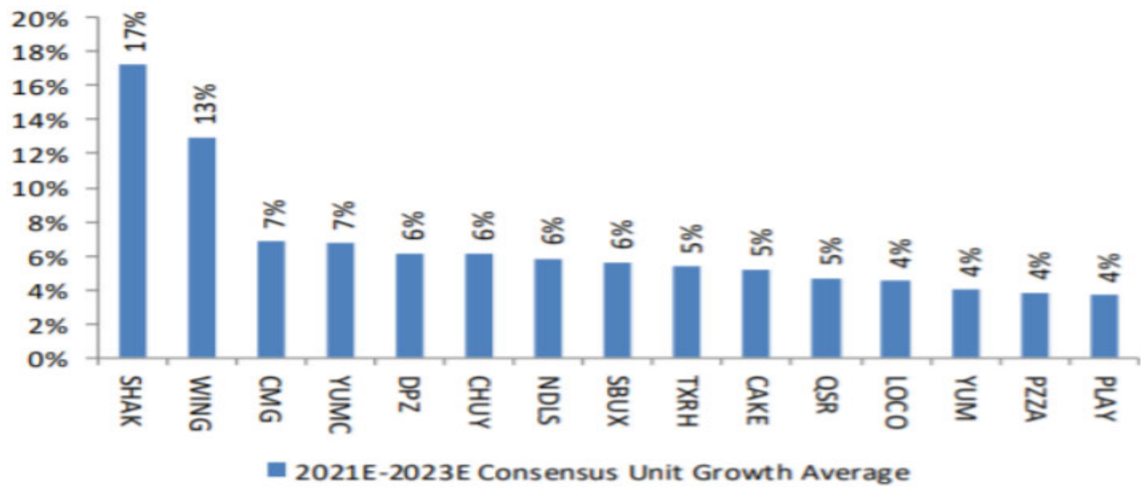


This industry is straightforward and was an obvious loser in the pandemic with closures but the companies that had the ability to utilize delivery, mobile ordering and takeout thrived. It is also an industry where the weakness is transient, people will return to eating away from home, and the investments during this period will pay off over the long run. Casual dining names were more hesitant to embrace technology given a less frequent customer and lost share to quick-service the last few years. Fine Dining likely faces the toughest challenges with exposure to business & leisure travel as well as higher tickets and a high alcohol mix on-premise. A wave of closures over the next 24 months is likely to benefit larger chains in terms of market share gains. The industry has a number of other emerging themes such as expanding the global footprint via virtual, host and ghost kitchens. Third-party delivery and curbside pickup will remain key themes.

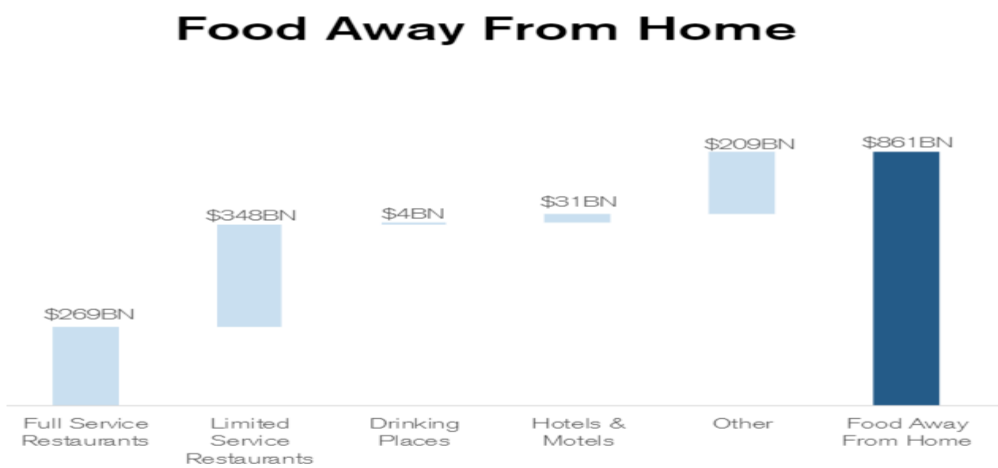




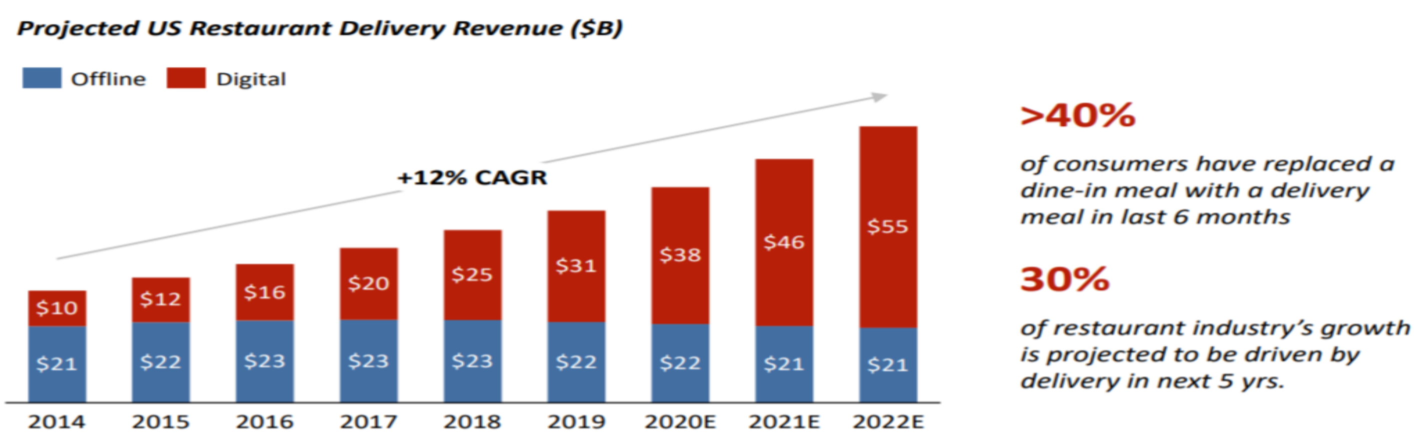




US consumer spend $1.6 trillion on food annually with $600B spent at restaurants and growth has outpaced that of overall retail sales growth. The full-service is a $300B segment that is very fragmented with large chains accounting for 30% of sales and 8% of total units. Knapp Track is a great provider of monthly insights on traffic, tickets and sales. We look at metrics such as same store sales growth, average tickets, foot traffic, sales per square foot, current ratios, inventory turnover, and unit growth outlooks. Cowen sees $39B in annual sales available for the taking through 2022 due to closures of independents. The best franchised concepts to take vacancies are **Wingstop (WING)** and **Domino's (DPZ)** while company owned plays are **Chipotle (CMG)** and **Starbucks (SBUX)**.



It is an industry that has seen a fair amount of consolidation, including a deal in late 2020 for Dunkin' Brands, which followed some notable deals for Buffalo Wild Wings, Panera, Popeye's, Qdoba, and Bob Evans in recent years. Other deals were done for Boston Market, Habit, Whataburger, Jimmy John's, Sonic, Zoe's, Brava Brio, Krispy Kreme, Del Frisco's, Hooter's, Cheddar's, Ruby Tuesday, and PF Chang's.



Management Commentary

Chipotle (CMG) on the digital business: "So digital continues to be roughly 50% of our business, a little shy of that. And the thing that's terrific is that order-ahead business makes up greater than 50% of that. And then we've got delivery that happens in the marketplace and delivery that happens in our app, right? And that breakdown is probably like 65-35 marketplace to in-app. So that kind of gives you an idea. And then, look, when we get past COVID, catering will come back. But right now, that's pretty much gone to 0. Not a lot of big catering events going on these days. But the thing that we get really excited about is things like Chipotlane where we give additional access for that order-ahead business, the order-ahead business grows even more. And you see people still utilizing delivery, but the convenience of not having to get out of your car and being able to order ahead and have a specified pickup time, people pivot to that convenience as well as the additional value relative to delivery."

Starbucks (SBUX) outlining the coffee market: "So with that, let me begin by framing the size of the opportunity and establishing some foundational principles of our strategy. The coffee market remains a very attractive category. It is large and growing, and we're focused on growing category share. Euromonitor sized the coffee addressable market at roughly $360 billion of revenue globally in 2019, and they expect that to grow at a CAGR of 5% to 6% through 2023. Now that would place the coffee addressable market at roughly $450 billion of revenue globally in 2023. We also believe businesses like ours that adapt rapidly to changing consumer preferences and behaviors will grow much faster than the market. As a premium and highly differentiated brand, our ability to grow share in this large and growing coffee market is at the core of our unwavering optimism about the future of Starbucks. So when you put this all together, Starbucks is stronger and more resilient than ever. We have a long runway of healthy growth ahead and are well positioned to invest in the right areas to strengthen our competitive advantage and drive consistent, sustainable growth for many years to come."

Restaurant Brands (QSR) on modernizing the experience: "And then moving into the modernization of the experience in the restaurants, drive-through is a big part of our business, but really haven't been touched in decades. So we've made investments, and we've announced all the changes we're making around outdoor digital menu boards, investing in predictive selling and all the media, all the smart technology and decision technology that goes into that. So we're doubling down on the drive-through experience, enhancing that and loyalty being a big part of the modernization equation, we think the combination of all those, which is hard work and is not one of these quick overnight fixes. But that work is going to give us a really good runway for growth of the business for years to come."

OptionsHawk Executive Summary and Top Picks

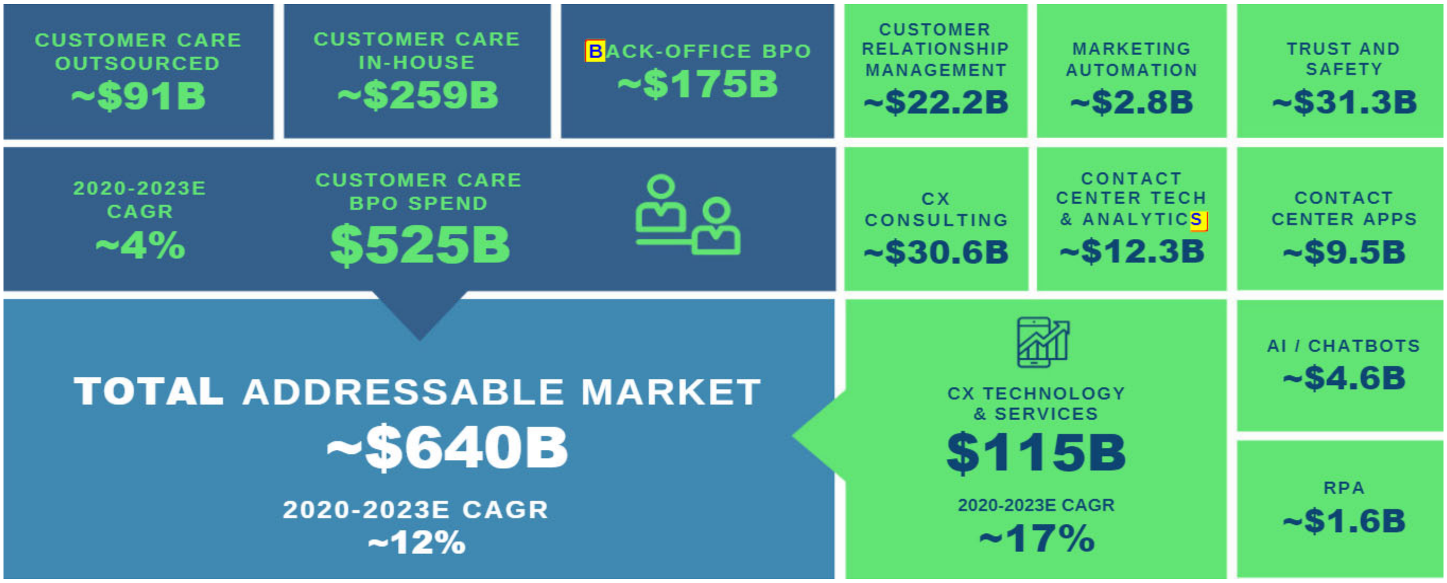
In Quick Service **Starbucks (SBUX)** remains a high-quality growth name in a strong coffee market as well as scarcity value as the only real play on that market, and recently raised its growth outlook for comps at the Investor Day in December. Among the large caps **Chipotle (CMG)** is the major growth story but do worry about margins with rising commodity and wage costs and after a major outperformance in 2020 to peers, **Yum Brands (YUM)** looks more compelling at this valuation. In the next market tier **Domino's Pizza (DPZ)** is a best-in-class operator with its major technology investments and generates impressive comp growth, very high returns on capital, and has room to take further market share. The two most attractive growth stories are small caps with **Wingstop (WING)** and **Shake Shack (SHAK)**, both with a ton of room for expansion and both also capitalizing on a number of the emerging themes across the industry.

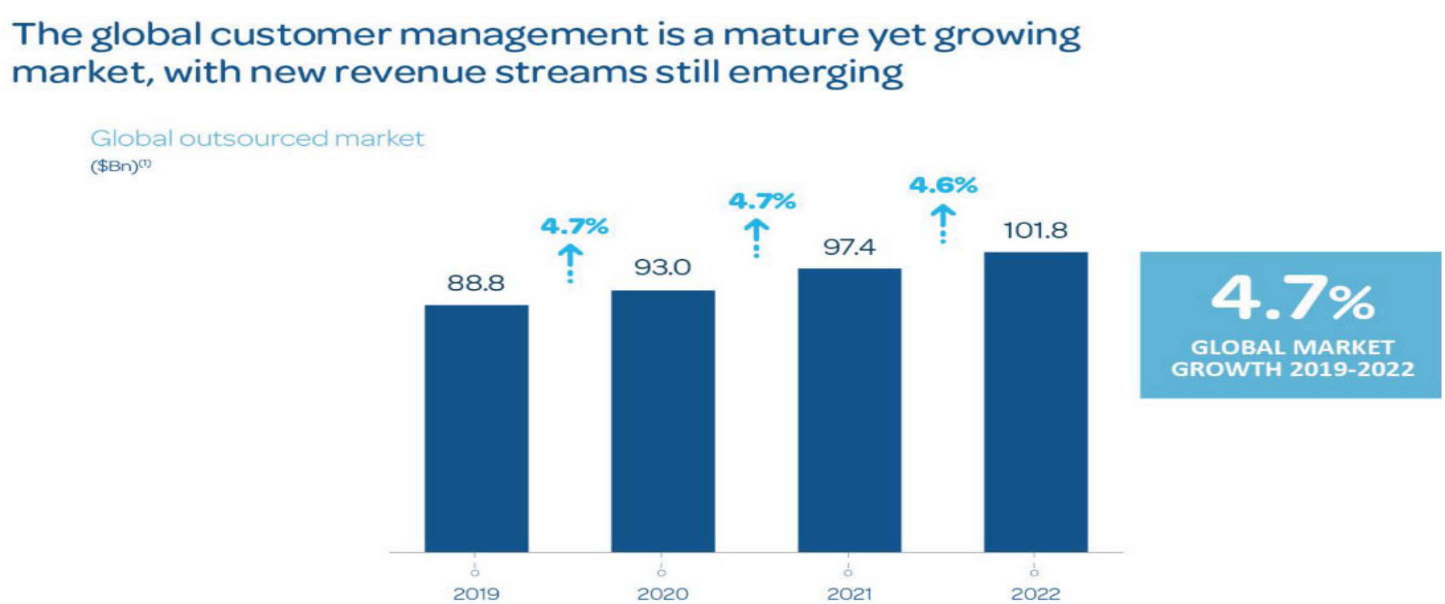
In Casual Dining, **Texas Roadhouse (TXRH)** always screens well for sustained growth, high ROIC, and solid margins and also like its Butcher Shop concept rolling out. The small cap standout is **Dine Brands (DIN)** which operates with high margins and strong ROCE as well as solid FCF. **Dave and Buster (PLAY)** a name I recently looked into remains undervalued for a potential major recovery play as people get back to socializing and can really tap into the live sports and betting markets.

Business Services and Consulting

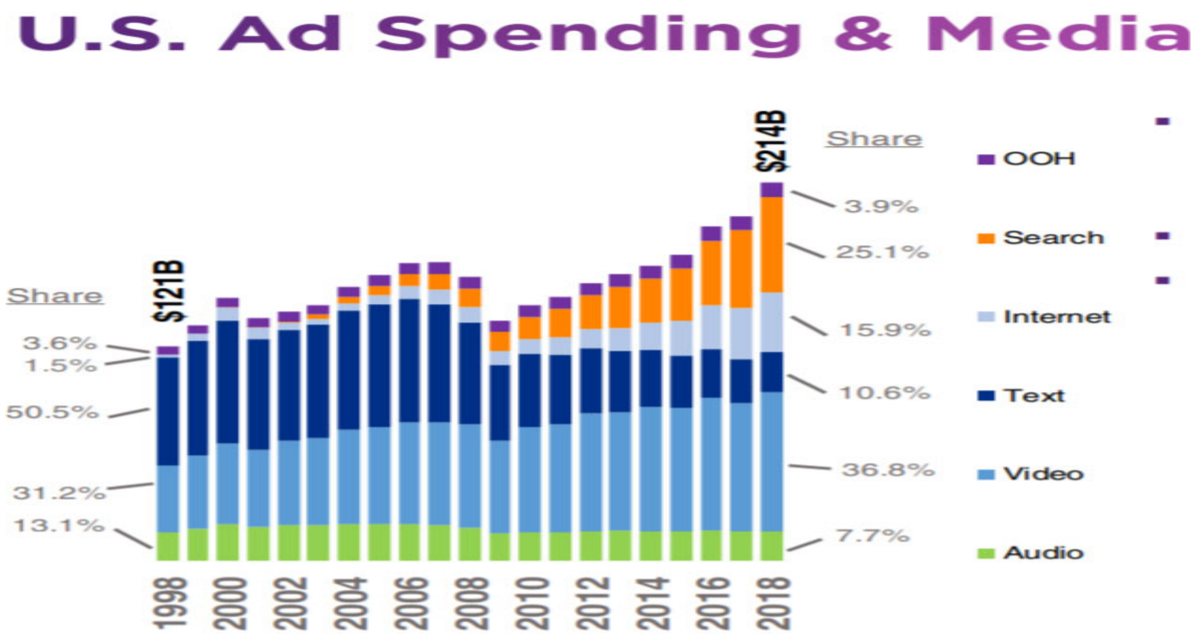
Advertising & Marketing Solutions Components: OMC, IPG, WPP, CCO, OUT, LAMR, SYKE, CMPR, DLX, ATTO, QUAD, CNXC, TTEC

This group contains some of the traditional advertisers/marketers that have been disrupted by digital and trying to transition more to stay alive as well as some print advertising solution companies. It also includes provider of customer relationship management services through the digital providers will be covered in Tech. The more mature print advertising industry is dominated by just a few players while moving towards a digital transformation and data-driven marketing solutions. There are also the outdoor advertising names (OUT, LAMR, CCO, JCDecaux) utilizing billboards, posters and signs out of home. According to data published by Magna Global in December 2019, global revenues in the out-of-home sector are expected to grow at a 4.4% compounded annual growth rate from 2020 to 2024, significantly faster than other traditional mediums. The customer engagement solutions group is highly fragmented with SYKE, ATTO, TTEC in this group and competes with leaders like Teleperformance, Concentrix (SNX), Alorica, and Sitel. CMPR is a niche player capitalizing on the trend of mass customization. The core CRM market is estimates at $875B growing at a 3-5% CAGR the next three years.

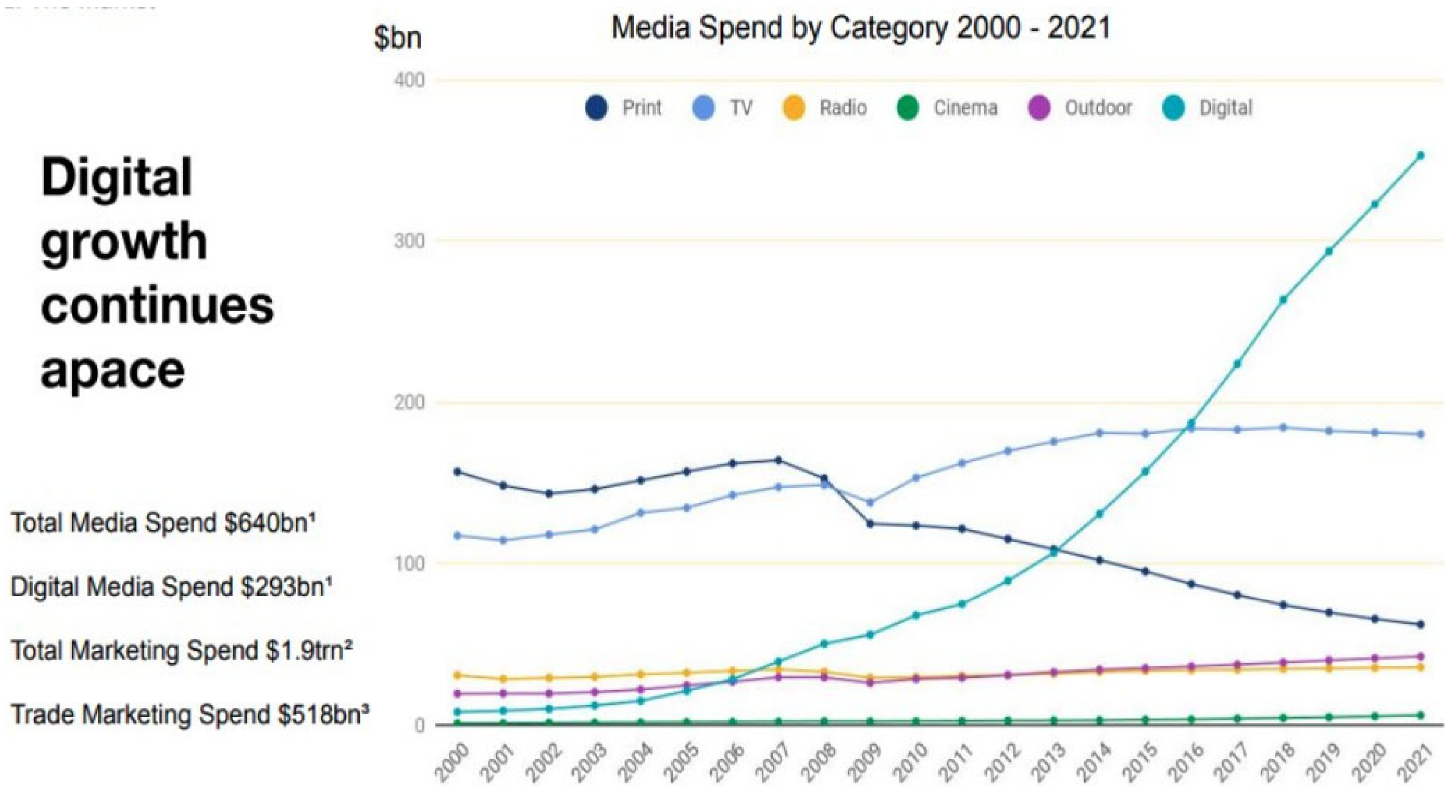




The U.S. advertising services industry is forecast to grow at an annual compounded rate of 4% between 2019 and 2023, as compared to the printing industry which is in secular decline. The advertising and marketing services industry is highly fragmented. According to the November 2019 Dun & Bradstreet First Research report, the top 50 companies in the U.S. advertising and marketing services industry generate approximately 40% of industry revenue. Services in this industry include advertising for print, broadcast and online media (about 25% of industry sales); public relations (12%); and direct marketing (10%). Other services include display advertising, media buying (reselling advertising time or space), and media representation (selling advertising time or space on behalf of media outlet owners). The U.S. advertising and marketing services industry includes about 38,000 establishments (single-location companies and units of multi-location companies), with combined annual revenue of about $105 billion. The customer engagement solutions and services industry, which includes services such as digital marketing and demand generation, customer acquisition, customer support, customer retention and automation, is highly fragmented and significant in size. According to Everest Group, an industry research firm, the total size of the customer engagement solutions and services industry worldwide measured in terms of the U.S dollar was estimated between $330 billion and $360 billion in 2018. Of the total size of the industry worldwide, approximately 25% was outsourced to third-party engagement centers with the remaining 75% utilizing in-house engagement centers. In 2019, the outsourced portion of the customer engagement solutions and services industry worldwide was estimated to be between $86 billion and $88 billion, growing at rate of approximately 3% from 2017 to 2019.



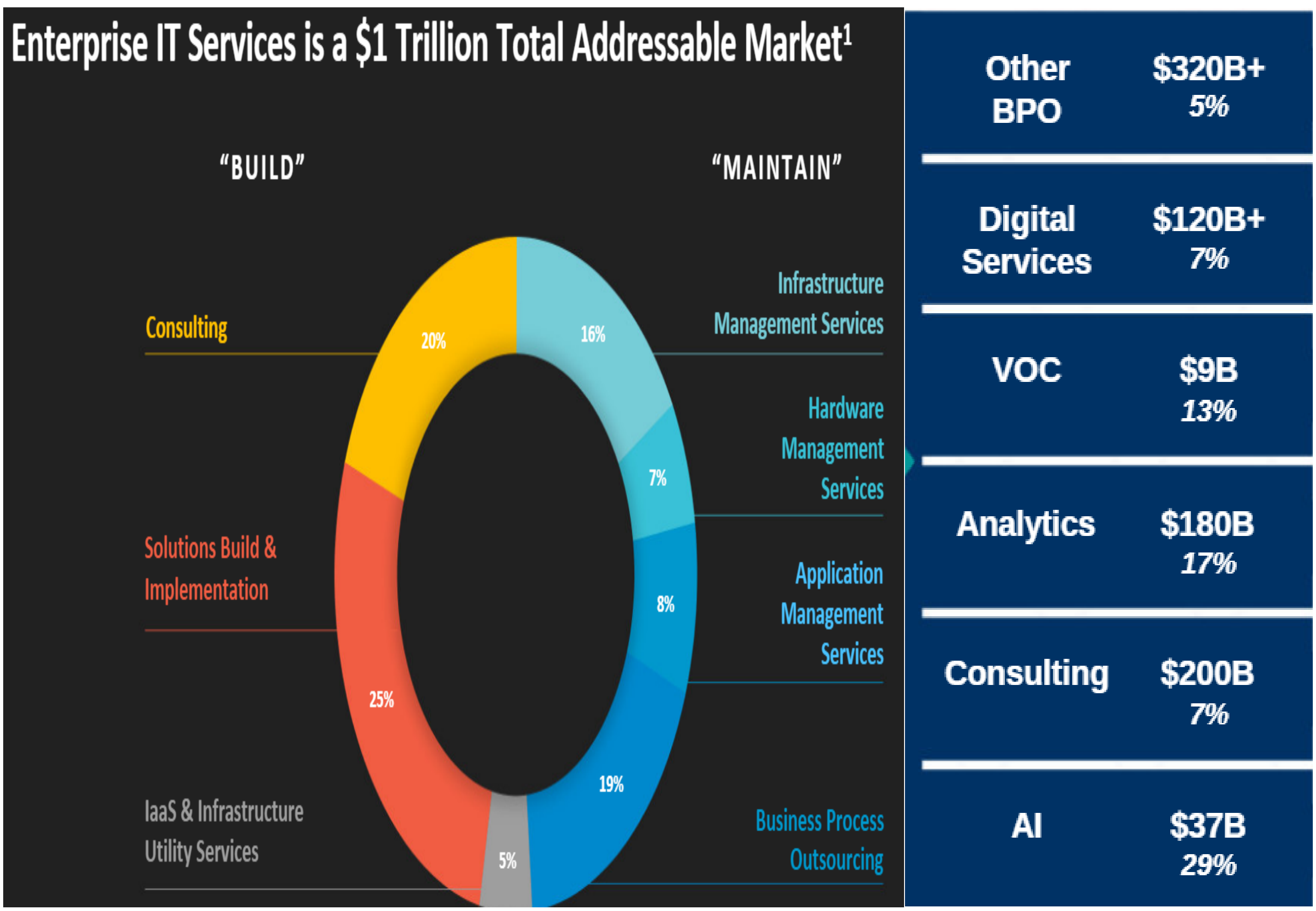
Competition in both the advertising and marketing services and print industries is affected by real gross domestic product growth, as economic activity and advertising spending are key drivers of consumer demand. In times of economic prosperity, advertisers may increase spending to build brand awareness and to drive sales. Conversely, in times of global economic uncertainty and budget pressures, advertisers may reduce spending or shift their spending to other forms of media.

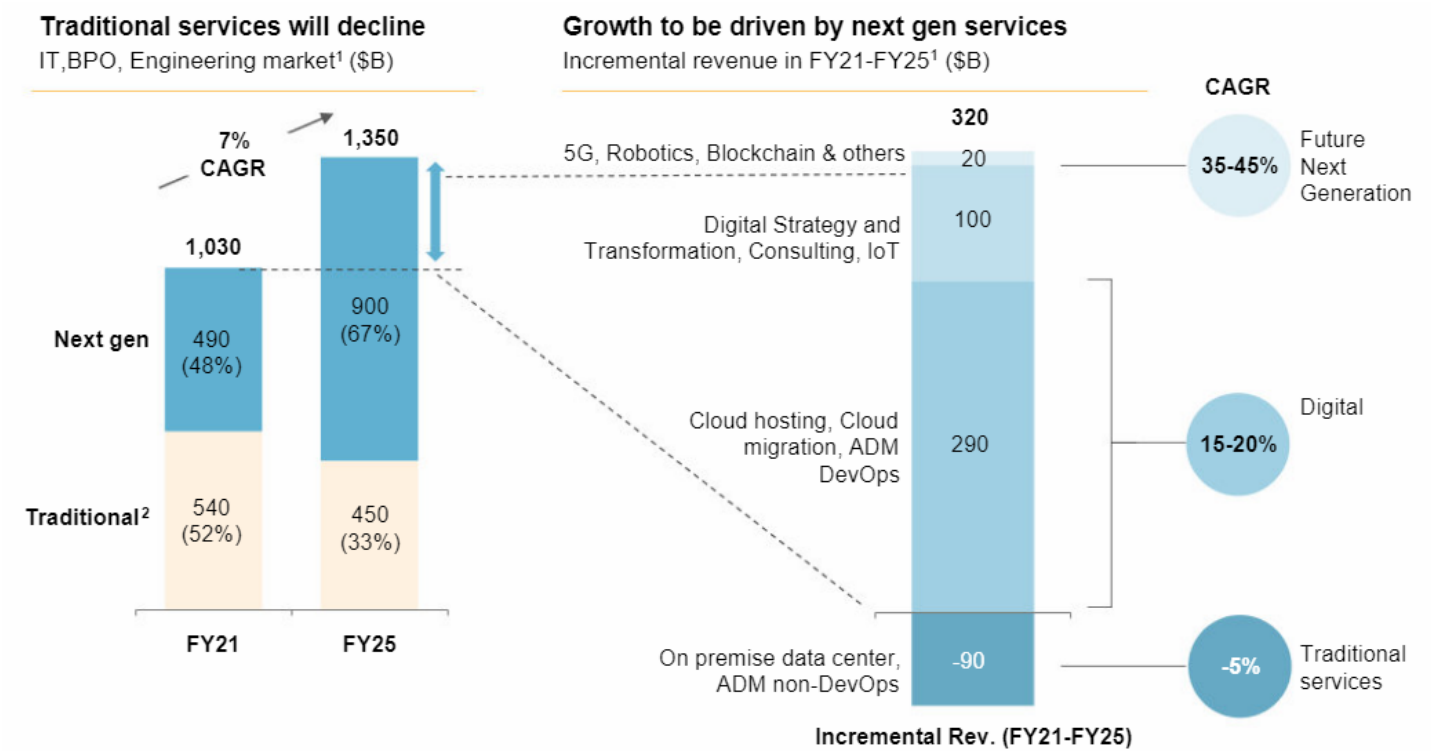


IT/BPM Services Components: EXLS, WNS, ACN, CTSH, G, INFY, VRTU, DAVA, CNDT, EPAM, DXC, GIB, GLOB, WIT CDW, PLUS, NSIT, PRFT, CNXN, PLUS, UIS

This has been a very important industry leading the digital transformation shift for companies looking to stay competitive and contains two of my long-time favorites in EPAM/GLOB as well as data & analytics service provider EXLS. These companies are providing a broad range of services in strategy and consulting, interactive, technology and operations. Capgemini and Tata Consultancy are notable foreign competitors in this group. IT and Business Process Outsourcing is more than a $1 trillion industry and growth set to be driven by digital and next-generation services as shown in the graphic below. The global business process service industry is estimated at $200B serving commercial industries, government services, transportation, and other industries. BPM service providers work with clients to transfer their key business processes to reduce costs, improve process quality, handle increased transaction volumes and reduce redundancy. BPM providers can enable organizations to enhance profitability and increase efficiency and reliability, permitting them to concentrate on their core areas of competence. BPM is a long-term strategic commitment for a company that, once implemented, is generally not subject to cyclical spending or information technology budget fluctuations. Increased global demand, cost improvements in international communications and the automation of many business services have created a significant opportunity for BPM providers with offshore delivery capabilities, and many companies are moving select office processes to providers with the capacity to perform these functions from overseas locations.

These companies support clients across every step of the digital transformation value chain with capabilities across Data and Data management, Business intelligence and Analytics, Digital Transformation Consulting, Digital Integration and Operations. Demand for these services is expected to exhibit strong growth in the next several years.



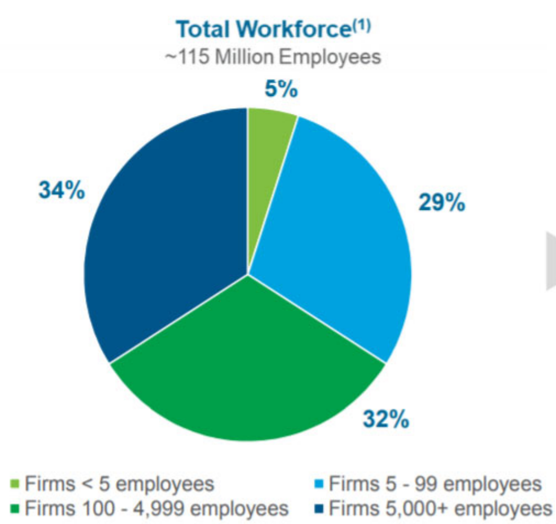


Consulting Components: EXPO, FCN, HCKT, HURN, ICFI, NCI, RECN, VVI, RGP, CRAI, FC

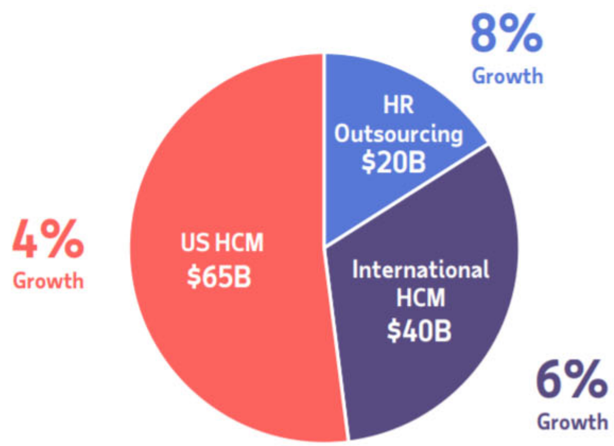
This is a small group of mostly smaller cap companies the fit into the business consulting segment providing various advisory services. Catalysts for future growth across multiple industries include IT modernization, infrastructure spending, energy efficiency, data analytics, resilience planning, public health, litigation, restructuring, biomechanics and data analytics. These companies tend to have specializations in particular industries and services offered so have to be studied on an individual basis.

Payroll & Staffing Components: CBZ, NSP, PAYX, ADP, TNET, ASGN, CCRN, HHR, HSII, JOBS, KELYA, KFRC, KFY, MAN, RHI, TBI, AMN

This is the Human Resources group and although we will look closer at HCM with the software group, a number of names to take a look at here. HR-related functions include compensation and benefits, payroll processing, employee data, health insurance and workers' compensation programs. One of the largest opportunities is across the small business space and the strong business start-up numbers likely a strong positive tailwind for the HR names. Competition in the PEO industry revolves primarily around quality of services, scope of services, choice and quality of benefits packages, reputation, and price.



$125B Global HCM Market with Mid-single-digit growth[1]



Secular Trends

- HR complexity and legislation
- Healthcare inflation
- Consumerization of HCM
- Gig economy
- Analytics

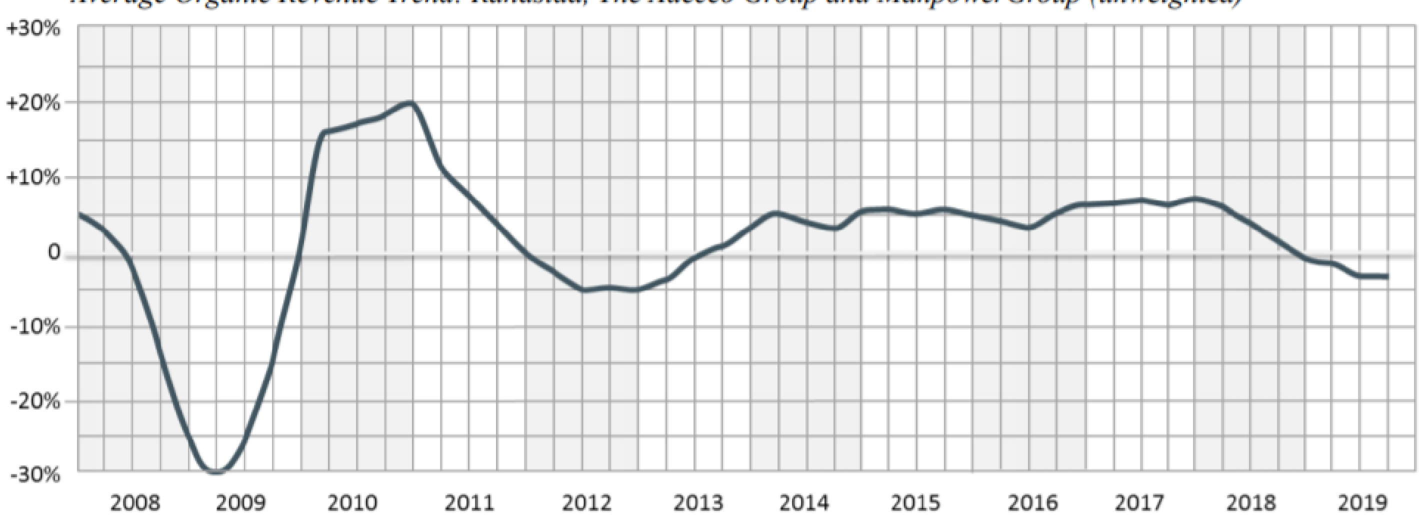
Cyclical Drivers

- Business formations
- Employment growth
- Wage inflation
- War for talent

The employment services industry providers a broad range of services, including permanent, temporary and contract recruitment, project-based workforce solutions, assessment and selection, training, career and talent management, managed service solutions, outsourcing, consulting and professional services. Some large foreign players include Adecco Group and Randstad. There are several trends in the global marketplace such as the increasing demand for skilled people, employers' desire for more flexible working models and consolidation among clients and in the employment services industry itself. The staffing industry is large and highly fragmented with many competing companies. Client demand for contingent staffing services is dependent on the overall strength of the economy and workforce flexibility trends. This creates volatility for the staffing industry based on overall economic conditions. The best time to buy a staffing stock is during a recession.

Annual global staffing industry revenues are near $500B with small businesses representing a large and underserved market. Tech staffing (KFRC, ASGN) is expected to be a $32B market in 2021 and has doubled in ten years and IT staffing is seeing strong demand after the pandemic accelerated the need for digital transformations. Over the next decade, demand for skilled workers will outstrip supply, resulting in a global talent shortage. Organizations must make talent strategy a key priority and take steps now to educate, train and upskill their existing workforces. The Staffing Industry Analysts ("SIA") September 2019 Industry Forecast report estimates the U.S. staffing industry will grow its revenues three percent in 2019 and three percent in 2020 to $152.1B and $156.1B, respectively. The largest industry segment, temporary staffing, is forecast to grow its revenues at an annual rate of three percent in 2020 to $134.5B, up from $130.9B in 2019. Within the temporary staffing segment, professional staffing is expected to grow its revenues three percent in 2020 to $81.6B, up from $78.8B in 2019. The temporary staffing industry is historically cyclical and typically has a strong correlation to employment and GDP growth. Permanent placement services revenues are forecast to grow two percent in 2020 to $21.7B, up from $21.2B in 2019.

*Average Organic Revenue Trend: Randstad, The Adecco Group and ManpowerGroup (unweighted)**

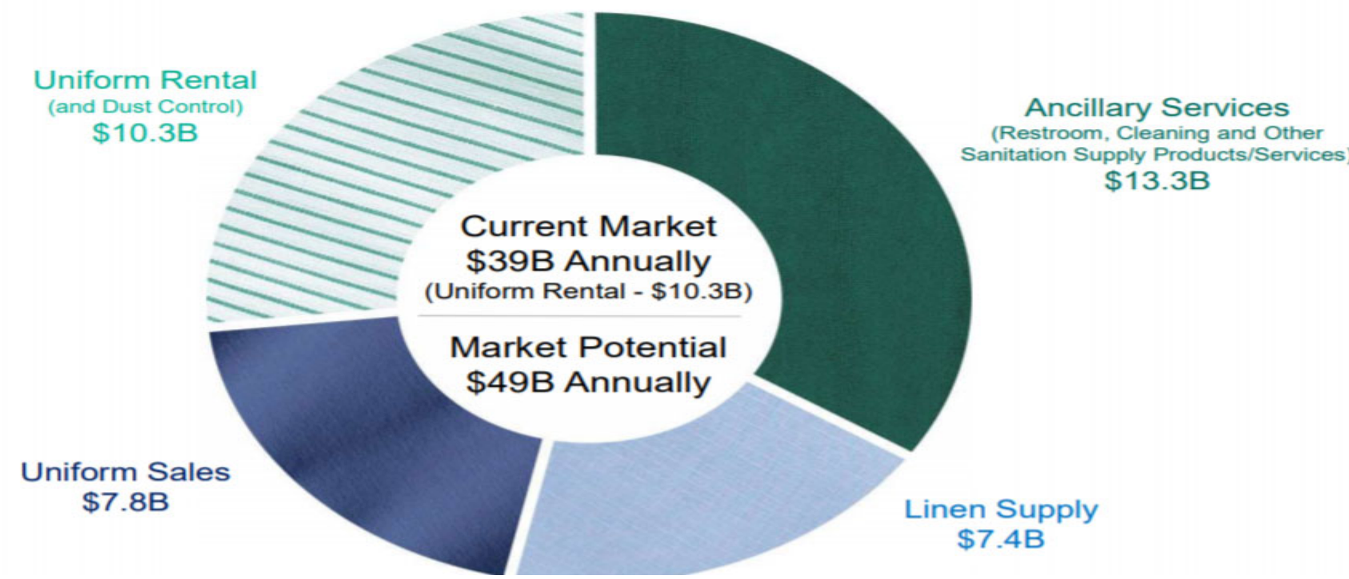


On a more niche level the Executive Search market (HSII, KFY) is a $14B market and also private players Spencer Stuart and Russell Reynolds as leaders as well as International players Egon Zehnder and Caldwell Partners. More companies are seeking experienced executives who can operate effectively on a global scale, driving growth for the industry. Job growth drives demand for the executive search industry. The profitability of individual companies depends on good marketing, development of a loyal client base, and effectiveness at identifying and recruiting qualified candidates.

Technology is also influencing this industry via data analytics, customer engagement, personalization, and performance measurement.

Facility/Uniform Components: BRC, MSA HCSG, CTAS, UNF, SP, ABM CVEO

This is a small nice group of facility and uniform service names with Cintas (CTAS) the main leader. This also includes SP which is in the parking management, ground transportation services and baggage service industries that are large and fragmented. Brady (BRC) another niche name here is involved with identification products and workplace safety and also included MSA Safety (MSA). The safety products market is highly competitive, with participants ranging in size from small companies focusing on a single type of PPE to several large multinational corporations that manufacture and supply many types of sophisticated safety products. Firefighter Safety, Gas Detection, and PPE markets are estimated near $9B in size. Nuclear and Cleanroom garments and services a $1B market, first aid service, training and products a $1.5B market while industrial uniforms, protective wear and work clothing a $39B market. These are very fragmented markets with CTAS/UNF dominating market share are Aramark (ARMK) also a player.

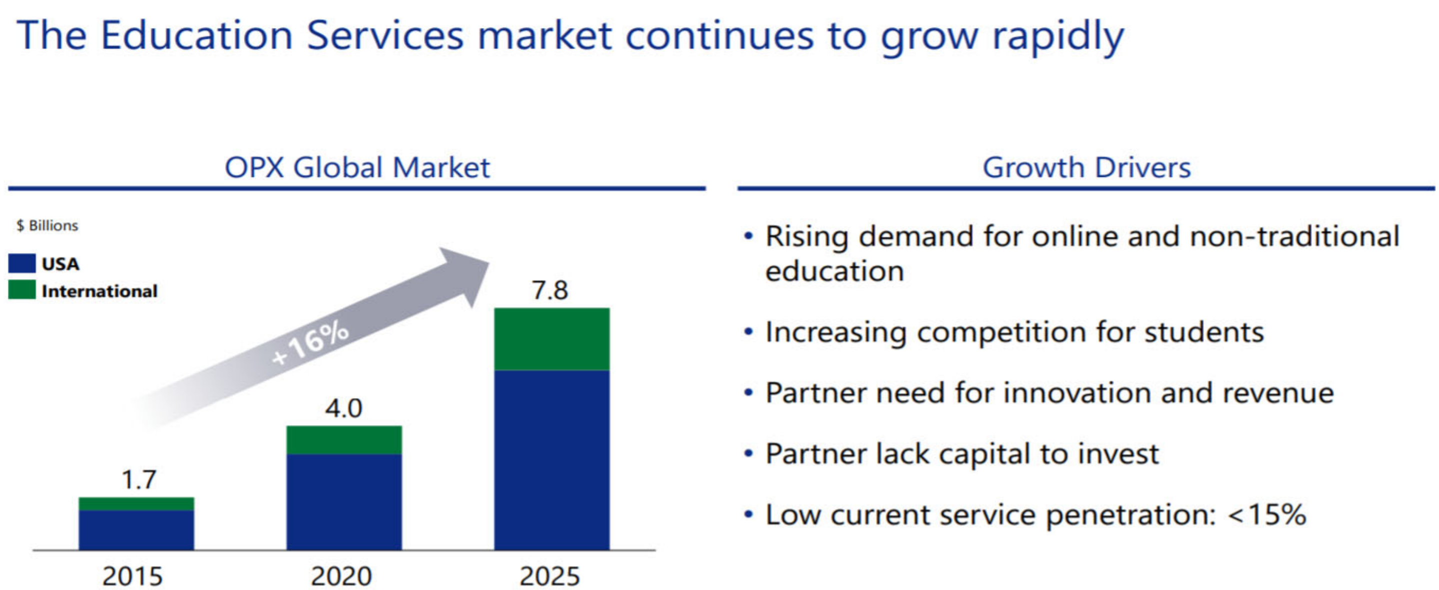


Education Components: TAL, EDU, GSX, AFYA, HLG, BEDU, LOPE, LAUR, STRA, GHC, ATGE, PRDO, LRN, ONE, RST, UTI, ASPU, GPX, APEI, VSTA, HMHC

The Educational Services sector comprises 13 subsectors of the US economy, ranging from public schools to testing and educational support operators. Many of the services provided by operators are staples, such as primary and secondary education, whereas others are more discretionary in nature, like business coaching and tutoring services. Operators in the public schools, private schools, community colleges, nonprofit universities and colleges and for-profit universities generate over 90.0% of sector revenue. As a result, the sector has benefited from increases in government funding for primary and secondary education, as well as funding for universities. The education and training services industry is in a transitional phase, as tighter government regulation of for-profit career schools has forced several institutions to close in recent years. At the same time, other career and technical education providers have benefited from growing support for vocational training from high schools, businesses, and government grant programs. Global education and training services companies are increasingly looking to emerging economies for new growth opportunities. Developing nations such as China and India often rely on education and training services to help support economic growth. The US education and training services industry includes about 67,000 establishments (single-location companies and units of multi-location companies) with combined annual revenue of about $43B. The global online education market is expected to reach approximately USD $133B by 2023, growing at a CAGR of 28.55% from 2017 to 2023.

A few on the stronger trends in education include high demand for online education, cloud-based solutions offering lower costs, improved accessibility and faster deployment, increased adoption of video content, virtual instructors, and higher enrollments with an increased focus on quality learning. Education technology (EdTech) is a term used to describe the industry that combines education and technological advances, revolutionizing the conventional landscape of education. According to Holon IQ, the global education market has reached a value of over $6 trillion with only $150B of market capitalization. Even though digitization only occupies 2.6% of the total educational expenditures as of 2018, indicating $152B of EdTech expenditures, digital spend is expected to increase to a $342B scale, taking 4.4% of total educational expenditures by 2025. Here are a few major segments within the EdTech realm, including early childhood, K-12, higher education and lifelong learning. The K-12 software platform and tools market is the dominant segment within the EdTech industry. This portion of the K-12 market had a market value of $1.71B in 2018 in the U.S., and is expected to be worth more than $1.83B by 2020. Compared to other segments within the U.S., K-12 has occupied 46% of the EdTech market while higher education and lifelong learning together occupy the other 54%.

The Chinese education group has some of the more exciting names boosted by a significant expansion underway in China. The total scale of private education is expected to reach RMB3.36 trillion by 2020 and be close to RMB5 trillion by 2025 with a CAGR of 10.8%. The China youth population is rising with the two-child policy shift in 2015 and the rising standard of living. Based on the statistics of urban household spending on preschool education, the scale of preschool education market is estimated to be RMB800 billion by 2020. With the growth in China's newborns, kindergarten enrollment rate and tuition fee, the overall demand for preschool education for those aged 0-6 is rising sharply, and there is an increase trend for preschool education at a younger age. These trends will result in an imminent upgrading of China's preschool education consumption, which means the parents hope to let their children grow happily and healthily and acquire various skills under a well-rounded and professional pre-education system.



Healthcare & Childcare Service Components: HMSY, MMS, PLNT, SCI, CSV, HI, MATW, WW, BFAM

This is another hodgepodge group that lacks a lot of close comparable companies and includes the death care services, daycare provider, fitness centers, and healthcare services.

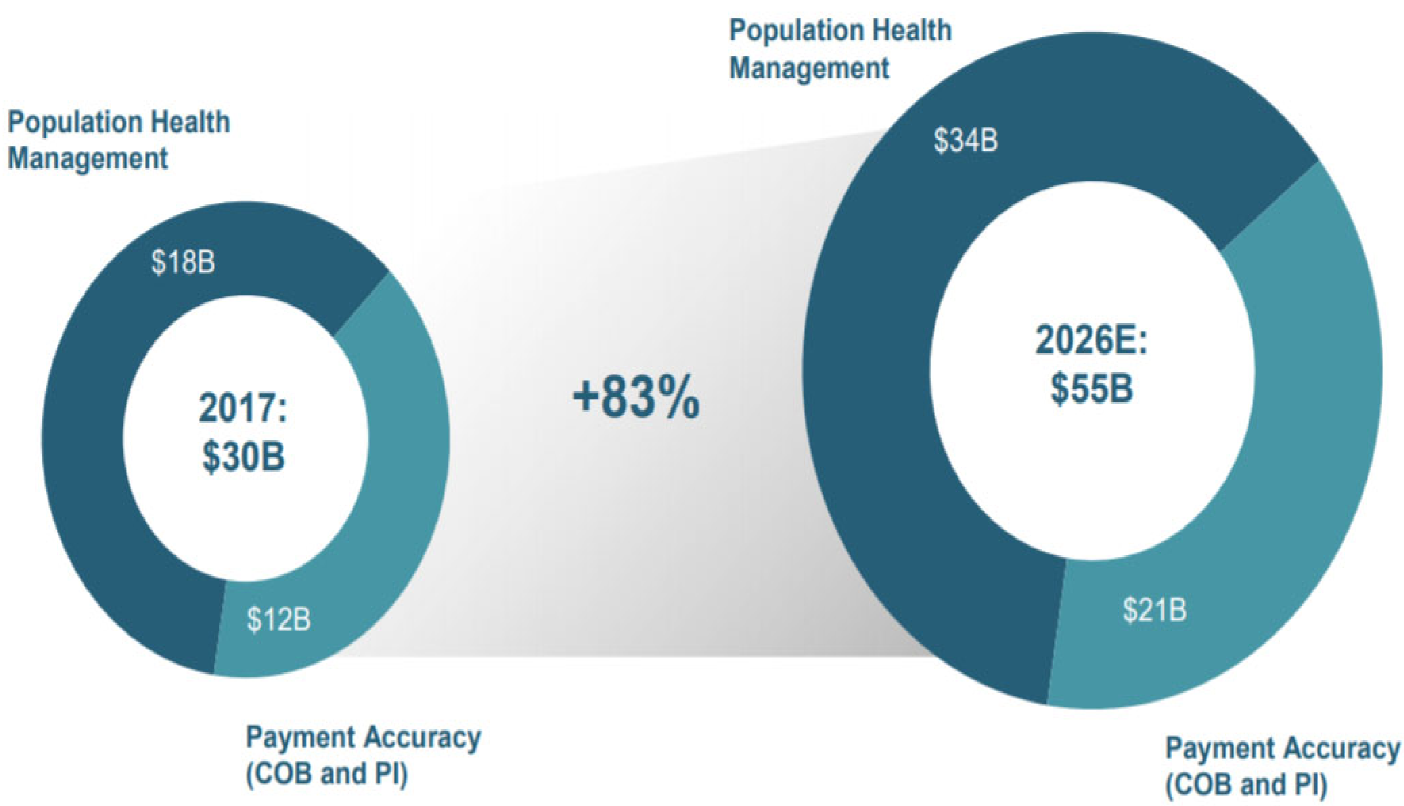
The funeral services industry is very fragmented with Service Corp. (SCI) the leader having around 15% market share and independents accounting for 80%. The global death care services market is massive, expected to hit $102B in 2020 with the US market seen reaching $68B in 2023 at a 4% CAGR. Funeral home and cemetery businesses provide products and services to families in three principal areas: (i) ceremony and tribute, generally in the form of a funeral or memorial service; (ii) disposition of remains, either through burial or cremation; and (iii) memorialization, generally through monuments, markers or inscriptions.

While the number of deaths is expected to increase over the next few years, the burial rate is expected to continue to decline. In 2019, the number of burials in the United States decreased by an estimated 1.2%, following declines of 2.2% and 0.5% in 2018 and 2017 respectively. The number of burials in the United States is estimated to fall by an average of 1.0% per year from 2018 through 2023. In 2023, it is estimated that there will be approximately 1.26 million burials in the United States and a burial rate of 40.2%. Increases in cremations overtakes the traditional burial methods in the US death care market. Green burials are the next big step towards sustainability in the US death care market. In 2019, the number of cremations in the United States increased by an estimated 5.2%, following increases of 4.5% and 5.6% in 2018 and 2017, respectively. Slower growth is expected through 2023, due in part to the sheer size of the market for cremations; however, shifting preferences will continue to lead to a considerable rise in cremations. The number of cremations in the United States is expected to grow by an average of 4.4% per year from 2018 through 2023. The green burial process includes no caskets, no embalming chemicals that were toxic to the environment, and nothing metal, whether urns, caskets, or tombs. The rapidly growing and aging population is expected to result in an increase in the number of deaths in the future.

According to the International Health, Racquet & Sportsclub Association the U.S. health club industry generated approximately $32.3B in revenue in 2018. The industry is highly fragmented, with 39,570 clubs across the U.S. serving approximately 62.5 million members, according to IHRSA. In 2018, the U.S. health club industry grew by 2.8% in number of units and 2.6% in number of members.

The child care market consists of the sales of child care services such as babysitting and learning services and related goods by entities (organizations, sole traders and partnerships) that provide care for infants or children either in the home of the child, in the home of the registered child caregiver or in a child care center. The global market for child care reached a value of nearly $339B in 2018, having grown at a CAGR of 8.3% since 2014, and is expected to grow at a CAGR of 11.3% to nearly $525B by 2022. BFAM is the leading provider of employer-sponsored center-based childcare, back-up care, and workforce education and estimates approximately six times more market share in the United States than its closest competitor. The market for childcare and early education services is highly fragmented. Learning Care Group, Goddard Schools, Primrose Preschools, Childbase, KidsFoundation, and CompaNanny are notable private competitors. An increase in the numbers of families where both parents are employed and a steady change in gender roles is a big contributor to the growth of the industry.

HMSY is a provider of cost containment and analytical solutions in the healthcare marketplace. They use data, technology and analytics to deliver coordination of benefits, payment integrity and population health management solutions that help healthcare organizations reduce costs, improve health outcomes and enhance consumer experiences. The market for cost containment solutions is large and growing, driven by increasing healthcare costs, rising program enrollment and payment complexities. MMS is a leading operator of government health and human services programs worldwide.



Management Commentary

Lamar (LAMR) on its business: "We are the largest out-of-home advertising company in the U.S. by revenue. And also by market cap, we are the largest in the world. We are predominantly billboards, traditional billboards, that's 88% of what we do. But we also have a transit and airport division that we operate in our QRS. Our billboards are REIT qualified, as well as our logo division, which is about 5% of what we do. Those are also REIT qualified assets. When you think about Lamar, you should think about just dominant player in small- and middle-sized markets across the whole of the domestic U.S. We -- about 80% of our footprint have an 80% or better market share. Lamar also operates the largest network of digital billboards in the U.S. More on that later. It's our fastest-growing division. And finally, we touch those 40,000 billboard tenants through almost 1,000 account executives and sales professionals across the U.S. and in Canada. Our digital platform, which Sean will touch on later, has continued to grow, particularly through the programmatic advertising channel. And when you hear programmatic, that is simply the online delivery of our digital sales platform in an end-to-end e-commerce fashion. We have the strongest balance sheet in the industry. I think it is a key competitive advantage for us."

TTEC (TTEC) on the momentum of its business: "Our world was already rapidly transforming to a more digitized and virtualized and direct-to-consumer future. The current environment has only accelerated this transformation, exposing a significant gap in the virtual delivery of customer experience for the majority of large Global 2000 organizations. Their frontline operations and customer support infrastructures are still far too brick-and-mortar focused. They are simply not nearly digitized or agile enough to master the last mile and on-demand experience that customers now require. This massive technical deficit has led to a mad dash to remediate what has become a global digital virtual divide. Organizations are being forced to meet a sudden and permanent shift in consumer behavior. Those who are truly digital-first are thriving, others must get there quickly or risk obsolescence. This step change is creating a groundswell of demand for TTEC. We are benefiting from our well-honed capabilities and expertise in optimizing and automating the customer journey for large-scale organizations. This is accomplished by rapidly deploying our pre-integrated best-of-breed CX technology ecosystem alongside delivering operational excellence. Our delivery of customer engagement is serving as the foundation to our record third quarter financial results. Our ongoing momentum has been underscored by this rapid paradigm shift. We are delighted with the continued diversity and high-quality nature of our bookings across new and existing commercial and government clients."

Infosys (INFY) on deal wins: "Digital revenues grew at 25.4% year-on-year in constant currency, and now accounts for 47.3% of our revenues. We delivered operating margin of 25.4%, which is an expansion of 370 basis points year-on-year and 270 basis points sequentially. This was achieved after rewarding our employees with variable pay at 100% and awarding a onetime special bonus. Large deal wins, which are wins of work above USD 50 million in TCV per contract, were at $3.15 billion. Large deal pipeline remains strong as clients look at accelerating digital transformation programs and continuing their focus on automation and cost efficiency."

Exponent (EXPO) on its role in tech advancements: "Companies and governments alike are adopting new ways to conduct business from testing new procedures and protocols to designing next-generation products and navigating changing regulatory requirements. Clients continue to call on Exponent's multi-disciplinary teams for sound advice as they evolve, adapt and innovate. Our engineers and scientists continue to support the advancement of complex technologies in many industries. Some examples of this ongoing activity include autonomous and electric vehicles in the transportation industry, flexible displays and virtual reality in the consumer electronics industry and combination device and drug delivery systems in the life sciences industry. The demand for Exponent's interdisciplinary solutions is durable, as society continues to raise its expectations for safety, health, sustainability and reliability and as technologies continue to increase complexity."

Paychex (PAYX) on its investments paying off: "Our investments over the past several years in virtual sales, digital marketing and lead generation and sales support technologies have positioned us well to succeed in this environment. With the challenges, small and midsized businesses have faced during this environment, our HR value proposition has never been more clear. We have seen a surge in demand for our various HR offerings since the beginning of COVID, and our Q1 sales results for our HR services division were very strong with double-digit increase over last year. We are well positioned to continue to take advantage of this opportunity. Our client retention during the first quarter has remained at record levels. We continue to see payroll clients that have been in non-processing status begin to pay employees again."

HeadHunter (HHR) on its outperformance in the industry: "We believe that we are actually one of very few job platforms globally, who have reached and even exceeded pre-crisis inventory level because many of our peers are globally struggling with inventory at this time. Due to our constantly improving search and recommendation algorithms, we've managed to sustain high conversions from application to invitations. Actually without compromising on client efficiency during this scale expansion. As expected, the most rapidly recovering product was job posting, growing 11% year-on-year as our Key Accounts resume their hiring post lockdown. And the most importantly, Small and Medium business category bounced back after sharp fall in Q2."

OptionsHawk Executive Summary and Top Picks

In the Advertising & Marketing group the larger traditional plays remain secular shorts with the shifting of ad budgets to better digital formats. **Lamar (LAMR)** in the Billboard space is a solid business with high margins and opportunities through its digital billboards. A recent spin-off, **Concentrix (CNXC)**, in the customer experience industry is an attractive name to pay attention to with its outlook for strong growth and margin expansion. **TTEC Holding (TTEC)** has always screened well and remains the best small cap combination of superior growth, margins and cash flows as a leader in CX-as-a-Service historic transformation.

The IT/BPM Services group has a lot of components with companies benefitting from a surge in digital transformation business. Although **Accenture (ACN)** is a quality business I like **Infosys (INFY)** into 2021 which provides stronger growth and margins and their latest call highlighted the strength of its business. **EPAM Systems (EPAM)** is a favorite in this group at an $18B market cap and delivering outsized growth while **Globant (GLOB)** is another favorite that not many follow but is doing some amazing things in digital transformation and posting big numbers. Both also carry high multiples and value investors may want to look at **Genpact (G)** which trades cheap while having solid metrics. Among the small caps **Endava (DAVA)** a discovery from 2019 that continues to screen well and been an amazing performer. **Perficient (PRFT)** is the other small cap that screens very strong and is winning more large deals as well as expanding margins.

In the Consulting group we only have smaller cap names with **Exponent (EXPO)** the high margin and return on capital leader, a name highlighted in last year's annual outlook that continues to see positive mix shift and demand drivers for its businesses. **FTI Consulting (FCN)** is the other attractive name that has not performed well in 2H20 with COVID disrupting its business and loose money slowing the pace of bankruptcy filings and other restructuring activities, but I expect it will be positioned well in the future as M&A picks back up.

In Payroll/HCM **Paychex (PAYX)** screens a bit better than **Automatic Data (ADP)** and should continue to benefit from strong small business start-ups. **TriNet (TNET)** a long-time favorite continues to fly under the radar while delivering impressive numbers and is the favorite in this group. The Staffing group is not all that attractive to me, on the small cap side **HeadHunter (HHR)** a Russian online recruitment platform is delivering very good growth numbers while **ASGN (ASGN)** the best-in-class staffing firm here with exposure to growing needs for IT jobs. In Facility/Uniform **Cintas (CTAS)** is a high-quality go-to name with a dominant position and screens well across all metrics. **SP Plus (SP)** is a quality business down 30% in 2020 and think a nice bounce back candidate as the travel industry recovers for its parking/baggage services. **Brady (BRC)** another small cap of interest, though lower growth, delivers solid profitability and returns on capital while seeing margin expansion and having a good mix of businesses with a strong R&D pipeline.

The Education group is a diverse mix with the large cap names being the China Education plays, and **New Oriental (EDU)** remains the preferred name in that group. There are much more attractive investments when we start looking more at the educational technology plays. In the US Education institution plays it really comes down to **Grand Canyon (LOPE)** and **Strategic (STRA)**, the former outperforming with better margins and ROCE, but neither of real interest. There are two small cap growth stories hidden in this group with **Aspen Group (ASPU)** which offers post-grad programs with a focus on Nursing and **Vasta (VSTA)** a newer name from Brazil offering digital education solutions.

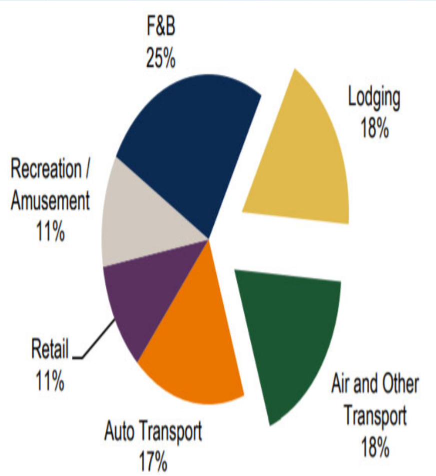
Travel, Leisure and Gaming

Hotel & Venue Components: MAR, HTHT, HLT, IHG, H, CHH, WH, WYND, STAY, GHG, VAC, HGV, PK, PLYA, BXG

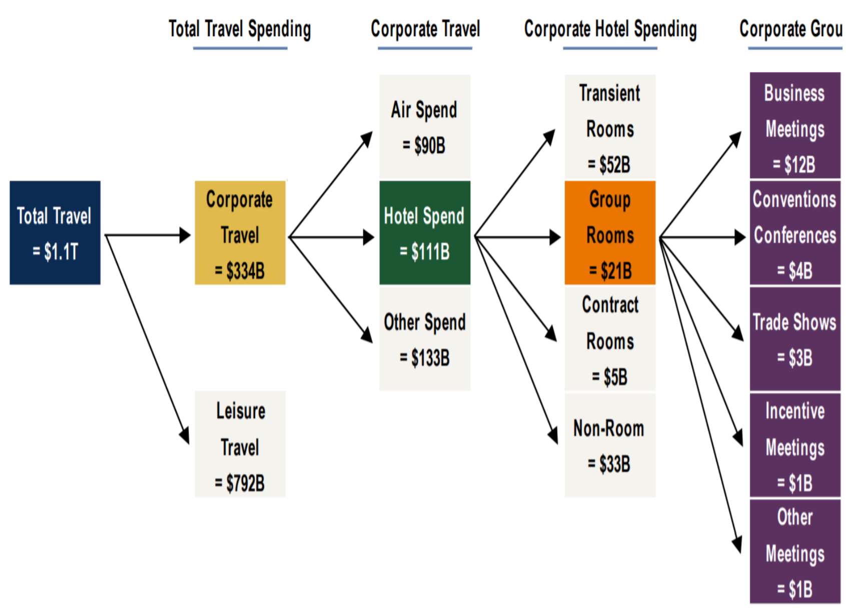
The lodging industry is highly segmented as a result of the slow evolution into a multitude of brands. Hotel companies have developed a variety of brands, which convey to the customer not only consistency and quality of the property for the best brands but also amenity levels, price ranges, accommodation types, and service levels. Revenues for hotel companies (conference/convention/group business) are greatly affected by corporate travel budgets. On the supply side, we monitor construction starts and new room additions. When supply outpaces demand, occupancy falls, which eventually puts downward pressure on room rates, thereby pressuring lodging revenues. Airbnb remains a threat to the industry along with other home-sharing businesses as it increases supply. OTAs are an expensive form of a booking channel for the Hotels, so they try to minimize their distribution mix and the large hotel brands have built loyalty programs to try and combat the threat. There are three main types or segments of hotel companies: hotel managers, hotel franchisers (collectively known as C-corps) and hotel owners (including publicly traded lodging REITs). The global lodging business is a highly fragmented industry. Marriott International, the world's largest hotel company, accounts for just 7% of total global rooms, followed by Intercontinental Hotels Group, Hilton Worldwide and Wyndham Worldwide, all at just over a 4% share with more than 700,000 rooms each. In the U.S., which is the world's most developed and branded hotel market, no single company currently makes up more than 15% of total rooms.

	Hotel Franchiser	**Hotel Manager**	**Hotel Owner**
Tax Structure:	- C-Corp	- C-Corp	- REIT or C-corp
Description:	- Licenses rights of brand name to owners in return for royalty fees	- Facilitates daily operations for third-party owner in return for management and incentive fees	- Owns the physical hotel and often times the land as well (if not ground-leased)
Economic Structure:	- Royalty fees of 4-6% of room revenues and 2-3% of F&B revenues	- Base fees of 3-5% of gross revenues plus incentive fees from 6-30% of operating profits	- Residual profits after all expenses and fees to operate, maintain, and finance their properties
Advantages:	- Low capital risk - Benefits from RevPAR and unit growth - High profit margins and ROIC - Low cyclicality of earnings	- Low capital risk - Benefits from RevPAR and unit growth - Control over operations and brand - Some cyclicality of earnings	- Low cost of capital / availability of mortgage debt - Can liquidate assets in case of loss - Highest cyclicality of earnings
Disadvantages:	- Lower control over operations = brand risk - Reliant on new supply for growth - Low cyclicality of earnings	- Not total control over operations - More downside in a downturn from incentive fees	- Higher capital risk / initial investment - Highest cyclicality of earnings - New supply growth can hurt RevPAR - Usually highest level of debt
Capital Intensity:	- Low	- Low/Medium	- High
ROIC:	- High	- Medium	- Low
EBITDA Margins:	- 50-60%	- 45-50%	- 20-30%
Examples:	- Choice Hotels - Best Western - InterContinental - Wyndham Worldwide	- Hilton Worldwide - Marriott International - Hyatt Hotels	- The Blackstone Group - Host Hotels and Resorts - LaSalle Hotel Properties - Strategic Hotels and Resorts

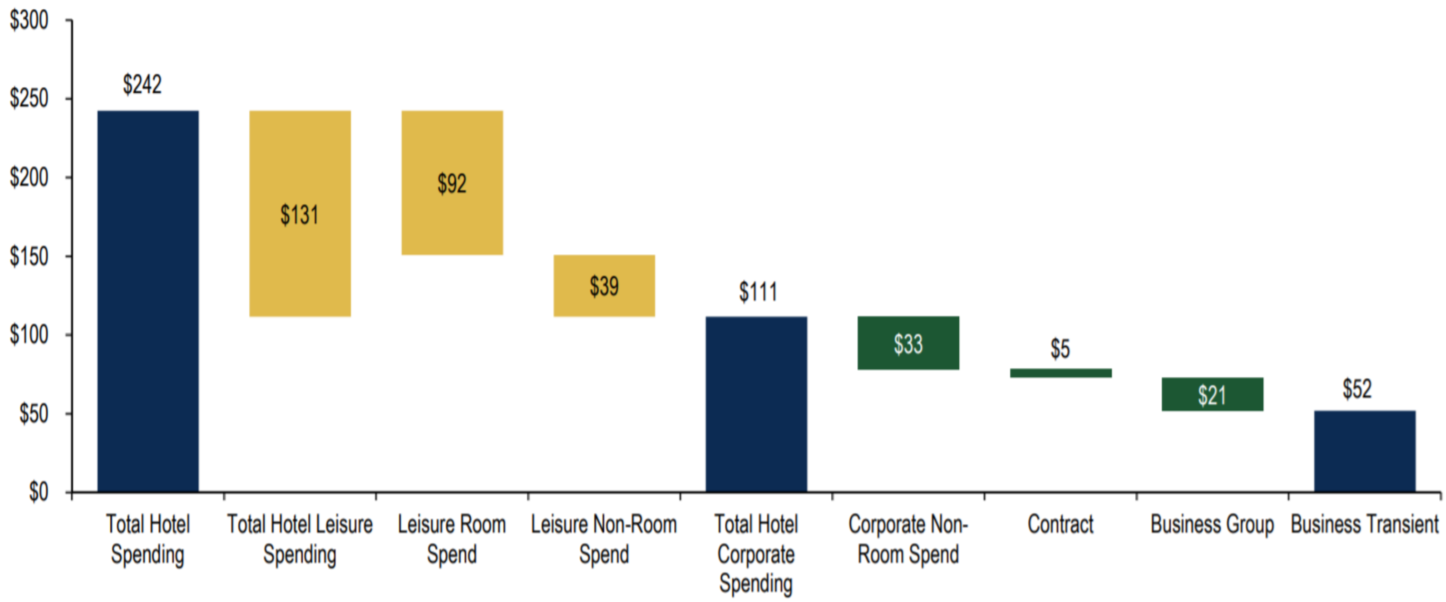
Travel spend was $1.1T in 2019, with F&B, Lodging and Transport the largest categories



Source: US Travel Association



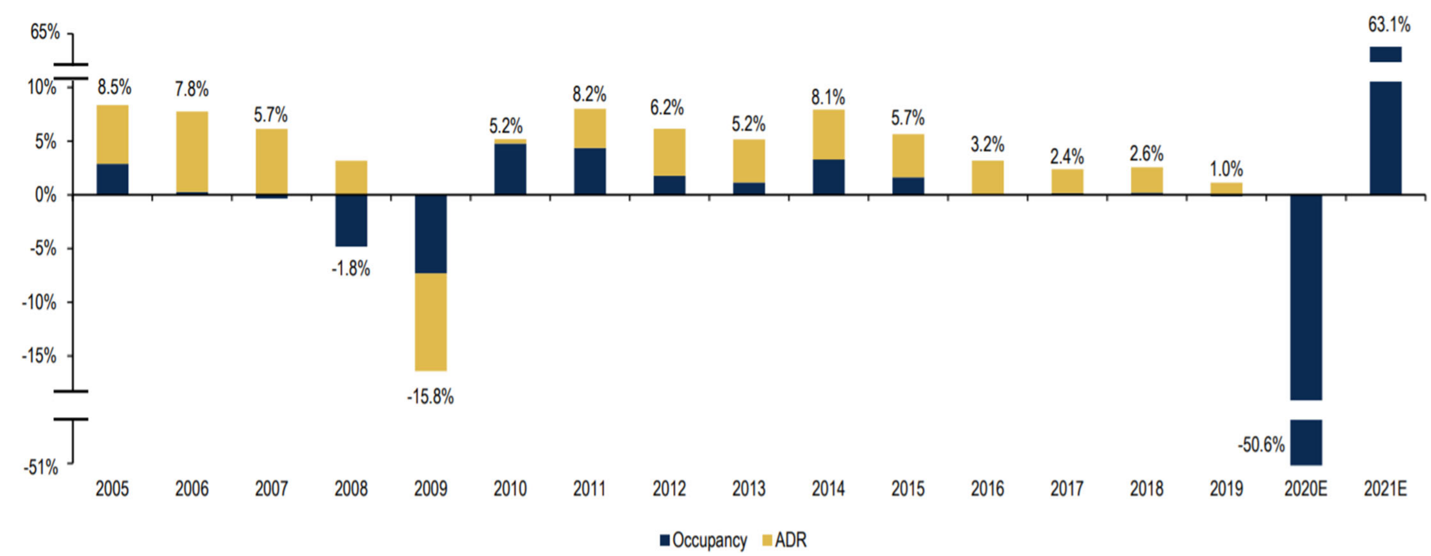
Total U.S. travel is a $1.1 trillion market, with corporate travel representing about 1/3 of that and Lodging equal to 18% or $242B. Lodging demand is highly cyclical, but it also grows substantially over time. Since 1974, hotel revenues have grown from $11B to $170B and compounded at a +6.3% CAGR. Corporate travel represents 46% of total hotel spending with total industry revenues of $170B in 2019 and this portion faces longer term structural headwinds far greater than leisure travel. The breakdown of business for the publicly traded hotel companies is different than the travel and lodging industry as a whole. Given their focus on urban and top markets, nearly 70% of publicly traded hotel company demand is generated by business travel. On average, business customers are also more profitable given the longer stays, less price sensitive (since the stay is being paid for by the company) and more willing to spend more on ancillary items, such as room service and banquet items (in the case of a group meeting).

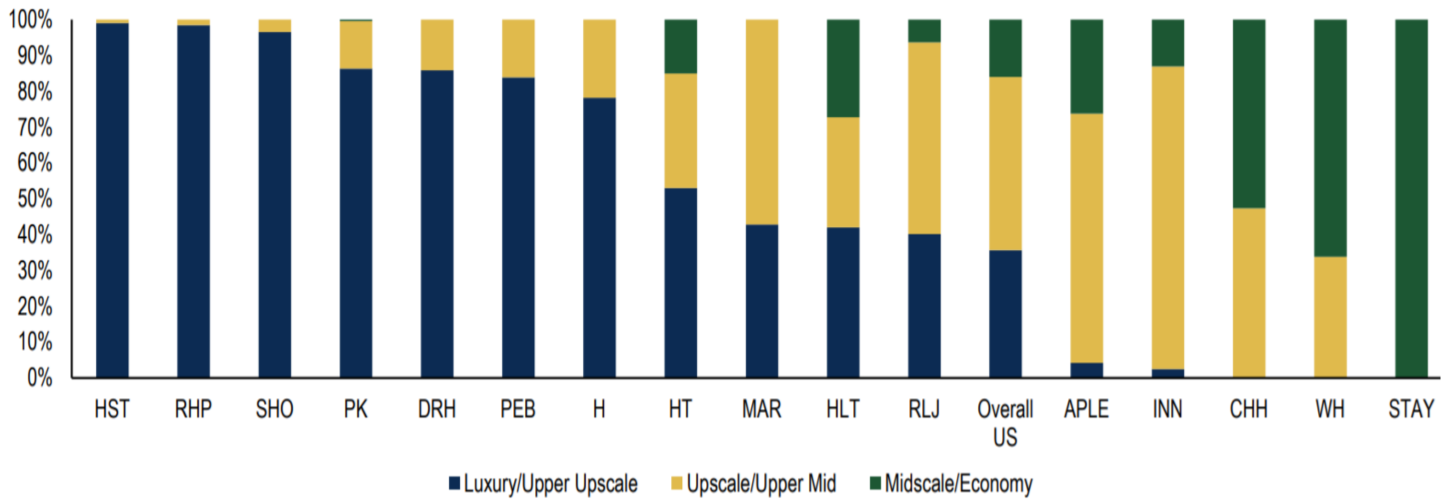


RevPAR is an indicator often used in the Hotel/Resort space as a key performance indicator and has the highest correlation with changes in employment while Average Daily Rate (ADR) is seen equally as important. Total Available Rooms, Average Occupancy Rate, and Gross Operating Profit Per Available Room are other metrics of note. STR Global is a provider of industry data that can be helpful staying on top of trends. Tourism and travel was the most impacted group from the pandemic and weakening RevPAR is a major concern as lodging stocks have tended to underperform when the indicator is decelerating. Demand in the lodging cycle moves with the U.S. economic cycle and tends to be in lock step with to slightly lag the overall U.S. economy. Importantly, while leisure makes up a significant proportion of lodging room nights, lodging cycles and indicators are much more highly correlated with business indicators (S&P profits, non-farm payrolls) than consumer indicators like consumer confidence or retail spending. Lodging stocks tend to peak before RevPAR peaks as the stock market tends to lead the economy while RevPAR is coincident with or lags the economy. I

Decline	Trough	Early Recovery	Mid/Late Recovery	Peak	Decline
▪ RevPAR growth is **declining**	▪ Second derivative in RevPAR **declines** stabilizes and begins to	▪ RevPAR moves from declines to **zero percent** and begins growing	▪ RevPAR **growth** is increasing at an accelerating rate and then peaks/stabilizes	▪ RevPAR still growing, but 100% rate driven	▪ See prior
▪ Suppy growth is accelerating	▪ Suppy growth has peaked/is peaking	▪ Occupancy troughs followed in short order by rates	▪ Suppy growth begins to increase	▪ Occupancy growth is declining	
▪ Companies are cutting property level	▪ Companies are cutting property level	▪ Supply growth declines/bottoms	▪ Companies are cutting property level	▪ Supply growth still increasing/accelerati	
▪ Multiples are declining	▪ Multiples have stopped contracting and start to expand	▪ Multiples continue to expand	▪ Multiples stabilize and may expand/ contract depending	▪ Multiples begin to contract	
		▪ Costs are still being reduced, margins bottom	▪ M&A increasing		

U.S. Annual RevPAR Growth (pre-COVID)

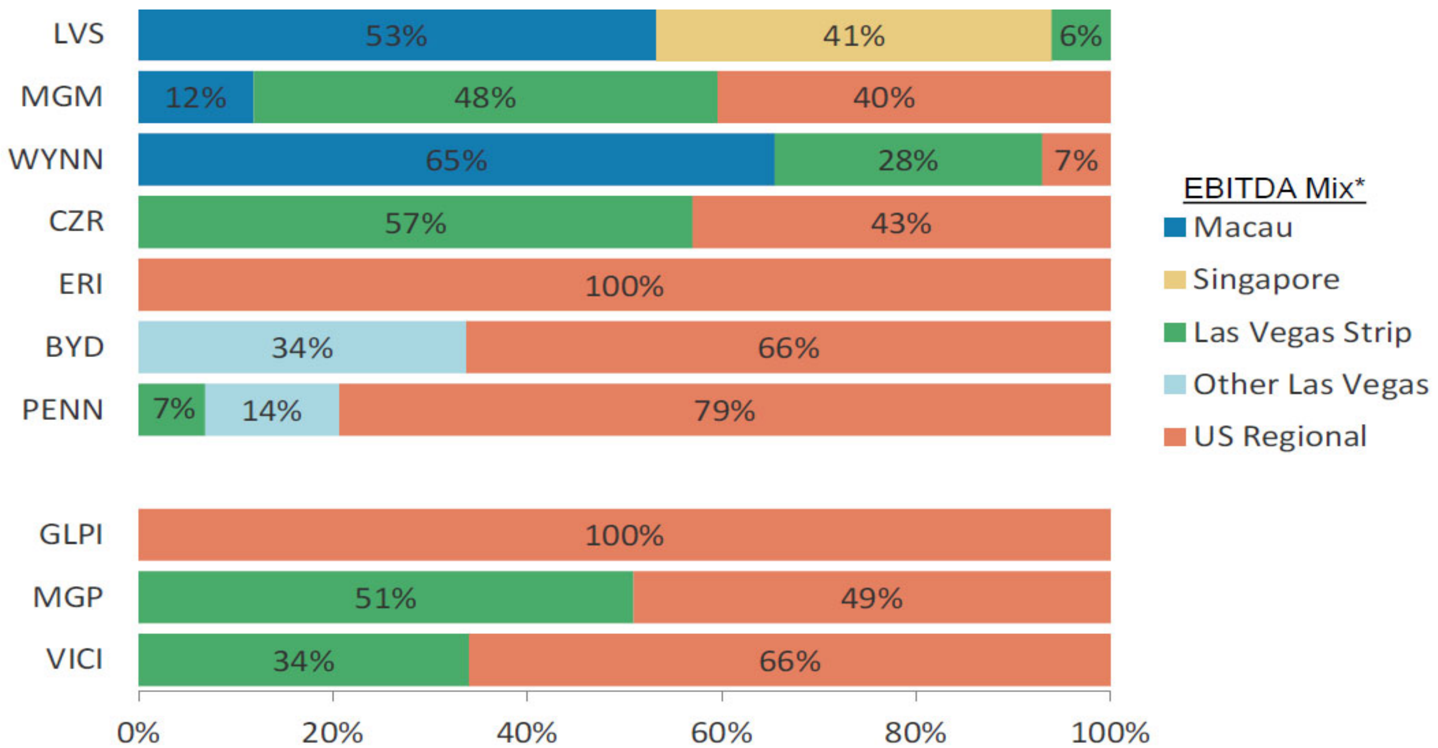




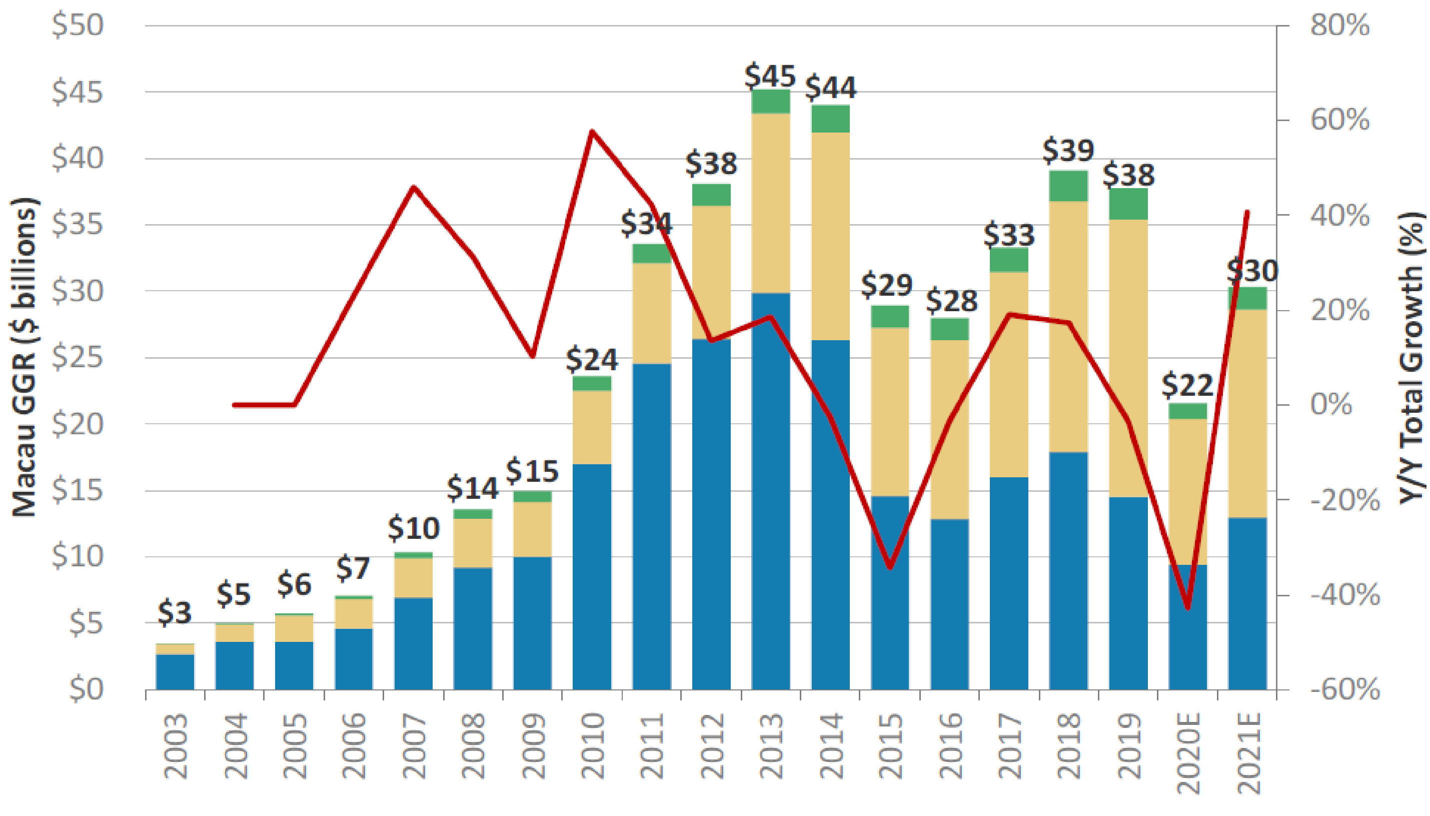
Casino & Gaming: LVS, CZR, MGM, PENN, WYNN, MLCO, BYD, MCRI, GDEN, CHDN, RRR, BALY

The casino/gaming group is generally first broken down into a regional basis so Vegas, Regional, Macau, and now Online a newer emerging category. Macau is a massive market estimated at $38B in 2019 while Las Vegas was just $7B. However, Macau EBITDA is just 1.6X Las Vegas as it operates at much lower margins and less contribution from non-gaming revenues. Gaming is 92% of Macau revenues and just 28% of Vegas. According to 2019 government statistics, Macau tourist arrivals increased 10.1%, to 39.4 million, from 35.8 million in 2018. Annual gaming revenues decreased to $36.5 billion in 2019, from $37.5 billion in 2018. The Macau market has experienced tremendous growth in capacity since the opening of Wynn Macau in 2006. As of December 31, 2019, there were 38,300 hotel rooms, 6,739 table games and 17,009 slot machines in Macau, compared to 12,978 hotel rooms, 2,762 table games and 6,546 slot machines as of December 31, 2006. Las Vegas is the largest gaming market in the United States. Although Las Vegas Strip gaming revenues remained relatively flat at $6.6 billion for each of the years ended December 31, 2019 and 2018, visitation and hotel room demand remained strong. Overall Las Vegas visitor volume was 42.5 million in 2019. Passenger traffic at McCarran International Airport increased 3.8% in 2019, following year-over-year increases of 5.8%, 4.5%, and 4.7% from 2016 to 2018, respectively. During 2019, the average daily room rate and revenue per available room on the Las Vegas Strip increased 3.2% and 4.3%. The gaming industry is characterized by a high degree of competition among a large number of operators, including land-based casinos, riverboat casinos, dockside casinos, video lotteries, video gaming terminals at taverns in certain states, sweepstakes and poker machines not located in casinos, Native American gaming, emerging varieties of Internet and fantasy sports gaming, increased sports betting and other forms of gaming.

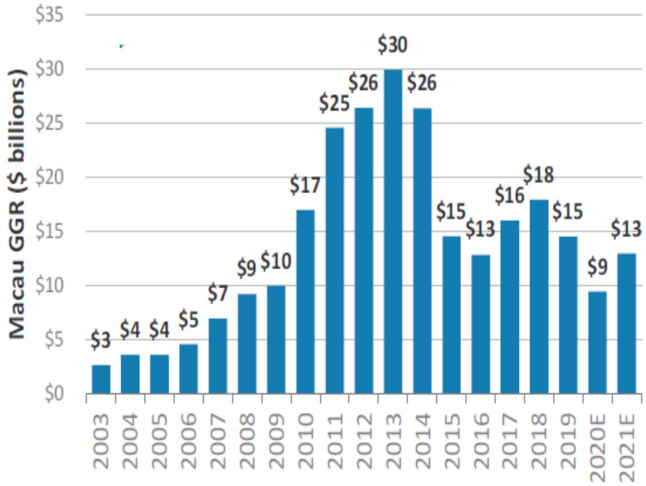
The gaming market is also broken into sub-segments VIP and Mass markets. The industry is driven by tourism/travel as well as increased capacity via hotel supply. The US gaming industry does $75B in gross gaming revenues (GGR) with tribal gaming accounting for 45% and growing a bit faster than commercial gaming.



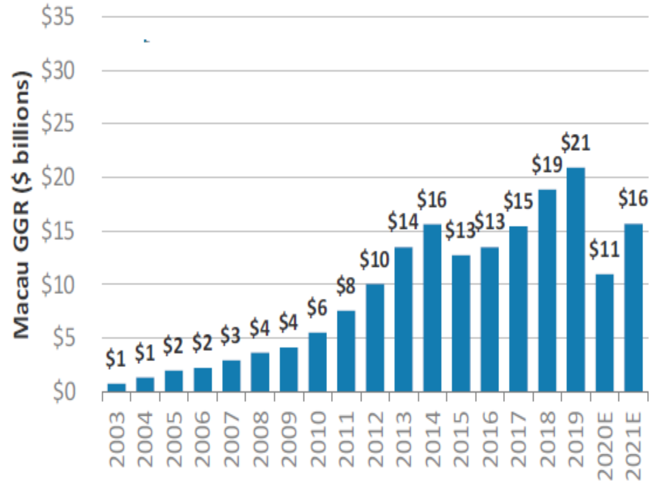
The casino & gaming group was another hit hard by the pandemic with the sharp decline in travel, casino closures, and recession. The regulatory positive tailwinds with sports betting in the US is a growth driver across the gaming sector while Macau has continued to struggle for the large casino operators. Regional gaming plays are benefitting from expanded legalization allowing for launches of new mobile betting platforms. The main themes currently in the group include a Macau recovery on hold due to government restrictions, leisure on a slow and steady recovery in Vegas, regional gaming margins moving structurally higher, and major enthusiasm in iGaming & sports betting.



VIP Market

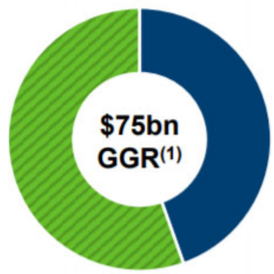


Mass Market



Commercial Casinos

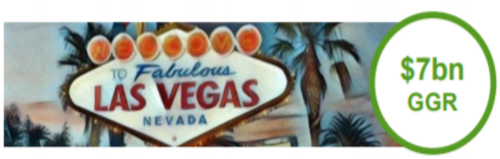
Number of Casinos	465
Gross Gaming Revenue	$42 Bn
Tax Revenue	~$10 Bn



Tribal Casinos

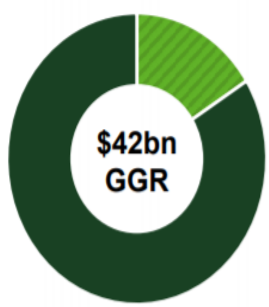
Number of Casinos	514
Gross Gaming Revenue	$33 Bn
Tax Revenue	Limited

Destination Casinos



Characteristics

- Destination casinos are located on the Las Vegas Strip
- Las Vegas assets produced more GGR in 2018 than the next three largest markets combined
- Tourist activity comprises a large portion of the demand dynamic
- "High-barrier-to-entry" market from a cost standpoint
- Revenue produced by these assets is diversified with an array of non-gaming entertainment and corporate events
- Properties trade hands infrequently



Top GGR Markets

($ in Bn)

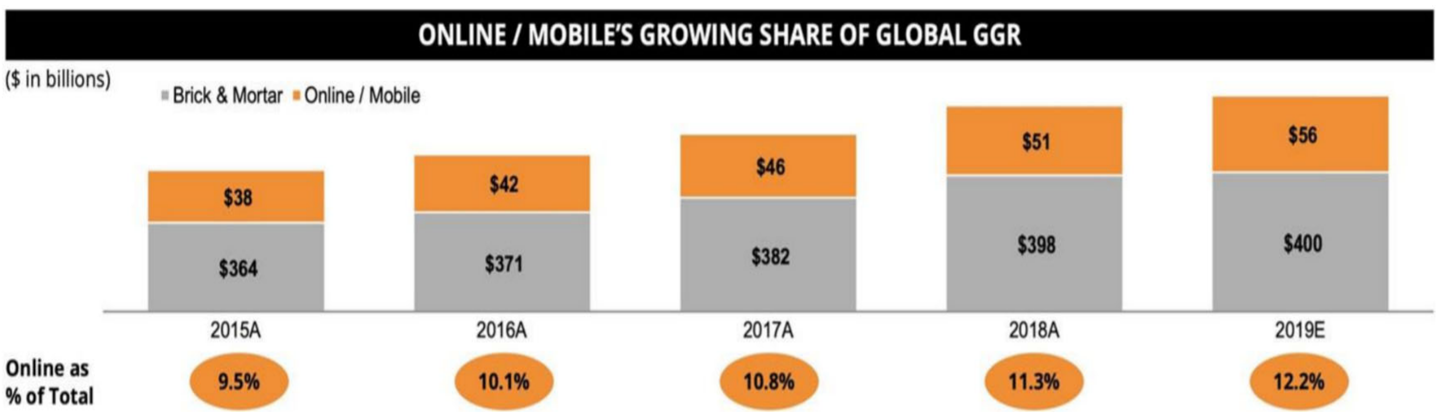
Regional Casinos

Characteristics

- Regional casino patrons are primarily locals that make frequent visits
- Typically located in markets that are considered "low-barrier-to-entry" from a geographic and cost of land standpoint
- However, these assets are typically subject to licensing restrictions and are considered "high-barrier-to-entry" in their respective markets
- Can often be the "only game in town" due to licensing restrictions
- Regional casinos can offer amenities other than gaming to serve as a pseudo-country club for locals (e.g., restaurants, spa, pools, etc.)
- Lower maintenance cap-ex requirements

Gaming Equipment & Tech: DKNG, AGS, EVRI, IGT, SGMS, GAN, ACEL

The gaming technology companies supply slot machine hardware and software for sale and lease with the big four being IGT, Scientific Games, Aristocrat, and Konami. IGT and SGMS also have significant lottery businesses while digital platforms and sports betting also included in this group. Smaller supplier have been taking an increasing share of the market. Lottery sales are extremely defensive and were barely down in 2009 and have grown at a 3.9% CAGR over past 20 years. ACEL outlines that "Gaming as a Service" is a large TAM and the fastest growing segment in gaming. DKNG estimates the US sports betting industry is a $23B market at maturity and iGaming is a $40B TAM. The global casino gaming equipment market is estimated at $70B in 2020 and seen reaching $173B by 2027, growing at a 13.8% CAGR.



	Game Op/Sales	Gaming Systems	Proprietary Table Games	Electronic Table Games	Digital Casino Games	Digital Game Aggregation	Digital Casino Platform	Lottery Games	Lottery Systems / Platform	Digital Lottery Games	Digital Lottery Platform	Sports Platform	Sports Trading / Services
SG Scientific Games	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IGT	✓	✓		✓	✓			✓	✓	✓	✓	✓	
ags	✓	✓	✓		✓	✓	✓						
Aristocrat	✓	✓			✓								
KONAMI	✓	✓			✓								
	GAMING							LOTTERY				SPORTS BETTING	

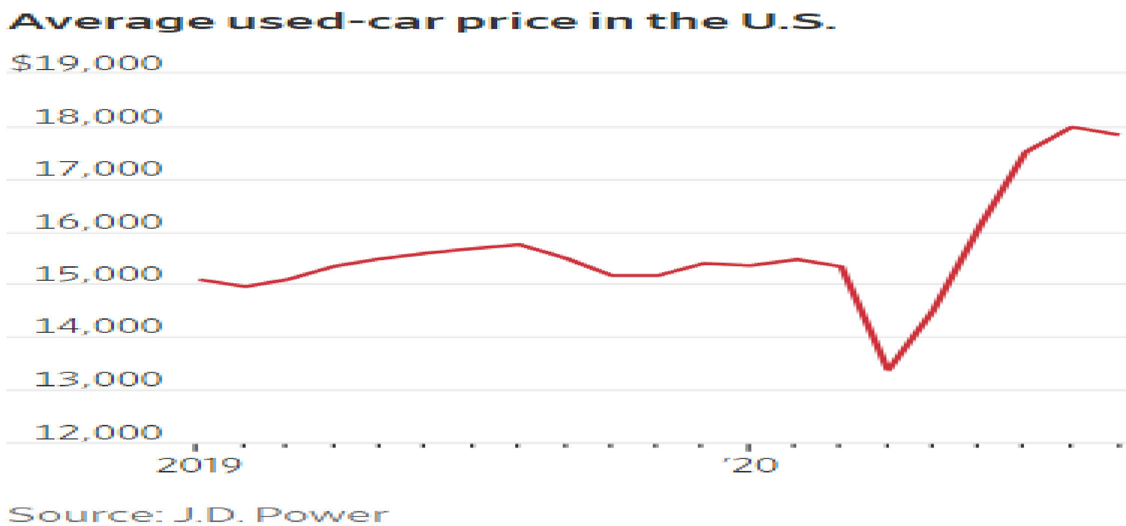
Theme Park & Cruise: DIS, FUN, MTN, RCL, CCL, NCLH, CAR, SEAS, SIX

The global amusement parks market is expected to decline from $73.5B in 2019 to $71.6B in 2021. The principal competitive factors in the amusement park industry include the uniqueness and perceived quality of the rides and attractions in a particular park, proximity to metropolitan areas, the atmosphere and cleanliness of the park, and the quality and variety of the food and immersive entertainment available. Theme parks offer a strong consumer value proposition, particularly when compared to other forms of out-of-home entertainment such as concerts, sporting events, cruises and movies. The theme park industry is seasonal in nature, the highest revenues in the second and third quarters of each year and accounting for 2/3 of attendance. The market is relatively fragmented with around 20% shares held by the top five companies that include Disney Parks and Resorts, Six Flags, Universal Parks and Resorts, Cedar Fair and SeaWorld. Universal Parks (CMCSA), Hershey Entertainment (HSY), and Merlin Acquisition (acquired by Kirkbi Invest – owner of Lego) are other key players. The importance of personalized guest experience is heightened especially during the current pandemic. Using virtual reality technology and providing more immersive experiences are examples of personalization in the theme park industry. Additionally, the usage of wearable technology will allow parks to provide individualized offers and services.

Snow sports tourism contributes about $20B to the U.S. economy each year. There are approximately 770 ski areas in North America with approximately 475 in the U.S., ranging from small ski area operations that service day skiers to large resorts that attract both day skiers and destination resort guests looking for a comprehensive vacation experience. During the 2018/2019 North American ski season (the ski season immediately prior to the outbreak of the COVID-19 pandemic), combined skier visits for all ski areas in North America were approximately 79.7 million. There is limited opportunity for development of new destination ski resorts due to the limited private lands on which ski areas can be built, the difficulty in obtaining the appropriate governmental approvals to build on public lands and the significant capital needed to construct the necessary infrastructure. As such, there have been virtually no new destination ski resorts in North America for over 35 years, which has and should continue to allow the best-positioned destination resorts to benefit from future industry growth. The amount of snow in the western United States has seen an average drop of 41% since the early 1980s, shrinking the season and a notable industry headwind.

The cruise industry was one of the fastest growth areas of leisure travel, revenues growing from approximately $15.7B in 2010 to an estimated $31.5B in 2020 before COVID. Cruising is considered a well-established vacation sector in the North American, European and Australian markets and a developing sector in several other emerging markets. Industry data indicates that market penetration rates are still low and that a significant portion of cruise guests carried are first-time cruisers. Sources estimate that the global cruise industry carried approximately 30.0 million cruise guests in 2019 compared to approximately 28.5 million cruise guests carried in 2018 and approximately 26.7 million cruise guests carried in 2017. Cruising benefits from the aging of the Baby Boomer and Millennial generations. In North America alone, the number of Baby Boomers at retirement age increases from 48 million in 2015 to 56 million in 2020 and 73 million by 2030. The Baby Boomer generation likes to pursue an active lifestyle and has the desire and the means to travel and enjoys multi-generational cruising. The Millennial generation has surpassed the size of the Baby Boomer generation and represents the fastest growing demographic segment of the vacation industry. This group expresses a strong desire to travel and share new experiences, a mindset that should continue to foster growth for the industry. Among the major trends that will shape the industry over the next decade are the continuing emphasis on sustaining ability and waste reduction, catering to single cruisers, the growing number of two- and three-day micro-cruises, and the continued growth of luxury expedition cruising.

The car rental industry was valued at $88B globally in 2018. Car rental volumes tend to be associated with the travel industry, particularly airline passenger volumes, or enplanements, which in turn tend to reflect general economic conditions. The operations are also seasonal, with the third quarter of the year historically having been the strongest due to the increased level of leisure travel during the quarter. The use of technology has increased pricing transparency among vehicle rental companies and other mobility solutions providers enabling cost-conscious customers to more easily compare on the Internet and their mobile devices the rates available for the mobility solutions that fit their needs. This transparency has further increased the prevalence and intensity of price competition in the industry. Enterprise is a notable competitor. In 2020 the industry was hit hard with a steep drop off in travel and a dive in resale values of fleets, resulting in 102-year old Hertz declaring bankruptcy. Used-car prices snapped back and even hit record levels in August as dealers grew tight on inventory. That market stabilization was crucial for rental-car firms because they regularly turn over their fleets and are sensitive to changes in resale values.



Management Commentary

Hyatt (H) on forward looking demand factors: "I'd like to now cover some forward-looking demand factors that we are paying close attention to. As stated, drive-to leisure has been and will continue to be the primary source of demand that leads the recovery for the foreseeable future. Business transient and group business, however, will both be necessary ingredients in achieving full recovery and in supporting better rate realization. We continue to see near-in group business cancellations consistent with what we saw last quarter and have now seen meaningful cancellations in the first quarter of 2021 group business. While the impact on second quarter 2021 business isn't nearly as significant yet, we are starting to see cancellations and believe we may experience additional attrition over the coming months. Large group business demand is heavily linked to confidence around widespread vaccine availability, effective therapies and scalable rapid testing solutions. We're cautiously optimistic about recovery in business travel in the second half of 2021, and we are encouraged by the advances in rapid low-cost testing. Group business on the books for the full year of 2021 at this point is down about 40% from where we were last year heading into 2020. While large-group business has essentially disappeared, we're having some success with targeted small-group business, including bubble programs for customers in professional sports, entertainment, emergency response workers and universities."

Hilton (HLT) on not seeing a "new-normal": I think in the end, when we're really past this, the business will look more -- a lot more like it did before than it does today. And I think that the -- we're not big believers in new normal. We don't have our heads in the sand. I think -- we think hybrid meetings is a thing. I mean, most of the people we talk to about hybrid meetings, in the long run, my guest/our guest, is that's not going to reduce capacity of meetings, it's actually going to increase the capacity of meeting. And what you're going to have is a certain number of people that come live and then more people that -- I mean, I can tell you the meeting planners and the associations and people that run events for a living are trying to use hybrid or thinking along the lines of using it to grow their business, not to shrink their business, right, or not to hang on, right? So I do think you'll have hybrid for a while, but I think you'll get back to capacity. I do think we've learned a lot about lower impact and lower value travel, meaning there are interactions or there are business trips that can now be done virtually. There's a lot of things we've built some muscle memory about virtual, but we think in the end that, that means the low impact or low value trips get replaced with higher value trips. So people spend more of their available travel time on research and development and using kind of grow the top end of the funnel of their business versus just more transactional stuff. And so we don't think there will be permanent headwinds in our business."

Choice (CHH) on its positioning for new travel dynamics: "For the last several years, we've seen a trend in leisure travel demand spreading more evenly throughout the month of the year, which we attribute in part to school schedules shifting over the years as well as the increase in baby boomers retiring and having more time and disposable income to travel. More employees can now work from anywhere with an Internet connection, while their children attend virtual schooling. For the past 2 months, we saw continued leisure demand extending into weekdays. A second trend is the increase in road trips. which we're benefiting from with our high concentration of hotels in drive-to markets. Road trips have been on the rise for the past 5 years, thanks in part to low gas prices, which have been trending down for several years. Consumers' appetite for road trips has only accelerated since the onset of the pandemic as Americans are showing a clear preference for trips that are closer to home. Destinations that may have been overlooked before the onset of COVID-19 are getting fresh consideration. With over 4,000 domestic hotels located within a mile of an interstate exit, our hotels are well positioned to serve travelers as they hit the open road. And with over 2,000 domestic hotels near beaches and national parks, our hotels are also located in the right markets to capture growing demand from travelers who increasingly are looking to rediscover the great American outdoors. Another emerging trend is the economic disruption brought on by the pandemic and its effect on consumers as the recovery takes place. We believe that in uncertain times, as in previous down cycles, consumers will be looking for more moderately priced limited service hotel offerings, presenting an opportunity for our portfolio to capture this demand. Another anticipated economic effect of the pandemic is higher relocation rates. As people shift jobs and industries, demand for longer-term hotel stays rises, a trend we believe will benefit our brands, particularly those in the moderately priced extended-stay segment."

Churchill Downs (CHDN) on its sports betting and iGaming businesses: "Regarding our sports betting and iGaming business, the TwinSpires business is having another strong year and has consistently delivered for a long time. TwinSpires is a very profitable high margin platform with substantial revenue and significant adjusted EBITDA growth that is enabled by its pari-mutuel wagering model, relationship with the Kentucky Derby and Churchill Downs Racetrack and long deployed disciplines customer acquisition approach. We are well positioned to broaden our online offerings to our customers as we enter the larger states for online sports and iGaming. We have direct access to many markets with our brick and mortar casinos and a roster of efficient indirect market access deals. Our BetAmerica sports betting and iGaming business will also provide the opportunity to introduce others to wagering on horse racing. Right now we remain focused on and disciplined in building a profitable sports betting and iGaming business that will be integrated with our horseracing wagering platform over the long term. Long-term success for us will depend on growing in a disciplined manner based on our strengths start with our commitment to operating efficiently with careful marketing spend and bottom line profitability. We recently announced new agreements with GaN and Kambi who will be providing the technology and manage trading services for our sports betting and iGaming platforms going forward. We believe they will improve our speed to market and operational capabilities and provide a more substantial foundation for profitable growth in sports betting and iGaming over the long term. When we have our technology where we need it to be, we are confident about what we can do in each market we enter. Our initial technology choices just did not provide us the reliability and confidence we needed to invest in this space. But it's been helpful to watch the strategies of others who have been active to better refine our own approach. Again, we will be disciplined and careful as we move forward."

Scientific Games (SGMS) on new products gaining momentum: "Our cashless and contactless solutions that we've been working on for years is now gaining momentum in the market. Unified Wallet, which powers the cashless gaming experience, was named 1 of the top 20 Most Innovative Gaming Technology Products by Casino Journal. Our solution is currently in pilot with 2 corporate customers with the deployments expected in the fourth quarter and into 2021. We are extremely well positioned for cashless gaming, given our market-leading footprint of approximately 525,000 connected slots. Additionally, SGVision chip tracking is set to release in the fourth quarter and will be placed at a pilot site in Q1 2021. This hardware and software subscription service will capture the value of bets and send accurate ratings so casino operators can properly invest in the table game player segment. Along these lines, the pipeline and interest for the electronic table games segment remains strong. Growth continues for the vault subscription program using a table game subscription model that allows operators access to a robust library of proprietary game titles. The common thing here is we expect to increase the recurring revenue component of our business, led by our focus on increasing our domestic premium footprint in game ops."

DraftKings (DKNG) highlighting its opportunities: "So we've been operating our Daily Fantasy Sports product for almost a decade now. And that continues to be a product that's growing. Its growth has slowed a bit. So it's more in the sort of low double digits, high single digits now, but it's also continued to be a great source of customers for us to migrate and cross-sell onto the new products we're launching, which are online sports betting and iGaming. IGaming, meaning things -- online casino, like only blackjack and things like that. Those 2 products are really the rapid growth sources for us right now. And the degree to which they will continue to be so really is mostly, first and foremost, dependent on how much and how quickly the U.S., across the different states, adopt legal frameworks to allow for these products. So right now, we're operating our online sportsbook in 10 states. We have our iGaming products in 3 states. There are more that we hope are on the way. I do think a consequence of it being that state budgets are in such tough shape after the economic impacts of the virus could be that more states might consider legislation around things like online sports betting or iGaming, and they might do it faster than they otherwise would have because the primary driver for states is the tax revenue. The B2B side is a nice business. It's a business that is generating about $100 million plus of revenue for us."

OptionsHawk Executive Summary and Top Picks

The Hotel group has never been a favorite as it was already entering a slowing period of growth before the pandemic and see serious headwinds with a structural slowdown in business travel while in leisure I continue to prefer the rental plays like HomeAway and Airbnb. Of the Hotel names **Choice (CHH)** is a best-in-class operator positioned to the lower-end markets, positioned well geographically and seeing healthier trends. On the small cap side **GreenTree (GHG)** is an interesting China lodging growth story that screens much better than much larger **HTHT**.

The Casinos group has a lot of interesting candidates for a recovery that is likely to come with the vaccine as well as the emerging growth themes from sports betting legalization and online/mobile/social gaming. **Penn (PENN)** made a brilliant investment in Barstool Sports and is really playing to the sports betting and domestic trends, expect it to continue to be a leading performer. **Caesar's (CZR)** is becoming a key player in digital gaming and seeing benefits from the merger with El Dorado, as well as securing some key partnerships with sports networks, and also has very strong margin expansion aspirations. **Las Vegas Sands (LVS)** is best-in-class among the global players and **Churchill Downs (CHDN)** has always screened as a favorite and has an excellent business, though hampered by the Kentucky Derby admissions loss, one that will bounce strong in coming years.

In Gaming Equipment, I prefer **DraftKings (DKNG)** which despite valuation concerns is a great business in the early stages of the sports betting surge in the US and has incredibly marketing and customer engagement. **Everi (EVRI)** is an attractive small cap I profiled in early December with demand for cashless and contactless funding solutions likely to drive strong demand moving forward. **Gan Ltd. (GAN)** an intriguing small cap that provides SaaS solutions to the online gaming and sports betting industry, and has traded poorly in 2H20, but delivering growth and has top tier industry partners. **Scientific Games (SGMS)** has been a strong performer and keeps delivering innovative products for the emerging growth areas like contactless gaming solutions, iGaming, sports betting and SciPlay while its Lottery business remains resilient.

Technology:

Tech led strength in 2020 with the NASDAQ +35% YTD as a group not only less impacted by the disruptions caused by the pandemic, but many saw significant acceleration of trends such as ecommerce, digital transformation, edge computing and social media engagement. Many top thematic trends continue to gain ground as Tech disrupts every industry-group. Software (IGV) with another strong year gaining more than 40% YTD and remains in the earlier innings of displacing legacy products while continuing to evolve into solutions driving greater efficiencies at companies. The Internet (FDN) group gaining more than 40% with benefits from ecommerce, online payments, streaming media, social media, and digital advertising driving the top components. Semiconductors (SMH) also gaining more than 40% YTD as chip demand continues to strengthen on increased applications and another major wave of consolidation occurred in 2020. The Artificial Intelligence (AI) market is seen growing at a 42% CAGR through 2027. The Cyber Security market is seen growing at a 10% CAGR through 2027 to reach $330B. The Digital Advertising market is seen reaching $240B by 2026 at a 21% CAGR. The Digital Transformation market is seen surpassing $1 trillion by 2025 at a 16.5% CAGR. The $1 trillion IoT market is seen returning to double digit growth with an 11% CAGR through 2024.

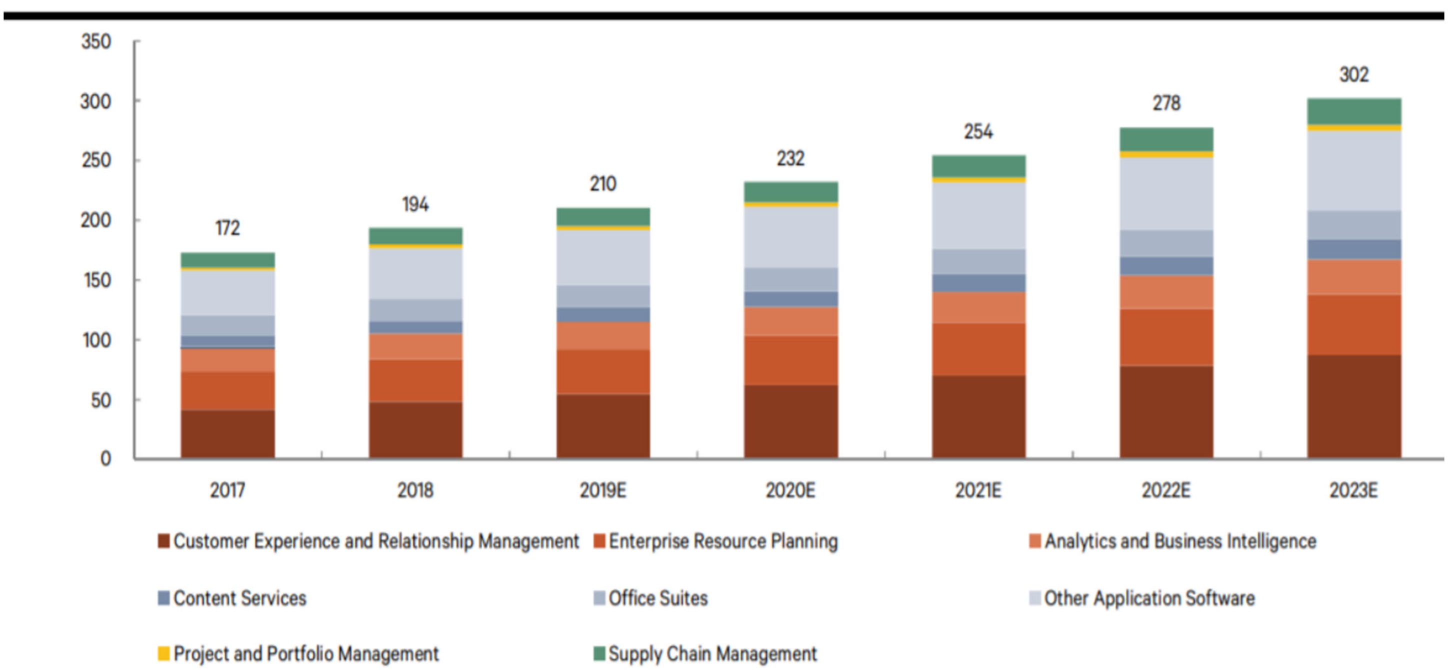
Gartner sees IT spending to grow 4% in 2021 to $3.8 trillion led by growth in Enterprise Software, Data Center Systems, Devices, and IT Services. Over the next 5 years, all growth in traditional tech spending will be driven by just four platforms: cloud, mobile, social and big data/analytics. Meanwhile, cost savings generated by cloud and automation will see more spending diverted towards new technologies such as AI, robotics, AR/VR, and blockchain. Next-gen security related to new technologies will also continue to drive significant growth.

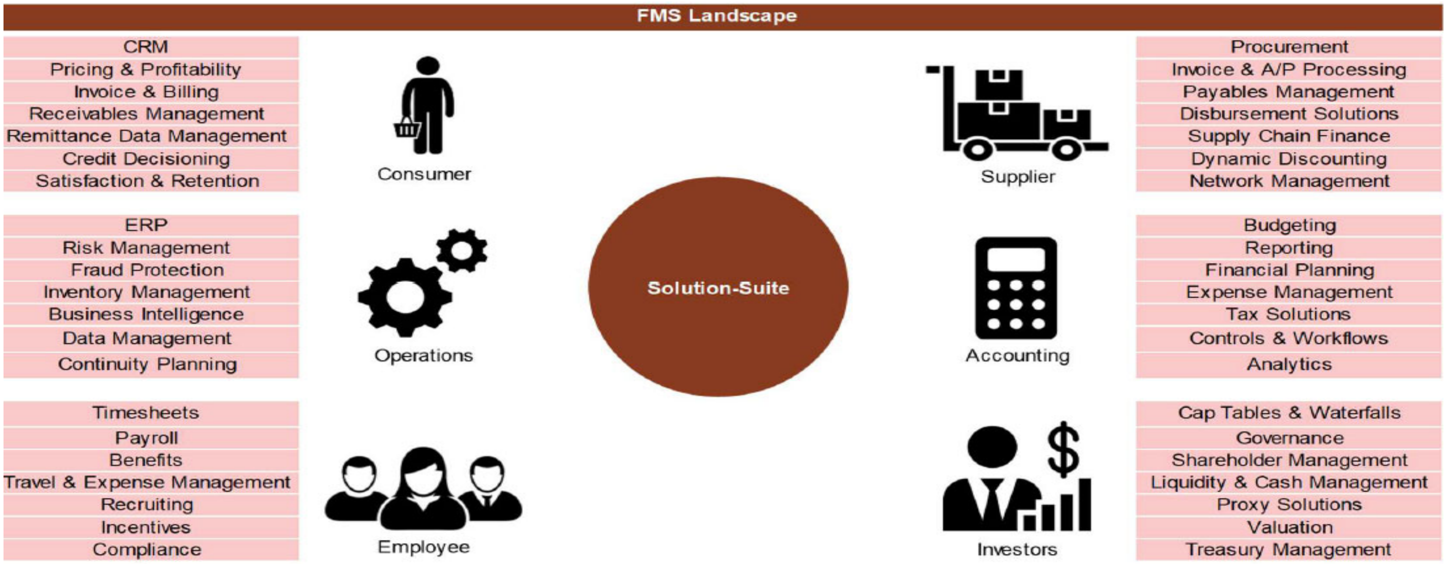
Software - Cloud, Security and SaaS

The fundamental case for Software remains very strong with all indications we are still in the early innings of a digital transformation and major growth trends continuing to play out in AI, Analytics, Cloud, Cyber-Security, and IoT. The "Rule of 40" is a metric used often in software analysis which is derived by adding a company's rate of revenue growth and its FCF margin. Other popular Software specific metrics becoming popular include Net Retention/Expansion Rate, ACV, MRR/ARR, Churn, ASP, ARPU, Bookings/Billings, Customer Growth and LTV/CAC. Also, incremental revenues to sales & marketing costs is a nice way to compare the companies. In terms of valuation EV/Sales is the go-to method while EV/FCF and EV/Recurring Revenues are also useful. We use LTV/CAC ratio to determine the value of a customer over their life time (LTV) to the cost of acquiring the customer (CAC). The higher this ratio, the better we consider the organizations' customer economics to be. The five factors that drive a Cloud software company's value: 1) total addressable market and adjacency of new markets; 2) Customer economics; 3) Cyclical/structural end market; 4) Founder/Operator mindset, and 5) Competitive moat.

The rising importance of online transactions, social or mobile customer engagements – and the corresponding growth in data – represents a structural challenge to almost every large enterprise founded 20 or more years ago. A mega trend, a confluence like never before of multiple disruptive factors including cloud, mobile, social, AI, BI, big data, all enabling customer experience and the digital economy/ecosystem. Another major theme is the rose of DevOps, seen to be in the early stages with secular drivers such as shifting workloads to hybrid/public cloud, digital transformation, and companies wanting an end to end DevOps cycle. As companies increasingly shift onto a Cloud/Hybrid system, additional enterprise applications under the domain of the CFO are poised for digital transformation including: ERP: software spanning multiple operational processes and back office functions such as accounting, human resources, and manufacturing/operations; Corporate Performance Management: monitoring and managing an organization's performance by tracking Key Performance Indicators such as revenue, expenses, ROI, overhead, etc.; Spend Management: spanning payments and procurement; increasing trend to the convergence of software and payments, thereby closing the loop of the complete procurement/spend life cycle; Configure, price, and quote (CPQ): streamlines the creation of quotes (pricing and tax) for complex products or services.

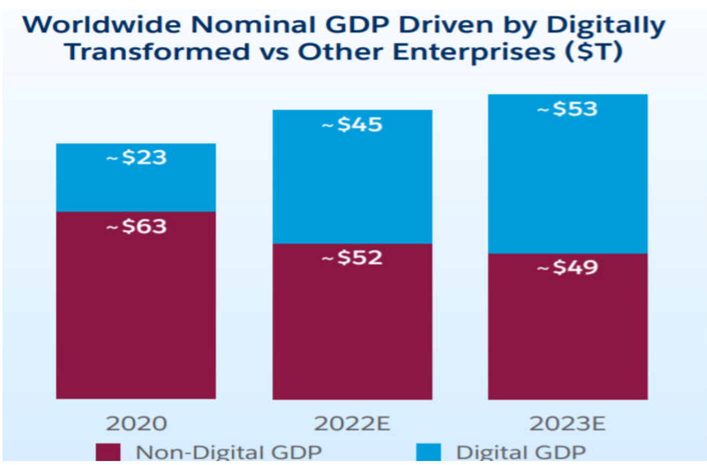
Enterprise software global spending by segment

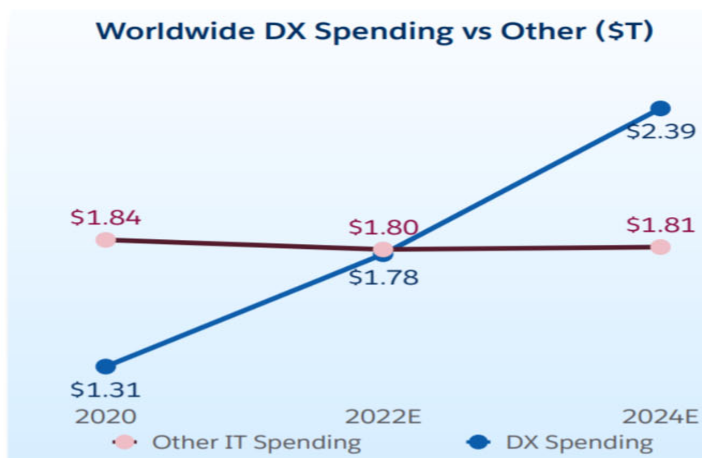


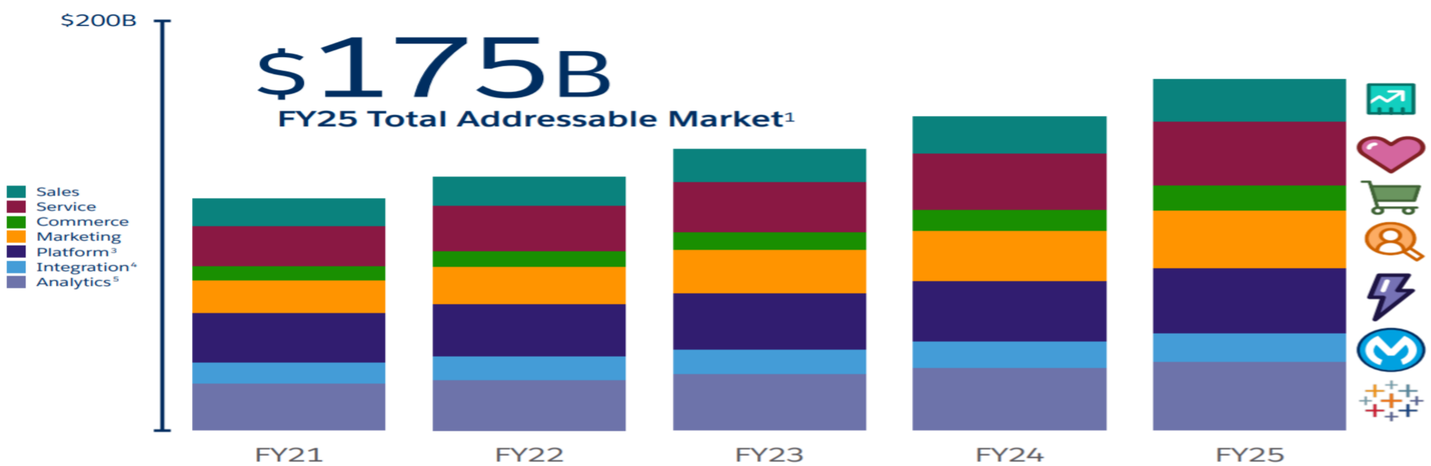


Mega-Cap Diversified – Digital Transformation Leaders: CRM, MSFT, ADBE, ORCL, SAP, NOW

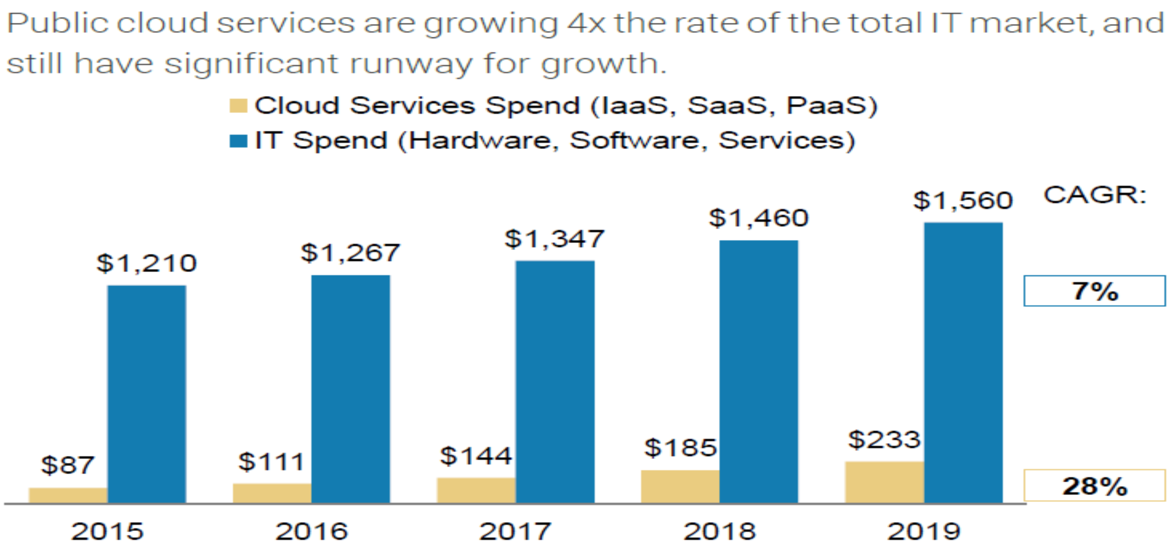
These diversified leaders provide solutions across the entire IT landscape that supports massive TAMs. Digital Transformation spend is nearing an inflection point and a large opportunity remains to disrupt legacy markets. Salesforce recently outlined a $175B TAM expected to grow at an 11% CAGR through FY25 across Sales, Service, Commerce, Marketing, Platform, Integration, and Analytic sub-segments. Many software companies operate a Land & Expand strategy which is to land a customer with a small deal and then sell more seats and more products/services to expand its footprint. There is almost an endless amount of use cases for digital and it is disrupting every industry vertical providing multi-year growth tailwinds across the Software sector.







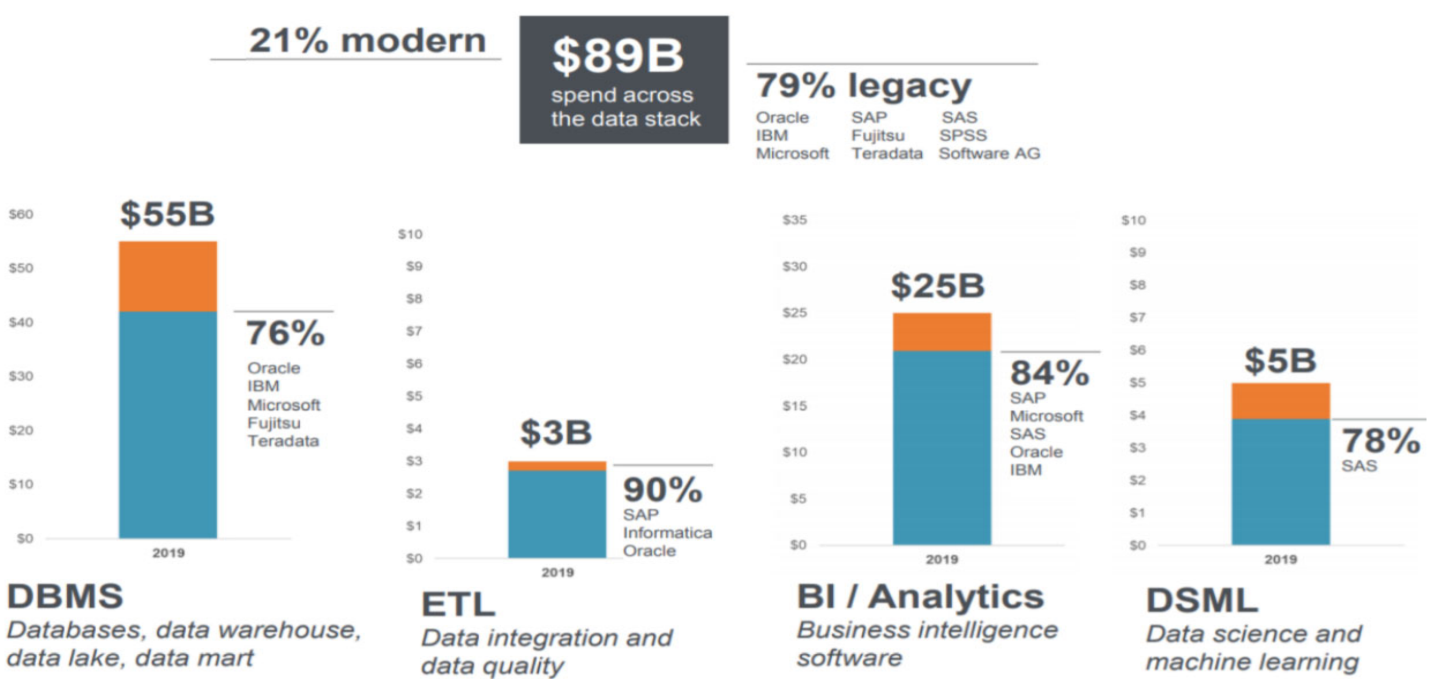
A study by International Data Corporation, or IDC, suggests that by 2023 spending on digital transformation technology globally will reach $2.3 trillion, representing a compound annual growth rate of 17.1% over a five-year period. Digital transformation requires significant modernization of legacy environments, shifting from high cost, labor intensive, and inflexible technology systems to a modern cloud-native architecture. Another IDC study states that by 2023, over 500 million digital applications and services will be developed and deployed using cloud-native approaches - the same number of applications developed in the last 40 years. According to IDC, in 2019 small and lower-midsize businesses will spend approximately $65 billion on software in the U.S.

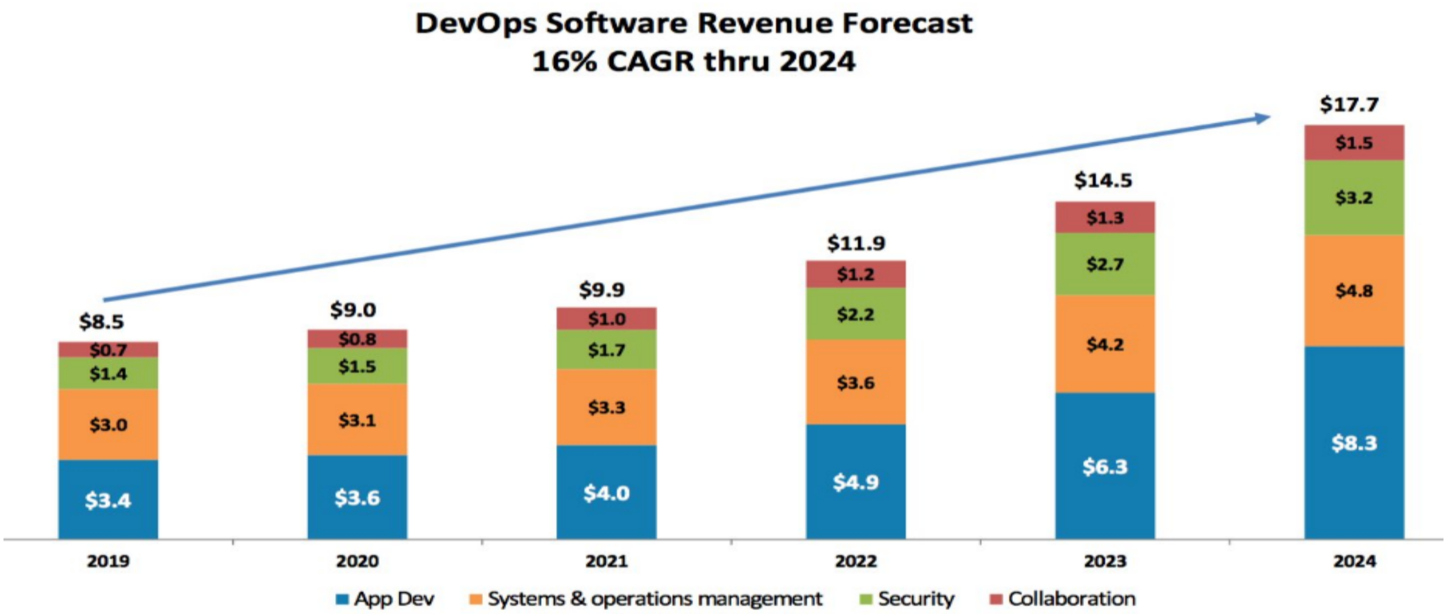


Cloud Infrastructure / DevOps Components (Database, Network, Monitoring): MDB, NET, FSLY, VMW, PD, DDOG, NEWR, DT, SPLK, ESTC, FFIV, SWI, FROG, NTNX, RXT, SUMO, LLNW, AKAM

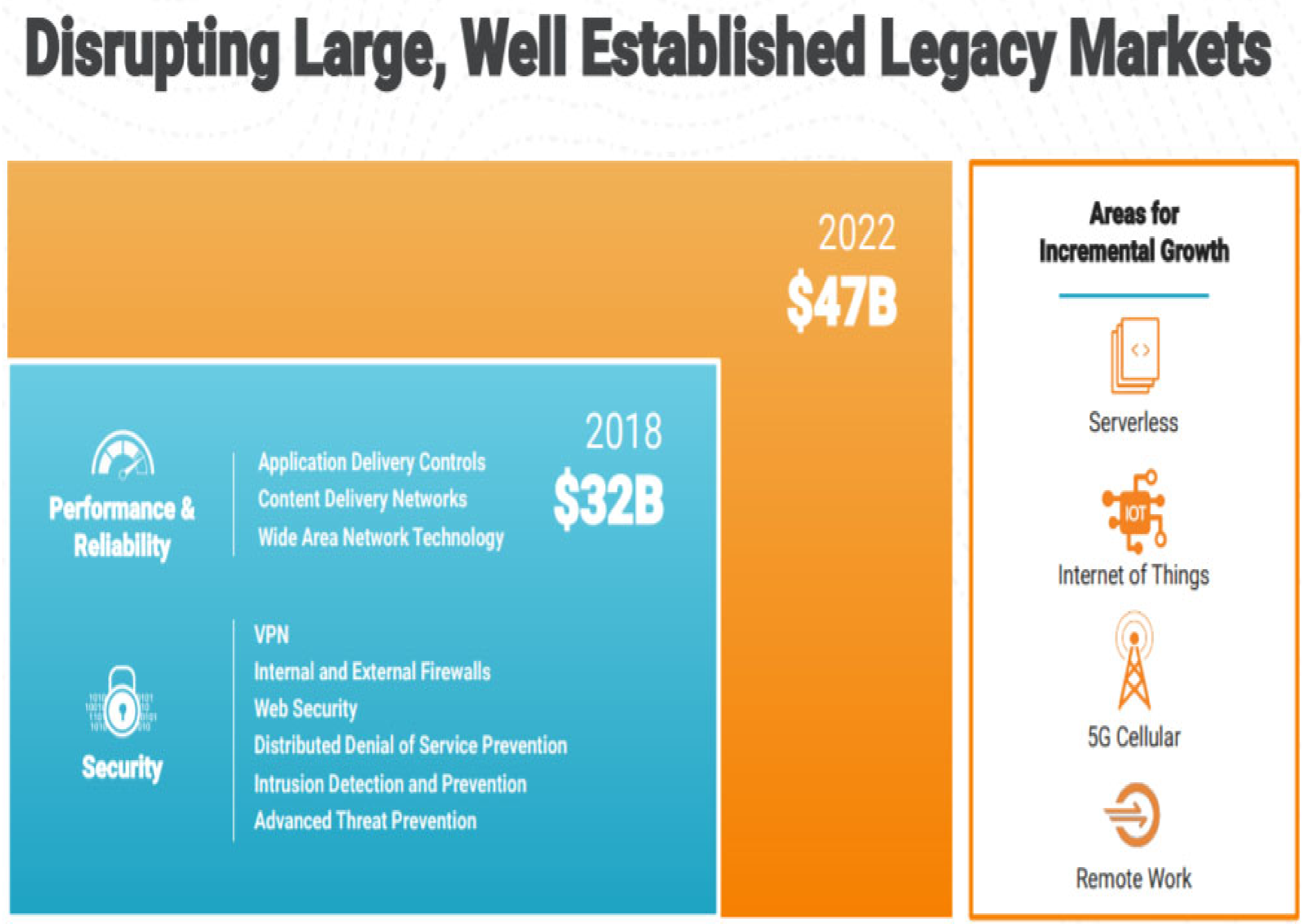
This is one of the most exciting parts of software with the need to monitor these digital transformation deployments growing rapidly as well as the exciting advancements in edge computing. According to the Gartner Forecast: IT Services, Worldwide, 2018-2024, 2Q20 Update, the managed services and cloud infrastructure services market worldwide is estimated to be $410 billion in 2020 and is expected to grow 7% annually to $502 billion in 2023.

The database market is one of the largest in the software industry. According to IDC, the worldwide database software market, which it refers to as the data management software market, is forecast to be $71B in 2020 growing to approximately $97B in 2023, representing an 11% compound annual growth rate. Legacy database vendors have historically dominated this market.

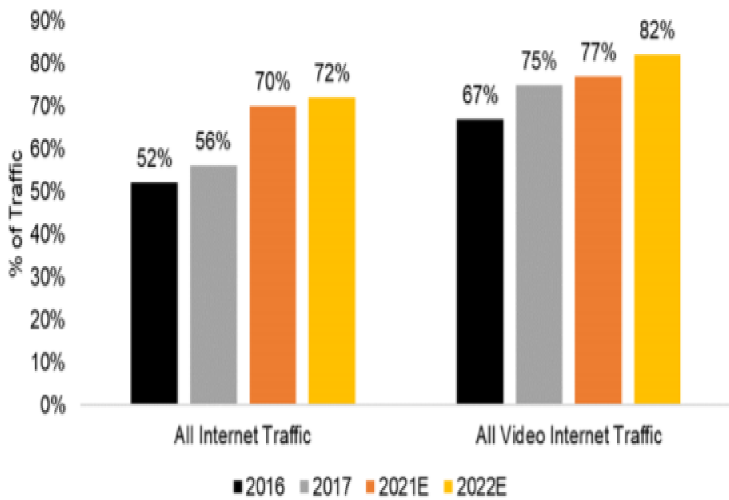


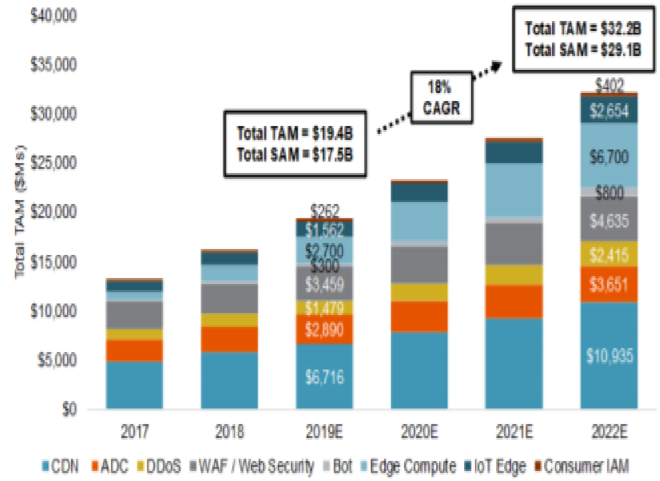


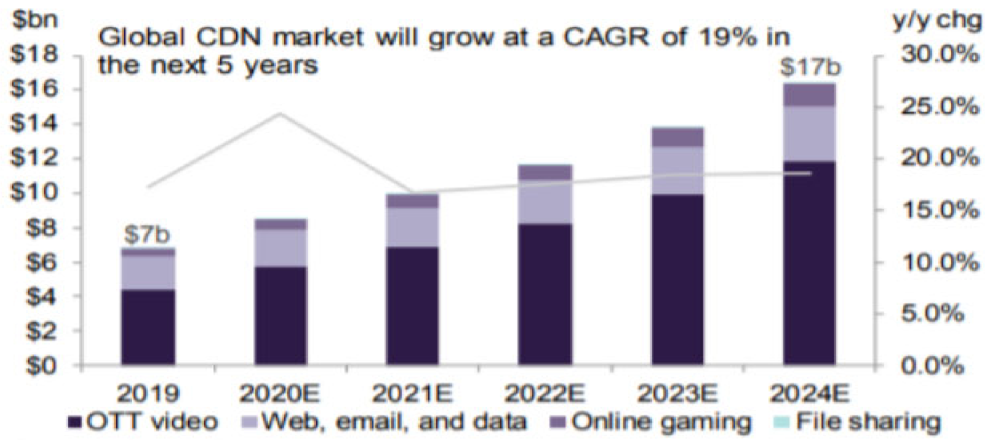
The markets for edge computing, content delivery and streaming, cloud security, and application delivery controller were estimated to have a total market opportunity of approximately $23B in 2019. This total market opportunity will grow to $35.5B in 2022, representing an expected CAGR of 15.3%.



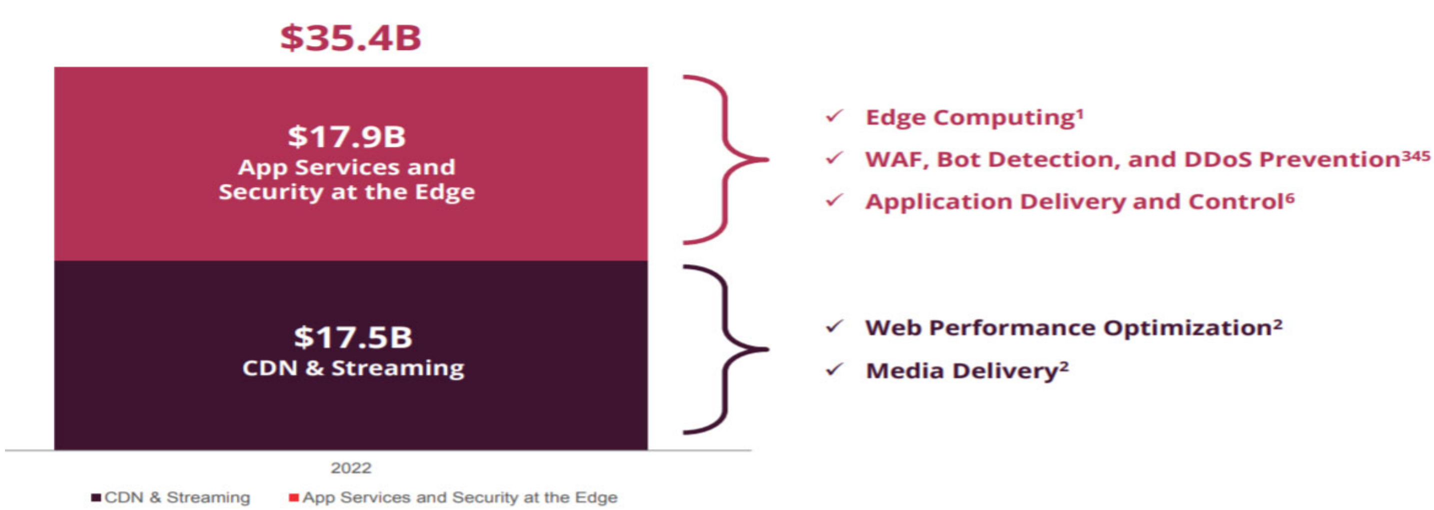
CDNs Gaining Share of Internet Traffic at a Rapid Pace, Resulting in One of the Fastest Growing TAMs.





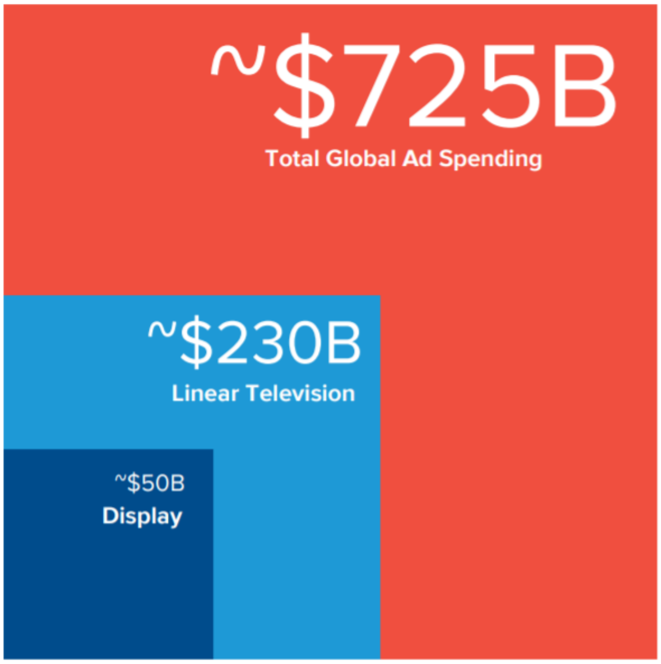


According to Gartner, the global IT operations software market was estimated to be $29B in 2019 and is expected to grow at a compound annual growth rate of 6.7% to $37.5B in 2023. Gartner estimates that enterprises will quadruple their APM use due to increasingly digitized business processes from 2018 through 2021, to reach 20% of all business applications. According to IDC, the opportunity for all DevOps tools is expected to reach $18B by 2024. Sumo Logic estimates its total addressable market opportunity to be approximately $55.1 billion by aggregating 2020 projected revenue by organizations in the following IDC software categories: advanced and predictive analytics software; AI software platforms; content analytics and search software; end-user query, reporting, and analysis software; software change and configuration management; security analytics, intelligence, response, and orchestration; and IT operations management (ITOM) software, across on-premise and cloud environments.



CRM/Marketing/Digital Advertising Components: TTD, ZI, HUBS, NICE, DOX, CSGS, MDLA, VRNT, APPS, SVMK, YEXT, BCOV, VERI, EGAN, SSTK, IBEX

Forbes Global 2000 companies collectively spent over $2 trillion on sales and marketing activities alone in 2018 according to Capital IQ. Experience Management Platforms had an addressable market of $68B in 2019. The Customer Engagement and Custom Management addressable markets are estimated above $100B. According to the IDC, customer care is the largest horizontal market in BPO with approximately $66B of revenues in 2016 and is expected to grow to $83B by 2021, representing a CAGR of 4.5%.



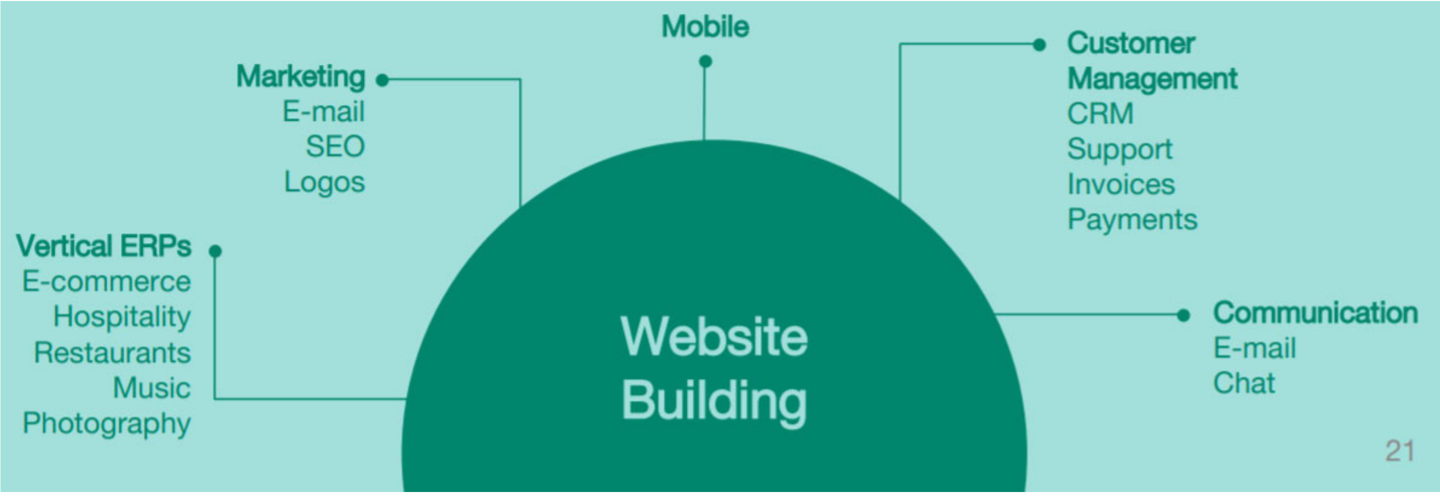
Back Office & HCM Cloud: AVLR, VERX, BILL, COUP, PLAN, WK, BL, ZUO, WDAY, CDAY, PAYC, PCTY, CSOD, INS

The transaction lifecycle—encompassing the processes that enable businesses to pay and get paid—is critical to every business. Businesses begin the transaction lifecycle by creating and mailing invoices, approving bills, and making payments, and end the process by recording and reconciling transactions in an accounting system. BILL estimates the opportunity for small and medium enterprises (20M) to be $30B globally and $9B domestically.

The market opportunity in the U.S. for payroll and HCM applications and services is driven by the importance of payroll and HCM solutions to the successful management of organizations. PCTY estimates the market opportunity for medium sized businesses at $18B. According to an IDC report published in June 2018, the global market for Human Capital Management and Payroll Applications in 2018 was predicted to be $21.1 billion, of which $16.0 billion is for HCM applications. According to IDC, the HCM and payroll application market is expected to grow to $30.5 billion by 2022, representing a 9.6% CAGR, and includes payroll, HR, talent acquisition, workforce management, document management, performance management, compensation management, and succession planning.

Commerce/Web Development: SHOP, BIGC, STNE, WIX, GDDY, VRSN, LSPD, JCOM, LINX, PRO, TCX, QH, ECOM, FVRR, UPWK

The rapid acceleration of ecommerce has put a strong focus for businesses utilizing web development and commerce applications. Global retail ecommerce will reach $3.9 trillion, representing 17% of total retail spending in 2020, according to eMarketer. They forecast that retail ecommerce will reach $6.3 trillion by 2024, representing 21% of retail spending. IDC estimates that the global market for digital commerce applications was $4.7B in 2019 and is expected to grow at a compound annual growth rate of 11% to reach $7.8B in 2024. Shopify estimates its small business TAM at $78B. Godaddy breaks down the opportunity into Dream, Create, Grow and Manage stages for the lifecycle of entrepreneurs with online businesses amounting to a $350B total TAM.



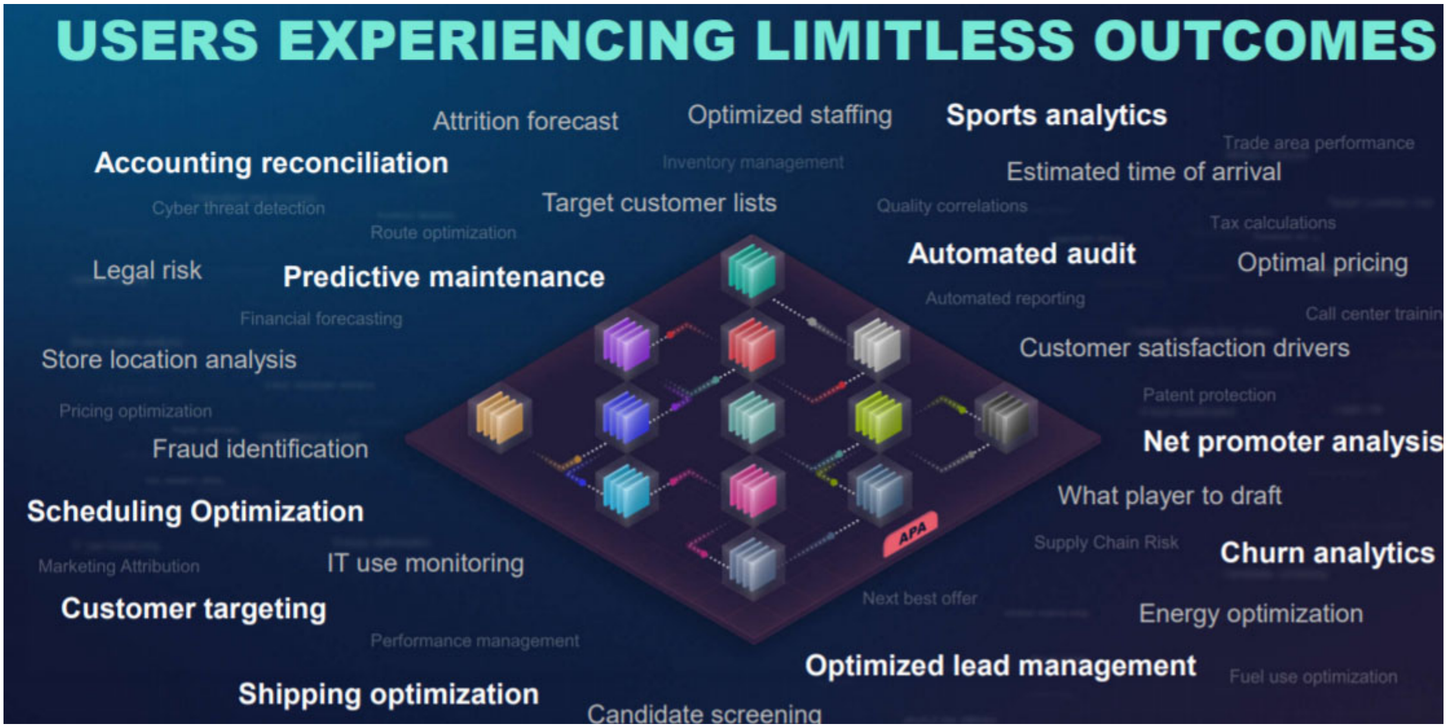
Financial Applications: INTU, SSNC, GWRE, DCT, SPNS, QTWO, JKHY, NCNO, ENV, OSPN, BNFT, EBIX

According to Gartner, banking had the highest global enterprise IT spending of all industries with approximately $376B spent in 2018. According to a 2018 EY survey, 85% of banks are currently undertaking digital transformations to modernize their businesses and 60% of banks planned to increase their technology budgets by at least 10% over the next 12 months. The P&C Insurance software market is estimated at $5.5B in the US and $15B globally.

The wealth management industry has experienced significant growth in terms of assets invested by retail investors in the past several years. According to the Federal Reserve, U.S. household financial assets totaled approximately $91 trillion as of September 30, 2019, representing a sizeable wealth management opportunity. According to Boston Consulting Group's Global Wealth Report 2019, North American wealth is expected to grow by 5.4% each year between 2018 and 2023 to exceed $115 trillion. Investable assets are projected to rise to 56% of this total, or some $65 trillion. Based on data from Cerulli Associates, advisors had discretion over 58% of managed account assets as of September 30, 2019.

Data Analytics/Business Intelligence/Information Management: SNOW, OTEX, AYX, CLDR, MSTR, TLND, PDFS, RAMP, DOMO

According to IDC, the markets for Analytics Data Management and Integration Platforms and Business Intelligence and Analytics Tools, will have a combined value of $56B by the end of 2020 and $84B by the end of 2023.



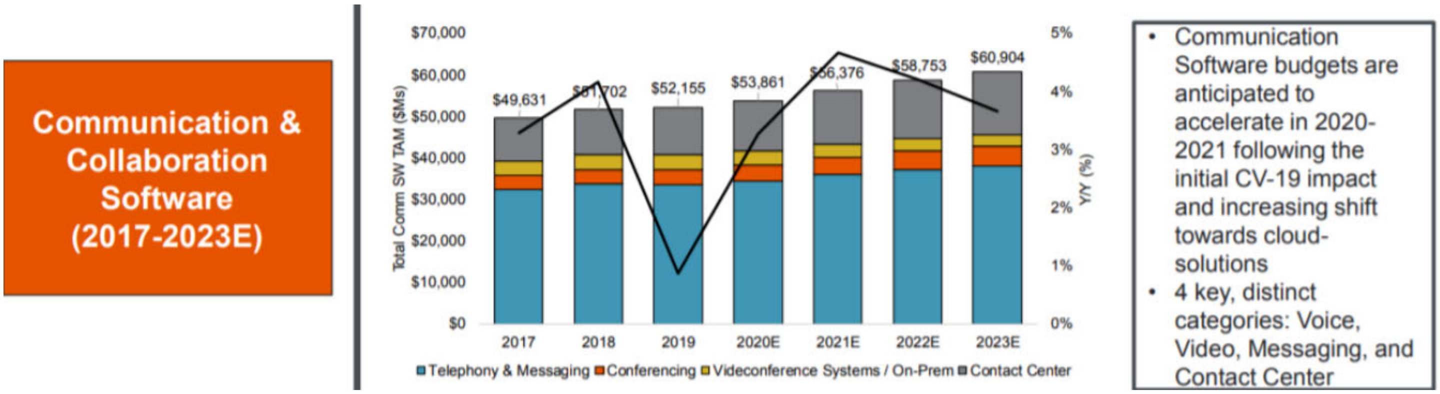
Enterprise Resource Planning (Supply Chain, Project Management): APPN, PEGA, UPLD, PRGS, MODN, MANH, DSGX, SPSC, AMSWA, AI, QADA

According to the Low-Code Development Platform Market Research Report published by Prescient & Strategic Intelligence in August 2019, the market for low-code development platforms was valued at $5.6B in 2018 and is expected to grow at a 45% compound annual growth rate to $52.3B in 2024. According to Forrester, the market for RPA automation totaled $3.9B in 2018 and is expected to grow at a 25% compound annual growth rate to $12.0B in 2023. According to Gartner, the global application PaaS market was valued at $26.4B in 2018 and is expected to grow at a 21% compound annual growth rate to $69.3B in 2023.

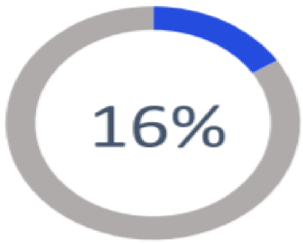
Collaboration/Storage Components: TEAM, DOCU, SMAR, WORK, CTXS, BOX, DBX, ASAN, CVLT

According to a June 2019 IDC report, the markets for collaborative applications and project and portfolio management, in aggregate, are expected to grow from $23 billion in 2020 to $32 billion in 2023.

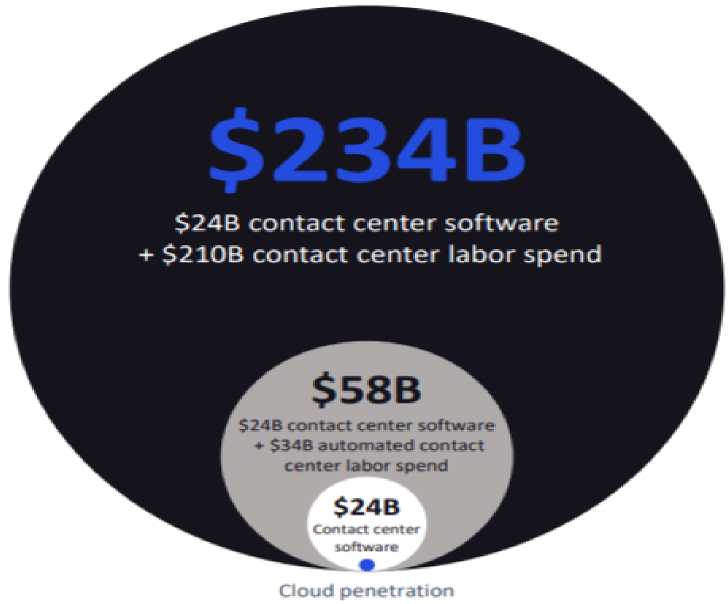
Communication (UCaaS, CPaaS) Components: RNG, AVYA, FIVN, ZEN, EGHT, TWLO, BAND, VG, NUAN, ZM, EVBG, API, LPSN, CRNC, SPT



Contact centers are vital hubs of interaction between organizations and their customers and are mission critical to the successful execution of customer service, sales and marketing strategies. Both consumer and enterprise technology trends are driving an evolution in contact center strategies. Today, customers increasingly expect seamless communications across multiple channels, including voice, chat, email, web, social media and mobile, thereby increasing the number of touch points between organizations and their customers. Along with these additional channels, customers expect personalized interactions to enhance overall customer service. Delivering customer interactions to an appropriate agent resource, while delivering relevant customer data to the agent in real-time, is crucial in providing effective customer service.



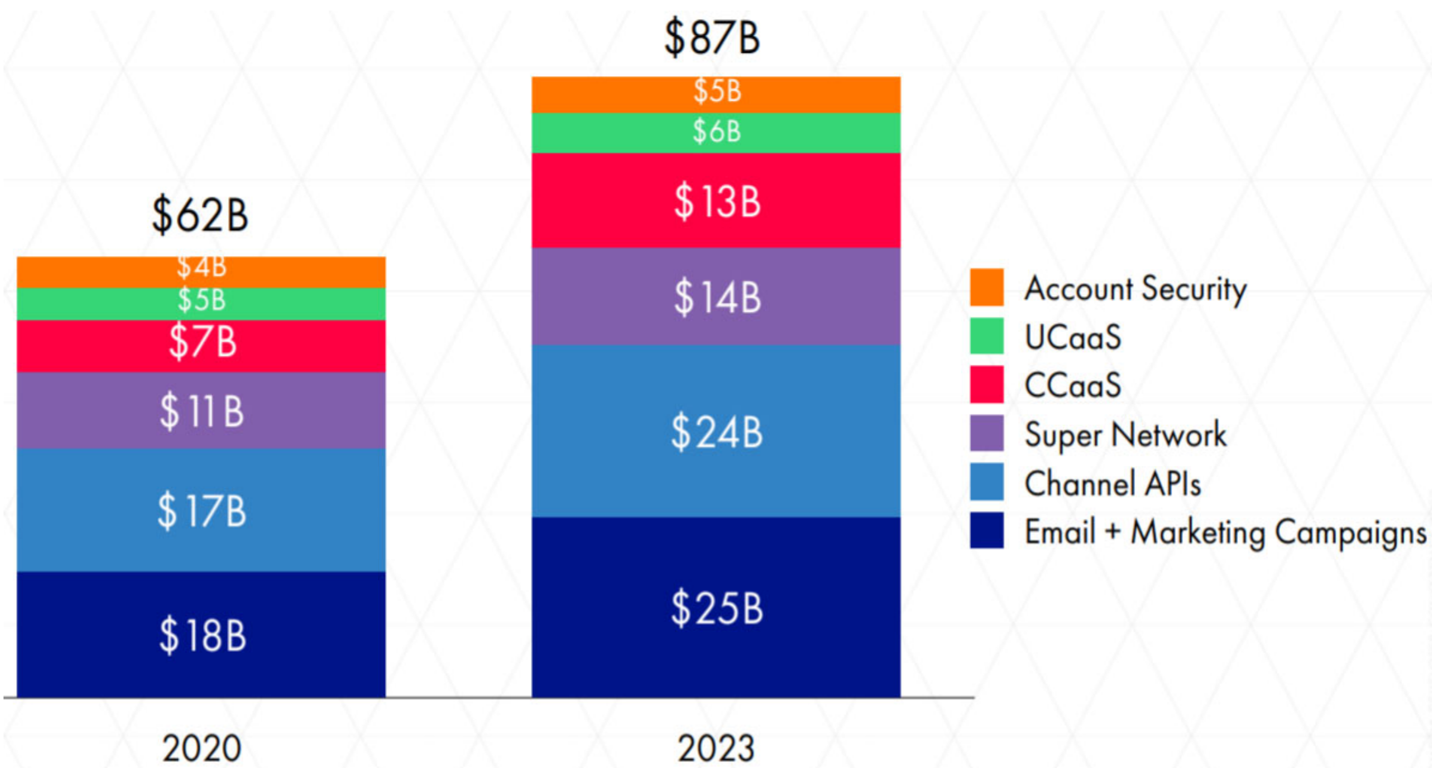
Percentage of customer service representatives that will be displaced due to automation by 2030
– McKinsey



Long-term addressable market opportunity

According to International Data Corporation, or IDC, the worldwide CPaaS market is forecasted to grow from US$3.3 billion in 2018 to US$17.2 billion in 2023, at a compound annual growth rate, or CAGR, of 39.3%. Within the CPaaS market, video is forecasted to grow from US$0.6 billion in 2018 to US$3.5 billion in 2023, at a CAGR of 43.6%. Voice is forecasted to grow from US$1.5 billion in 2018 to US$8.0 billion in 2023, at a CAGR of 40.8% and data (messaging) is forecasted to grow from US$1.0 billion in 2018 to US$4.5 billion in 2023, at a CAGR of 35.4%.

The market for Critical Event Management (CEM) solutions represents a $41.0B worldwide opportunity in 2020. Markets and Markets estimates that the aggregate market for mass notification software and services is projected to grow to $4.4B in 2020. Frost & Sullivan estimates that: (1) the market for IT service alerting is projected to grow to $753 million in 2020; (2) the market for telemedicine is projected to grow to $752 million in 2020; (3) the market for secure mobile messaging is projected to grow to $694 million in 2020; (4) the market for community engagement is projected to grow to $516 million in 2020; and (5) the market for IoT is projected to grow to $9.9 billion in 2020.



Due to social media's rapidly growing and strategic importance, all organizations of adequate scale around the globe would benefit from using a social media management solution to engage with their consumers and drive insights from social data. Based on current average customer spending levels, the annual potential market opportunity social media solutions is currently $13 billion in the United States.

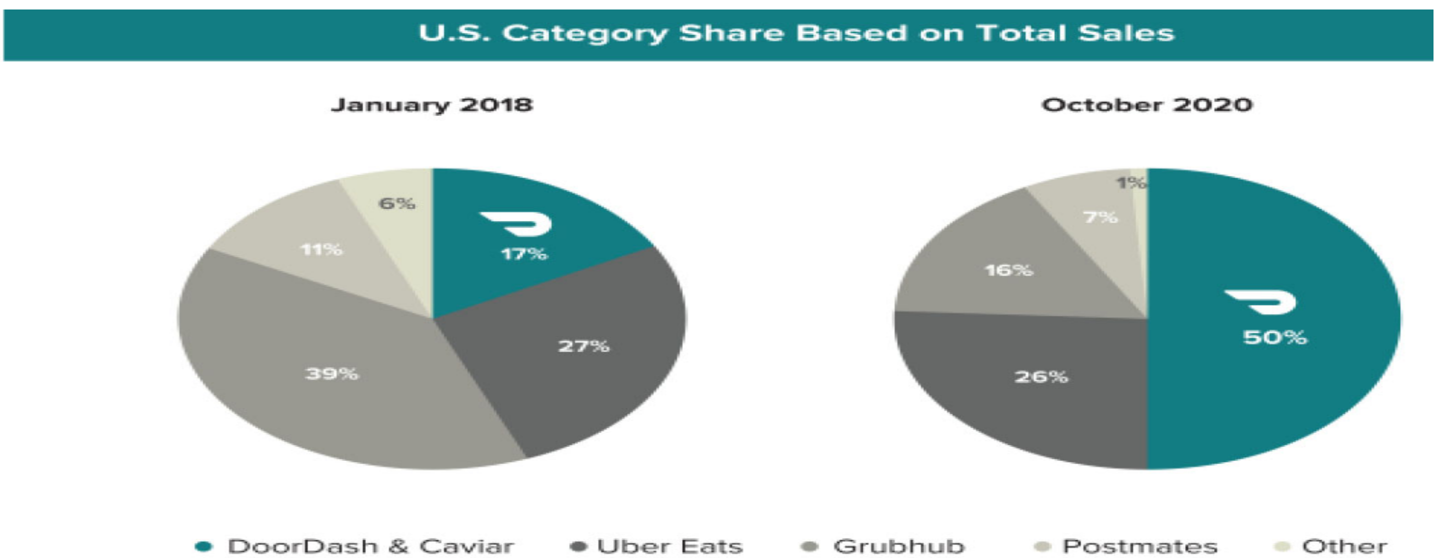
The market for automotive cognitive assistance is rapidly expanding. Tractica estimates that the automotive voice and speech recognition software market is expected to grow at approximately a 39% compound annual growth rate to $4.5 billion by 2025.

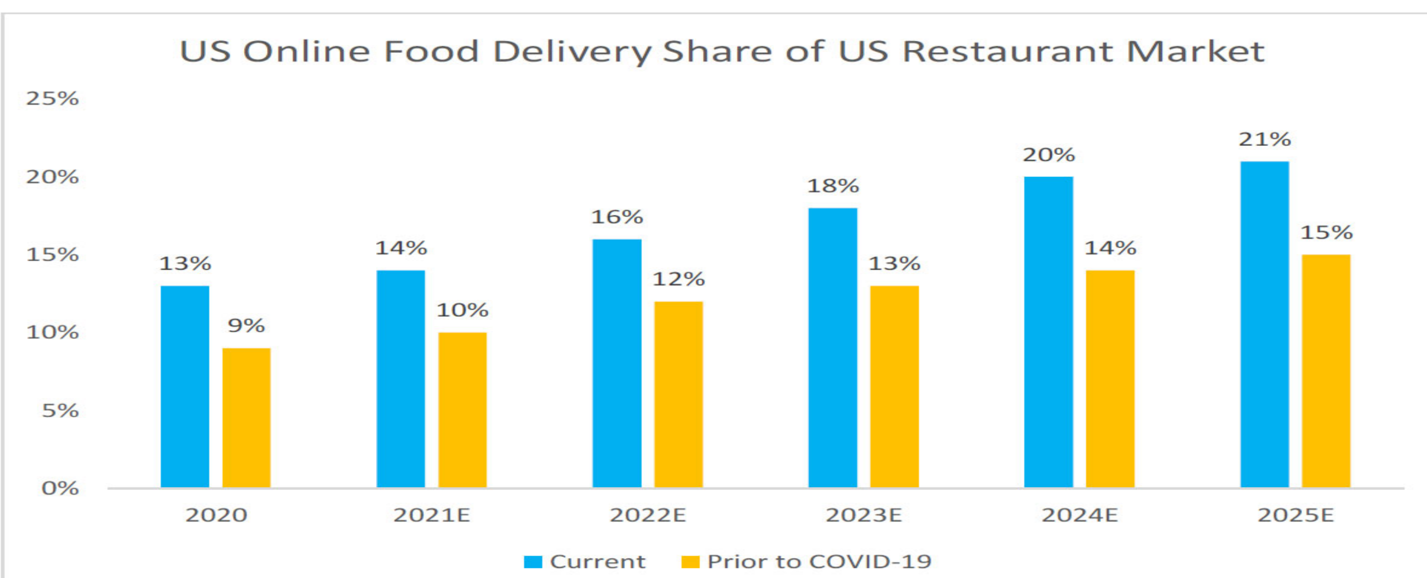
Specialized Application Components: APPF, RP (Real Estate), CDK (Automotive), SSTI, ALRM (Security), JAMF (Apple Enterprise), BLKB (Non-Profits), PS, TWOU, CHGG (Digital Skills), EB (Event Ticketing), TYL, EGOV, DMRC (Government Services), AGYS, PAR (Point-of-Sale), LYFT, UBER, DASH (Ride-Hailing / Delivery), VEEV, PHR (Life Sciences & Healthcare)

RP estimates a $19B market opportunity for its real estate data analytics software solutions. According to Frost & Sullivan, the global total addressable market, or TAM, for Apple Enterprise Management is estimated to be $10.3 billion in 2019 and is expected to grow at a compound annual growth rate, or CAGR, of 17.8% to $23.4 billion by the end of 2024.

The Food Delivery market is very competitive with little product differentiation, but DASH has strongly gained market share. Online food delivery is still in the early innings of expansion. DASH Marketplace GOV was $8 billion in 2019, compared with off-premise restaurant spend and other

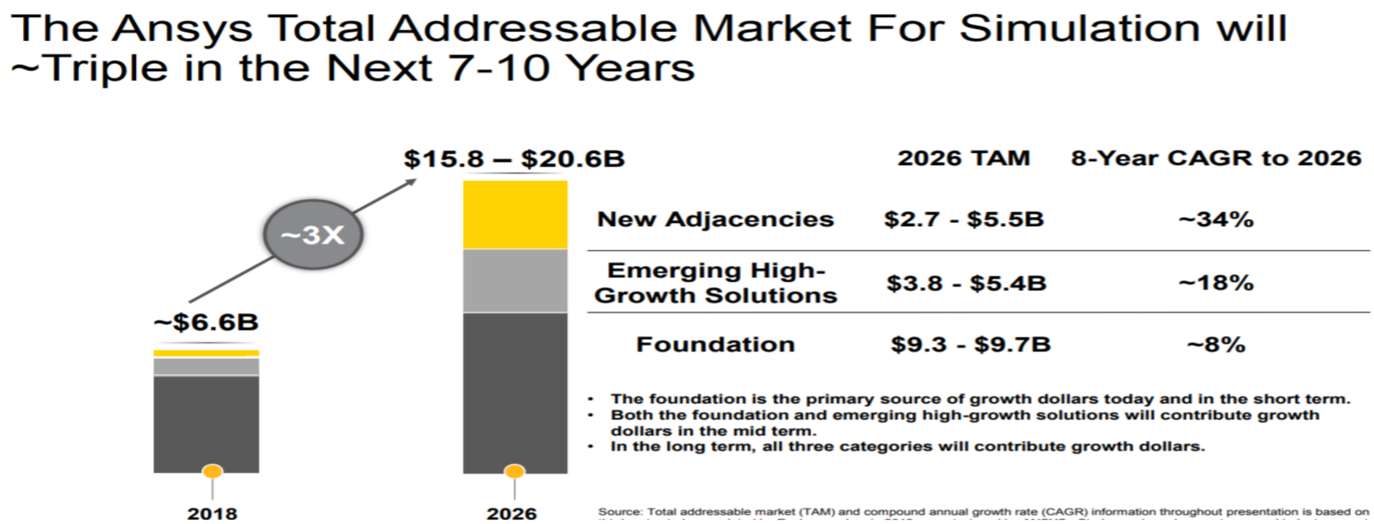
consumer foodservices spend of $303 billion – representing less than 3%.





Engineering/Design Components: ADSK, ALTR, ANSS, AZPN, CDNS, CEVA, NATI, PDFS, PTC, SNPS, BSY, TRMB, U, MTLS, Dassault, Aveva, Nemetschek AG

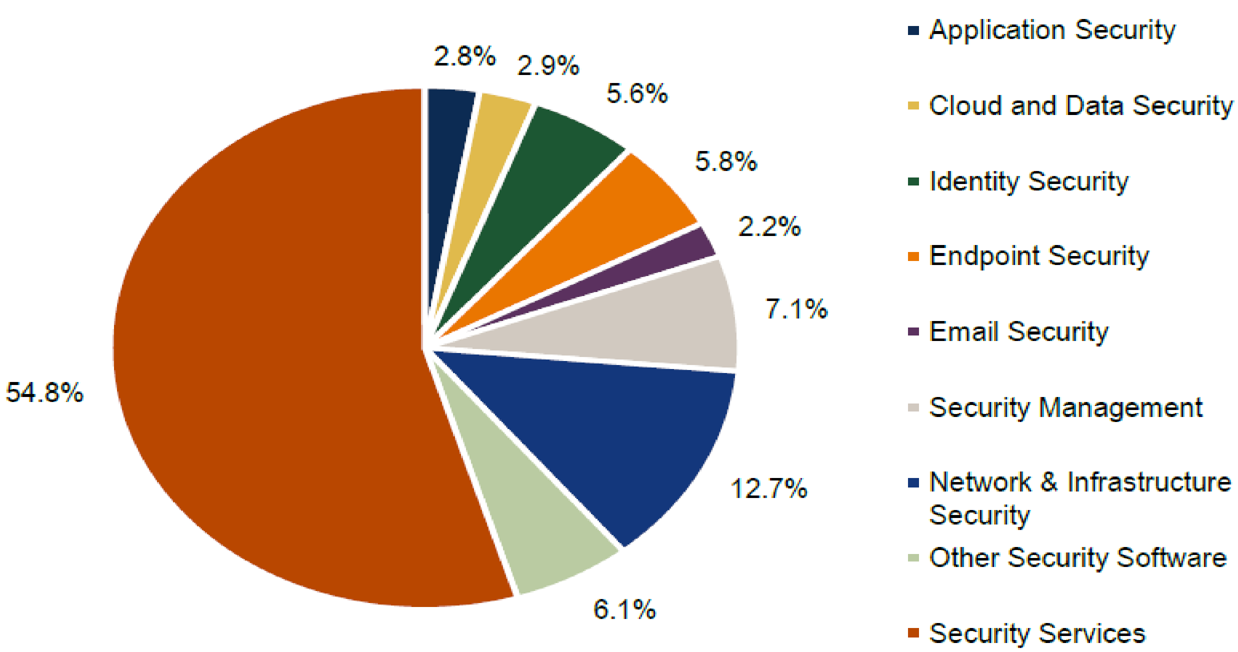
Digital progress in the engineering of constructed infrastructure has to date lagged behind other substantial economic domains, and in particular has lagged behind digital progress — as reflected in spending on engineering software — in the engineering of manufactured products. Cambashi estimates that if engineering software spending would become as intensive in infrastructure engineering as in product engineering, global infrastructure engineering software spending would be $29.2B.



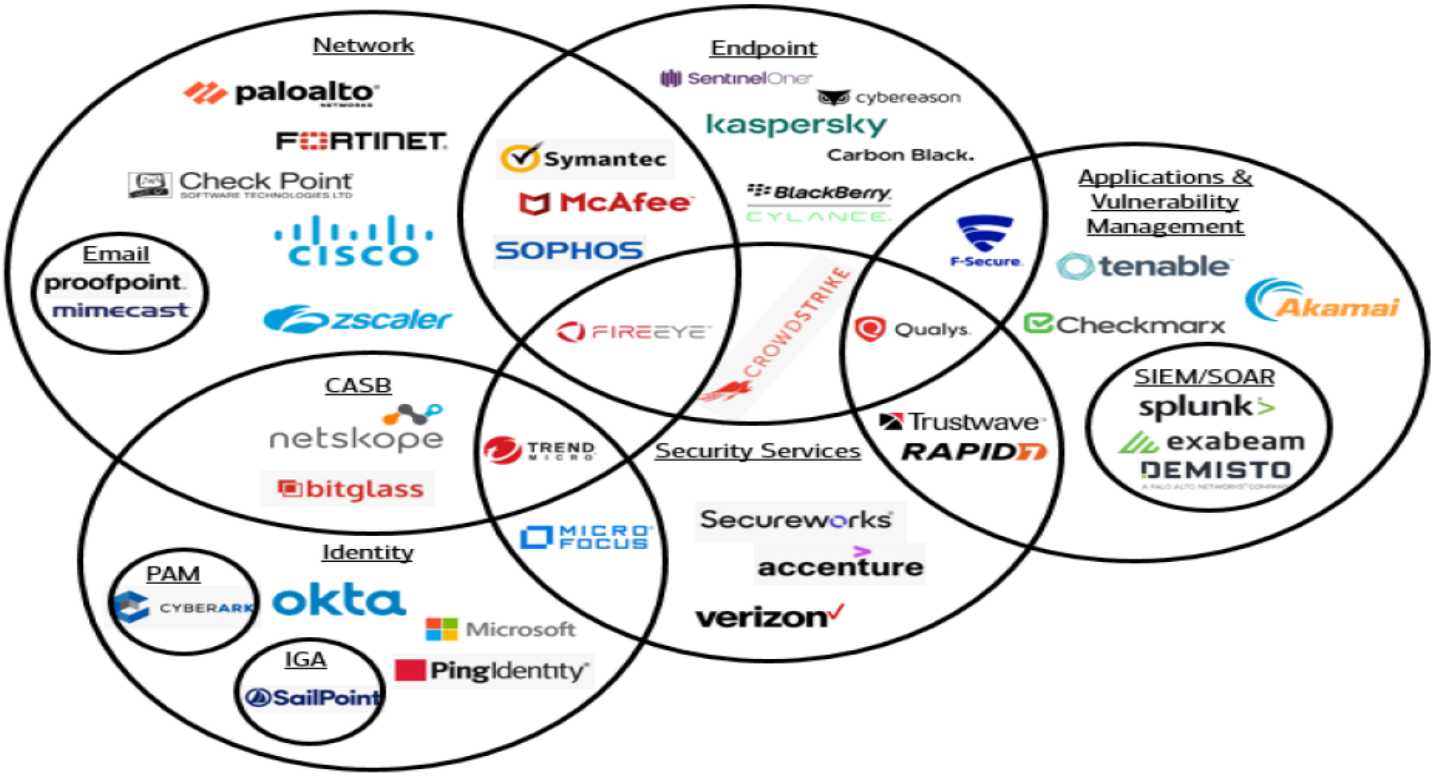
The 2D/3D design software for gaming and other industries is a $29B market opportunity. In gaming the market opportunity for Create Solutions and Operate Solutions is approximately $12B in 2019 across over 15 million potential creators, growing to over $16B in 2025.

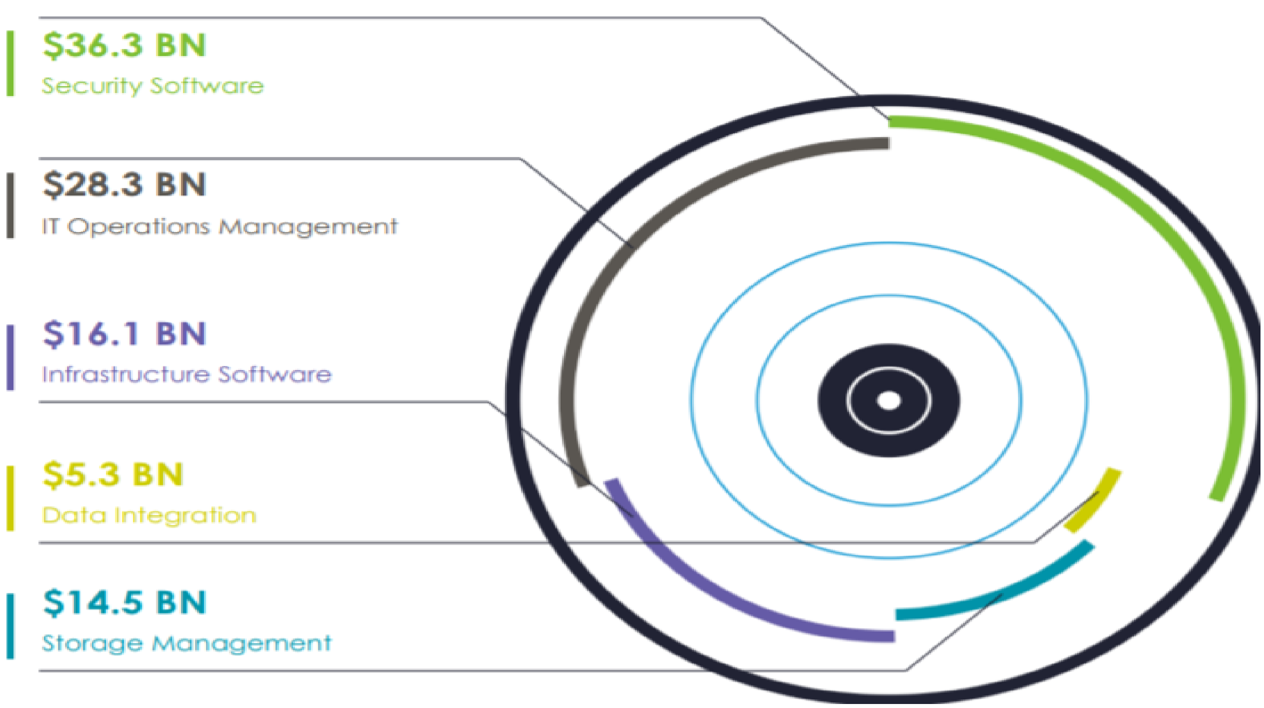
Cyber Security Components: PLTR, CRWD, OKTA, PANW, CHKP, FTNT, PFPT, CYBR, RPD, VRNS, FEYE, PING, SAIL, NLOK, MCFE, ZS, TENB, QLYS, BB, MIME, RDWR, SCWX, Trend Micro

Cyber Security has been a strong market and one that is rapidly changing with new vendors, attack methods and products. Cyber security is expected to be a relatively resilient market, growing 2.5% in 2020 vs total IT spending declining -8.9%. The criticality of security investment is three-fold, where (1) businesses across all verticals are undergoing digital transformations requiring additional security purchases; (2) work from home orders have forced the adoption of new security architectures; and (3) the attack surface has now expanded well beyond typical corporate network controls. The roughly $117B enterprise security market can be sliced in different ways as detailed below.



Identity and Endpoint are two focus areas with users shifting to mobile and applications shifting to the cloud. The new architecture and need for deeper security controls is also giving rise to an important new framework: Zero Trust, where no traffic is inherently trusted and access credentials are verified at multiple stages. As part of this shift to Security-as-a-Service, we have specifically seen a shift from appliances and services that are deployed on-premise to cloud-based delivery methods, with new market categories and terminology, such as Secure Access Service Edge (SASE). SASE addresses a shift away from security being managed in the corporate data center to delivering Security-as-a-Service closer to the users/devices. SASE combines the classic network and content security features of SWG, Firewall, Cloud Access Security Brokers (CASB), Network Access Control (NAC), Advanced Threat Protection (ATP), Data Loss Prevention (DLP), DNS Security, and more, in a cloud-delivered platform. Below is a good snapshot of where vendors fall across the security offerings.





Management Commentary

Salesforce (CRM) on Customer 360 product strategy: "And we're really focused on it because we think that especially right now, it's the most relevant part of every one of our customers' technology portfolio because this is about growth. If you're a consumer goods company that, due to the pandemic, has had their retail execution not driving the kind of growth that you'd previously expect, you're probably contemplating going direct-to-consumer. What does that mean? It means an e-commerce storefront. It means order management. It means digital marketing. It means building a customer data platform since you have first-party customer data for the first time because you're not just going through wholesalers and retailers. And behind -- and if you go into the c-suite of a company like that, are they talking about their ERP system? No, they're talking about their business model transformation, which is driven by a vision for CRM and Customer 360. And you go into every industry: financial services, health care, CPG, retail, manufacturing. Every single one of these companies is going through what they would call a digital transformation. But if you double-click on that, because that word is so abused by technology companies to me and pretty much everything you want it to mean. What they really mean is their customers are going digital, their customer experience is changing, their business model is changing. Their channels and partnership strategy is changing. And I think Salesforce is really the software that can power that transformation and fundamentally get companies back to growth in an economy where that is hard. That requires a ton of agility this year. And I think that's really why we're so relentlessly focused on this space, as you would describe sort of front office, which is how can we help our customers grow."

Microsoft (MSFT) on trends it is seeing: " In terms of the overall trends we're seeing, one, a lot more urgency to the cloud. I mean everyone had a cloud plan. As you know, like it wasn't a no cloud, but it's now the urgency and then much bigger, right? They were dabbling or having a very long plan. Now they're like bigger and faster. So that's certainly true. And a lot of it, why the agility to be able to scale up and down. A lot of customers are like I wish I could scale down quickly in moments, so recognizing that. And a lot of cost management, be able to cost optimize, not run servers at low capacity over the long run. So lots of that type of opportunity. But then also just need a lot more better capabilities, things like real-time analytics, rapid app development, they just needed need the cloud. Needed the cloud for those."

Adobe (ADBE) on key trends: "When you think about the macro trends that we all experience, every industry is experiencing a tectonic shift towards all things digital. And I believe that the events of this year have only accelerated that. The genie is not going to go back into the bottle. And even regulated industries that have traditionally been slower to embrace digital have certainly picked up the pace this year. We have industries like health care that are transforming, whether it's through personalized medicine, telehealth and new ways, frankly, to engage patients. On the creative side, it continues to be the golden age of design and creativity, and design continues to be a key competitive advantage because everyone at their heart is a creator. They want to express themselves across new devices with new modalities. And creativity is so essential to how we connect, how we cope and how we learn. Education has also been reimagined. Because digital is central to how students learn today, whether it's through remote education as well as by unlocking new forms of creative storytelling. And digital is also breaking long standard -- long-standing barriers to access to education, which is something great because it's making it more accessible. The way we work will never be the same again. And it's great to see how the PC has experienced a tremendous revival as the computing workhorse. Documents are at the center of how work gets done. Paper to digital transformation is only accelerating, and every business process is going digital because every business is now a digital business. Digital has become the primary way for all businesses to engage with their customers. And it's true that customer expectations are also at an all-time high because e-commerce is exploding. In fact, an annual holiday report that's powered by Adobe Analytics predicts that online holiday spending will reach $189 billion, which represents 33% year-over-year growth. And underpinning all of this is a massive shift towards artificial intelligence and machine learning, which will only further these forces at play."

Service-Now (NOW) on potential for ITSM Pro: "One of the things we have in ITSM Pro is just the, what we call, Performance Analytics, just analytics on mean time to resolution, what's going on with your employees, how fast, how efficient is the IT department in serving the employees, okay? So that's the one factor within ITSM Pro. And you cannot buy that a la carte anymore for the most part. That resonates with customers. So the self-service and machine learning capabilities that we introduced in 2018 is also driving ITSM Pro. So we have supervised machine learning, natural language understanding, those kind of features that we have built into ITSM Pro, which is driving now. So ITSM Pro, as you have seen, even in Q3, I think 16 out of top 17 ITSM deals was ITSM Pro. It's almost a no-brainer for every new customer. And for existing customer, 1/3, approximately 1/3 of our customers renew every year, right, because most of our contracts are 3 years in life cycle. We go and tell them the ITSM Pro story, and that's what is driving the growth. So 15% installed base today. And Phil, I know you'll ask me the question, what's the maximum? I would say the maximum, depending on which management book you believe in, some people will say, if you can get to 35% of your installed base on uplifting to ITSM Pro, that's a good thing. I would say 50% to 60%. My goal would be 50% to 60% with my teams and our sales teams. Our sales leader, Kevin Haverty, will tell you he wants every customer to be an ITSM Pro. But 50% to 60% adoption in the next 2 to 3 years, including every new customer signing up with ITSM Pro, where we get 25% uplift is a game changer.

DataDog (DDOG) on its broadening portfolio: "We have 7 product categories today. We have infrastructure, the original, then APM and logs. Those are the next 2 largest. Those are in hyper growth. The infrastructure already is, given the cloud migration, is a very, very high-growing SaaS software company. And we've added to those, Synthetics, RUM, network monitoring and security. So this has been very rapid. And the go-to-market is very well architected for frictionless adoption. Clients can adopt the products without professional services. That has -- the evidence there is the 70%-plus adopting more than 2 products. And in fact, we're landing right now 75% of the lands are with more than 1 product. So clients are really adopting this. And at the same time, we still get in the door first to infrastructure, we think, which is a very good, immediate need. And 100% of the infrastructure is monitoring. So it gets us the real estate. And then our clients have increasingly adopted these other products. Right now, we said that we have very strong and sizable positions, multiple tens of millions of dollars in APM and logs. Synthetics, in 8 figures right now, been out in the market for a year. And we're getting good traction with the newer products of the NAT, RUM, network and security."

Cloudflare (NET) on its ambitions to a $100B market cap: " So we want to be one of the iconic technology companies. And if we're going to get to that sort of $100 billion market cap and up, when we look at the companies that have achieved that, they all have -- with a notable couple of exceptions, they all followed what is a platform strategy with multiple products that are bundled together in order to create complete solutions. And so that's the path that you're on. You can do that by going out and acquiring a bunch of companies. That's what Salesforce did, and obviously, it was very successful. That's what Adobe's done. That's the usual path. The challenge of that is then you have to integrate them in various ways, and it can be really expensive and you can make mistakes along the way. And so we really optimized Cloudflare, first and foremost, to how could we make it as fast and easy for our team to innovate themselves incredibly quickly. And I think that the real 2 secrets behind that are, first, we created a development platform for ourselves that our own team uses. And so our Workers platform, which has a lot of excitement about in the market -- but I really think that the biggest opportunity in at least the short to medium term is it's allowing us to build products incredibly quickly and get them out to market. But that was really built for our own team first. And if you look at Cloudflare for Teams, if you look at Magic Transit, you look at some of these really innovative products that we're releasing really quickly, the reason we're able to do that is we have this Workers platform that allows us to very quickly develop and create code and deploy it out there. The second piece though, which is the really differentiated piece, is that we looked at what are other companies that have very fast release cycles. And Facebook and Google are 2 companies that we admire, obviously fundamentally different businesses than we have, but they are incredibly fast at developing new products. And so when we were building Cloudflare, we said, "How can we get that same thing?" If we have to rely on our largest customers to test new features, then our development cycle is going to be incredibly slow. If you make a mistake in traditional software, it's a real pain. So you have these average of 2-year -- in Silicon, it's now up to 3-year development cycles to get out there. In cloud companies like a Salesforce, they're really proud that they have 3 releases a year. That would drive us crazy because we want to be significantly faster than that. And the key is because we have all of these long-tail users, even if they don't pay us anything, whenever we're like, "Hey, we're building a new product for -- at one of our big clients. Who wants to test it?", we'll have tens of thousands of users raise their hand to volunteer to effectively be our virtual QA team. And as a result of that, our rate of innovation can be significantly faster."

MondgoDB (MDB) on its markets: "We talked about, I think, the evidence of the new customer additions and the continued strength there, sort of just reinforces the fact that this is a very large market. We're very early on in penetrating it. And also, we've been making some sort of investments on both the self-serve side to kind of introduce some of that consumer DNA as well as some changes in kind of tinkering that we do and optimizations on the go-to-market side that are having the desired effects. And I think fundamentally, all that's led us to -- despite the environment that we're in to meaningfully raise our outlook for the rest of the year. And if I think on a more macro and longer-term basis, I think a lot of the trends that we're sort of naturally benefiting from, whether that be digital transformation, modernization, cloud adoption and migration, all those things are only being accelerated and enhanced. And so while there's clearly a short-term headwind from COVID in the macroeconomic backdrop that we've been managing through nicely, I think it turns into secular tailwinds when you look out over a multiyear horizon."

Fastly (FSLY) on taking share from Akamai: " Sure. I think at a high level, 90% of the time when we're competing for a new customer, it's an Akamai legacy customer. So most of the time, we're competing against Akamai. And it's probably no surprise. Akamai is sort of the legacy provider. They've been dominant for several decades, much kudos and respects to them. They were a software first driven company, which we sort of differentiate relative to other legacy CDM providers. They're very definitely geared more to the software side. So sort of that's sort of number one. The other factor with respect to why we see Akamai more is they're really shooting for these more complex, more scaled customers. These are customers who have applications that really scale into the millions, sort of really high numbers of transactions per day. We're talking millions of requests per second. But going back to Akamai, where we normally compete with, the idea that you can actually program your edge, manipulate it yourself and not necessarily rely upon an e-mail to change a configuration or wait for workflow to work on your vendor side, in this case, Akamai side, we feel like that's an area where we can actually put the power of the edge in our customers' hands so they can manipulate it themselves where we can cache APIs, for example, and do it, as we say, automatically and just allow changes from their origin all the way to manifest itself to the edge with sort of no human interaction whatsoever. And that's something that's unique to Fastly, and it's something that's sort of the genesis of Fastly. So when you think about sort of our 3 core components through the delivery side, programmatic, sort of based on Varnish, and it allows customers to manipulate themselves, layer on top without adding a new physical hardware layer because it's the hardware piece, putting security -- and this is the security we already had before, but now with Signal Sciences, we can layer that on top as well. And many times, many of the purchasers of "CDN" are now buying security as a sort of requirement. You have to have a web application firewall. You have to have DDoS mitigation. And I think for us, we -- what we've seen historically and now we've seen with clients, just sort of a greater confidence that we can actually go do this and continue to sort of take share in these markets of which, again, back to the respect, is that Akamai has dominated for so long. And none of this includes any of Compute@Edge. And the promise of Compute@Edge is we've had programmability since the beginning, but Compute@Edge, the promise of that is it allows you to program in whatever language you're most comfortable in, compile it on our edges and deploy it worldwide."

Dynatrace (DT) on its application security module expanding the TAM: "No, it's an exciting step for us. And it's our first step into what's a very large TAM expansion for us. We estimate it being about an $18 billion TAM expansion on top of the $32 billion we look -- we see today in observability. So it's a big space. And our entry is in the RASP area, the runtime application vulnerability and remediation area, okay? This has been an area that in sort of the classic data center world, has been a firewall kind of protection. Sort of think about it as ring fencing to protect your applications. In a dynamic containerized world, you can't do that effectively. And so a number of companies have sort of seeing the opportunity, but they're attacking it with sort of start-up functionality. Palo Alto with Twistlock and Rapid7 with, I think, tCell. And several other ones and there's some new start-ups that have targeted this runtime application of containerized environments. But because we have a level detail of everything that's happening in the cloud and all the applications, we have an engine that can watch continuously for any change or ad in production, and we can do it at mass scale. And we have an AI engine that can -- is very precise with what matters and what doesn't, to reduce false positives. We can bring a security module to market in this RASP space for dynamic clouds. It is very hard and frankly, totally underserved by any other alternative. So the requirement is there, the market is there. But there's no good alternative. So we see it as a great greenfield opportunity, where we can leverage the power of our platform with some added security expertise that we've been developing over the last couple of years and bring something really unique and powerful to market that literally for our customers is a flip of a software switch. So we're being conservative, I think with our -- sort of our guide as far as when the ARR impact really starts to hit, I mean we have an enterprise customer base, and they will take time to make sure everything works and probably check it twice before they put things into production. But at the same time, it's set up to be not only a powerful offering but be able to sweep through the customer base at a pretty rapid rate because of the simplicity of upgrade."

Trade Desk (TTD) breaking down advertiser spending: "Let's start with the first item, advertisers have become more deliberate. Brands and agencies that advertise more effectively, who leverage data to be more nimble and agile are gaining share, period. In 2020, almost every marketer and every large brand is being asked to do more with less. Every advertising dollar has to be accounted for. CFOs are more involved in marketing and advertising decisions than they've been in years. They become a lot more focused on what business value is created by advertising. And that means that advertisers have to focus on ad opportunities that are measurable and comparable, where the business ROI can be understood and proven. And for the first time, advertisers are aggressively committing to the open Internet because of the scale and results of Connected TV and premium video. I maintain my prediction that eventually all premium video will eventually make up about half of the global advertising pie. Now that advertisers can apply data to their premium video campaigns where hearts and minds are truly won, the long-term opportunity for The Trade Desk could not be more promising. Let me put some additional data behind these assertions. We recently surveyed more than 200 top advertisers. Around 85% of them said they are under new pressure from CFOs to justify marketing spend and to measure against business goals. 50% are now having their typical measurement techniques question. As a result, almost all of them intend to adopt data-driven measurement strategies. Our CTV spend grew more than 100% year-over-year in the third quarter as advertisers follow consumers to streaming platforms. That consumer shift has created a tipping point. The number of U.S. households with traditional cable TV subscriptions is dropping to below 80 million this year. According to eMarketer, 77.6 million U.S. households will have cable TV packages this year, down about 7.5% year-over-year. That is a rapid acceleration from the 3% decline that they had been predicting at the beginning of the year. The third reason I'm so optimistic about our future is that we have deepened our relationships with brands. This is in addition to our core agency relationships. Brands understand they need to maximize the value of their first-party data and scale its deployment across their marketing function. And increasingly, brands understand the power of data-driven advertising to drive growth. Programmatic is no longer simply a line item on the media plan. It's a central part of the planning process. In most cases, brands will continue to work hand-in-hand with their agencies, but the amount of brand resources applied to this is growing every quarter. Fourth, I'm very confident about our international growth. Early on in the pandemic, many of our international market slowed down first. But since started seeing the green shoots of recovery, many of them have returned to very healthy year-on-year growth, including Tokyo and Paris, which have grown spend over 100% year-over-year."

ZoomInfo (ZI) on its competitive moat from its datasets: "I think the first one is we've built, at the center of all of the data that we collect, is this algorithm that's collecting data from millions of different sources and then making decisions in real time on what to publish or not publish based on all of those different sources; the accuracy of those sources; the recency of the information; the relative weight of a different source; for example, if we see something in an SEC report today, that's a really valuable source with a really high weight of accuracy. If we see something from a blog post today, that's a less valuable source with a less relative weight of accuracy. So we're bringing all of these key data points into this evidence-based machine learning algorithm to make decisions on what to publish or not publish across our platform. One of the things that we're able to do is use the data that we've collected to build up millions of professional profile pages and company pagers across the web. ZoomInfo -- those ZoomInfo pages are some of the most visited pages in the world across the web. And those drive convergence into data contributors. Well, you can't really build those pages unless you have a robust and accurate and very large data asset, coupled with expertise in SEO that drives the traffic to those pages. And so you need a really great data asset to build a contributory network, and you need a contributory network to build a really robust data asset, and we think that builds a great moat around our business."

HubSpot (HUBS) on the structural turn: " I feel like the durability of our value prop and execution is very good. As I look into next year and I look at our go-to-market model and I look at our product pipeline and our value proposition, our competitive positioning, I feel really good about that better than I've ever felt about it. I think that's sustainable over multiple years. We've made some bets as a company in 2018 and '19 that are really paying off now. In terms of the tailwind, it's -- I mean, I don't know how long the tailwind lasts. I can say that, ironically, sales and marketing budgets have shrunk. If you look at sales and marketing budgets across our target market that shrunk, there's been some interesting analysis to come out of it, but they've certainly shifted, and budgets have shifted from outside field sales to more inside sales in light touch sales and product-led sales, of course. They've shifted from outbound marketing. Live conferences, trade shows, things like that, billboards and airports, things like that, too, inbound and everything's moved from off-line to online. So all of those trends have -- are trends that we've been calling for a long period of time. And we thought they would happen over the next 5, 6 years in a certain way, and they just have sped up. And I don't think the world is going back to -- you may not like to hear this because you're running conference right now. I don't think the world is rushing back to in-person conferences, in outbound marketing and outside selling. I think some of the changes that have happened just sped the -- sped progress up a little bit, and I think some of that's here to say."

Coupa (COUP) on its business spend management outlook: "Yes. I think it's a confluence of events. And if you look at the year and the way that we've seen IT spend, I think a lot of others have seen it is when the pandemic started, you see a lot of people investing in the work-from-home type technologies, right, because they had to adapt to the new world order, if you will. And then when you go down the stack, I think the next was the dev ops, right, and the technologies that are necessary to deploy your business and run remotely and endpoint security. And the next layer, which is where I think we play, is the application stack. And I would argue that if we're not at the top, we're at the near top of that because of the ROI, the quick payback. And in today's world, the one thing you can control is spend. You can't necessarily force revenue. So I think that's inured to our benefit. And as we get more and more of these marquee customer wins, I think we're becoming more viewed as the definitive winner of this category space. And as we have more customers advocating for us, that's also helping the flywheel of our growth. So it definitely seems to be improving at least through Q3. We'll see what Q4 brings with going into shutdown 2.0. But I think it's really been a confluence of those events, part of the macro, part of our value prop and part of our customer advocacy and just brand recognition."

Ceridian (CDAY) on its Dayforce Wallet product: "So let me just talk first about the actual product, and then I'll talk about what we're seeing in terms of success in the market. We don't look at the actual market all the way back in about 2010, 2011, and I looked at the payroll market, we all know that the payroll market is very large, about $20 billion in the U.S. and Canada, another $20 billion globally. So very, very attractive. I needed a way to inch the market where I can differentiate ourselves in a way that we could create real value to customers to obviously entice people to sign with us. And what we found was that the basic workflow for payroll was a little bit antiquated. All of the systems in the market, at that time, had separation of data between time and payroll. And that meant that the payroll people couldn't start their busy work until after the pay period had ended, it was a 2-week period. And during the other time, they were largely idle and then largely rushed, leading to not great quality to pay. We sold that by bringing pay and time together into one engine such that we always had a continuous calculation always on payroll, which meant that, at any time, you know exactly what people were being paid net of taxes and deductions. And once we had that, we then look towards the employee experience. And we said, look, we got this construct of the pay period. And a pay period really means that the person is being paid in arrears, lending money to their employer for no interest. So we believe that we could create tremendous value for the employee by allowing them to access their net earnings at any time that they wanted to. And when we did the study of the market, we found about 80% of people really kind of oscillated between being cash-rich on payday and cash flow towards the end of the actual pay period. And many of them are have to rely on these very expensive financial instruments, whether it be credit card debt or whether it be going to payday loans in order to fund themselves. And the potential for us, obviously, is quite large because we move, as you know, about $300 million and about half of that reaches employed in terms of net earnings. So 100% penetration, we're giving about $1.2 billion top line and bottom line benefits to the actual -- to the company. Obviously, it will take a very long time to get there, but there is a very strong potential."

Blackline (BL) on the future of finance and accounting: "Nearly 9 months into the pandemic, companies around the world are rethinking their physical footprint as employees continue to embrace the benefits of working from home. We believe the future of work for finance and accounting has been irrevocably altered. Some of our customers are already shifting to a permanent remote close because they have found greater efficiencies using the BlackLine platform, and we expect more customers will make flexible work arrangements permanent as well. We are very pleased that BlackLine customers have been successful in this environment. However, we serve less than 2% of our addressable market. There is a very large untapped opportunity for the majority of companies struggling with manual and unsustainable accounting processes. We believe these market dynamics will continue to favor our value proposition, and we are ready to meet the needs of customers accelerating their digital transformation spend."

Bill.com (BILL) on its opportunity: "We've seen surveys where 80% to 90% of businesses report that they still rely on paper checks as a primary form of payment. And that usually means that everything that precedes that paper check is also manual. So filing cabinets, sticky notes, e-mails, things of that nature. So we really are trying to transform, help companies transform how they operate from a process management standpoint because we apply the capabilities that we have around digital document management, workflow approvals and collaboration. We apply those capabilities to AP and AR. That's what gives us the opportunity to do payments. And ultimately, there's not a lot of direct competition as it relates to both AP and AR, which is what we focused on, granted most of our business is AP. And then we have, obviously, a large network. So 2.5 million members in our network where companies are either paying or getting paid. And ultimately, that becomes an interesting opportunity as a prospective source of new customers down the road."

Shopify (SHOP) on expanding ways to allow merchants to be successful: "What excites us the most at Shopify is what's always exciting to us, and that's to deliver on our mission to make commerce better for everyone. So things like buy online, pick-up curbside, local delivery options, gift card capabilities, expanding Shopify capital in terms of dollars committed as well as the U.K. and Canada expansions. There are others. That's just some of what we did very quickly. So Shopify balanced multiple new sales channels with Facebook, Walmart, the TikTok partnership, email marketing, Shop App, continuing to promote Shop Pay in a delightful checkout experience. And then adding Shop Pay Installments on top of that, adding multiple payment methods like Alipay and then continuing to be extremely committed and focused on the Shopify Fulfillment Network, given how important we know it is to get goods to buyers in a fast and affordable way. And going back to the Shopify flywheel, this is how we arm the rebels. This is how we help our merchants be successful. And their success, we share in that success. And we've also seen a significant increase in our scale. And as we increase in scale, we're able to then deliver more economies of scale and benefits to our merchants to help them be even more successful. And so we're seeing that flywheel energized right now, and that gets us excited."

Wix.com (WIX) on payments: "And going back to the Shopify flywheel, this is how we arm the rebels. This is how we help our merchants be successful. And their success, we share in that success. And we've also seen a significant increase in our scale. And as we increase in scale, we're able to then deliver more economies of scale and benefits to our merchants to help them be even more successful. And so we're seeing that flywheel energized right now, and that gets us excited. And going back to the Shopify flywheel, this is how we arm the rebels. This is how we help our merchants be successful. And their success, we share in that success. And we've also seen a significant increase in our scale. And as we increase in scale, we're able to then deliver more economies of scale and benefits to our merchants to help them be even more successful. And so we're seeing that flywheel energized right now, and that gets us excited."

Guidewire (GWRE) on its current position in the P&C industry: "Since our inception, we have focused on serving the more than $2 trillion global property and casualty insurance industry. Many of the largest insurers in the world rely on Guidewire Software to support the most complex and robust environments and to do so at scale. Today, we touch approximately 20% of the industry's direct written premium with at least 1 of our core products. And we've completed over 1,000 implementations at over 400 P&C insurers. While this penetration is impressive, these metrics also inform us that there is still considerable white space available and considerable opportunity for both Guidewire and especially our customers. We believe the imperative for modern core technology in the P&C industry is stronger than ever. To stay competitive, P&C insurers are responding to rapidly evolving policyholder and agent expectations by rethinking customer interactions with user-friendly digital experiences. Insurers are also looking to technology to help them grow by bringing new insurance products to market and expanding geographically. Insurers need to do these things as quickly and efficiently as possible with effective IT and enterprise systems all optimized through modern data systems and analytics, which make machine learning and artificial intelligence-powered solutions possible. We believe this imperative presents a tremendous opportunity for Guidewire and specifically Guidewire Cloud, which brings a new level of speed, agility and ease of upgrade to insurers. As we help leading P&C insurers modernize and innovate, we are executing on multiple vectors, including delivering a 6-month release cycle that enables customers to adopt new capabilities faster, accelerating our cloud momentum with each new cloud win and successful go-live and growing our industry-leading ecosystem of partners and marketplace applications. We continue to make great, steady and determined progress in each of these areas."

Envestnet (ENV) on expansion plans: " I think we've been very successful at the kind of building up our share of the market. Today, we serve 103-plus-thousand financial advisers. You look at the U.S. pie there, it's roughly 300,000, a little less than that. So we've done a really good job of getting advisers engaged on the platform. And then as they're engaged on the platform, where -- we've been doing a very good job of helping them become more productive. And over time, they're growing faster the longer that they use the Envestnet platform. But I'd say a couple of years ago, we've begun to really focus in on how we help those advisers penetrate more of the household assets of the clients that they're serving. And a lot of these initiatives really open up the breadth of capabilities that we offer. And so it -- while the story of growth in number of advisers who add accounts, and then that's how we build the business. That will absolutely be a long-term theme for us as we continue to expand and become a core service provider to the U.S. advisory space. What will also happen and what we're beginning to see happen that's exciting, is that those advisers are beginning to expand and use more of our capabilities. And those capabilities are broadening out the degree that they're able to serve those households and grab more of their wallet, the wealth wallet that those households have. I'll give you a few examples. Some of those are -- we had the core investment platform. Now we have an insurance platform. We have a credit platform. We're doing things around data, financial planning. All of those are components and give us the ability really to expand our -- the usage of Envestnet services from the advisers who are already on the platform."

Appian (APPN) on extending its low-code vision: "And maybe to answer that with another Gartner quote or related to this is that they predict 65% of enterprise software would be built on low-code by 2024, another prediction that Gartner put out. Where Appian is headed, though, is firmly focused on enterprise software, how do I enable business organizations to express their digital operations more directly in low-code software? Now we've had a lot of success in that in the workflow space, process automation, user experience design, mobile application design. And where we're really innovating right now is in data architecture. So one of the biggest challenges we've seen in there is when you choose to build a new software application, an initial choice often is designed -- is based on the data architecture I'm using behind the scenes. Whether I'm going to use a traditional relational database that maybe is very good for transactionality and for complex queries and logic, or do I want to use a document data store like a MongoDB? Do I want to use a vector column or data store? Do I want to use a time series data store or are there no SQL environments or DynamoDB? We're using 2 poles and other types of architectures. There's a lot of complexity in how you set up data initially and then make sure that you're optimizing that data over time for all the different ways people want to interact with it. They want to do fast aggregations, real-time transactions, reporting, analytics, things like this. So we're really tackling that head-on. And in our latest release, we actually announced a new Synced data store, which allows us to take data from any customer data stores. So whether it's any number of relational databases, Salesforce system or other web service and cache that in a local Synced data store, so the Appian product, for real-time transactionality and fast aggregation. So we're trying to make it really easy for a low-code developer to connect any database they want, suck that data in and then work with it in a very low-code sense without having to worry about creating a view or indices, just kind of get what they want out of that data store. So that has a lot of legs in the future as far as breaking down data architecture, simplifying it, making it very approachable and having the system itself automatically adjust based on the way that we know the users want to use that data store. If it needs to go from a transactional system to a more analytical-based system, it can adapt organically."

Descartes Systems (DSGX) on positioning in key trends: " For Descartes, we've been deliberate in our approach to e-commerce. We're focused on domestic and international e-commerce, warehousing and distribution. We structured our business with an international e-commerce focus and aligned our solutions in a new e-commerce pillar. We've made e-commerce a priority for investment with businesses serving e-commerce distribution like ShipRush, Velocity Mail and Scancode and e-commerce enablement and warehousing like pixi and Peoplevox. And recently, we've invested even further when we combine with ShipTrack."

DocuSign (DOCU) on its eSignature: " Absolutely. It's interesting because at some level, people think about the business as synonymous with DocuSign and also starting to feel like it's a more maturing business because, particularly in the U.S., everyone is -- tends to be familiar with DocuSign. But we think it's still very, very early innings, Karl. I mean if you take a look at the TAM, which is the way when Cynthia and I sort of talk about the penetration, it's the way we most frequently do. We think when we went public, we talked about this being about a $25 billion TAM. Maybe it's grown a little bit since then as the market is growing. But if you look at last year, our revenue was about $1 billion, and we're set about $1.4 billion-ish this year and maybe closer to $2 billion next year. But even if you look ahead and you think about that penetration, keeping in mind that when people look at the market that's developed today, people think DocuSign has somewhere in that 2/3 share. You realize it's still very, very early. And I think one of the things that we've learned through the pandemic is that as we put more capacity online, that capacity is still performing at the same level that you saw previously. We don't see a degradation. And that's -- we've seen that this year in our marketing spend in terms of driving the web and mobile business, people coming to us online. And we've seen it in our direct business, which is 85% of our business is the direct B2B selling. And as we've added more capacity, we haven't seen sort of performance of reps to grade as you might see if you were realizing you were coming up against sort of a penetration issue. So yes, it's a little bit unusual at this scale to see the growth we've had in our 53% revenue and just over 60% billings, which are kind of all-time high for us. And so somewhat unusual to hit this scale and still see that growth potential, but we feel super excited that we've got years and years of high growth ahead."

Twilio (TWLO) on its Segment acquisition: "We obviously go through the build versus buy this discussion pretty much with every acquisition. This one specifically, there just isn't a great option to try to build this right now, right? It would have taken us a long time to get to the point where we were ready. And this market is moving pretty quickly, all things considered. And so we wanted to make sure that we were still focused on building a data platform that our customers were asking for, being able to continue to leverage the communications platform that we've already built. And we -- in talking to Peter and team, it was really kind of Jeff that was talking to Peter a lot about combining these 2 companies and what that really means. And the ability to take Segment's data and push that out over our communications, which the more personalized that data gets, the better those communications are going to be. The more likely everybody is going to be to engage in those conversations, making that data even better for the next time and making that message even smarter the next time around. So it creates this really virtuous cycle. And so look, as we look at this going forward, we see this as a really major opportunity to position ourselves as the customer engagement company."

Zoom (ZM) on Zoom Phone: "So Zoom Phone, just to remind everybody, is about 1.5 years old. And first of all, we're really excited that Zoom Phone was included in Gartner's latest UCaaS Magic Quadrant as a leader. So very excited to see that, and we have seen very strong progress. In fact, in Q3, Zoom Phone was the fastest-growing product segment quarter-over-quarter. So that's really exciting to see. We also continue to break records with our largest deal size for Zoom Phone in Q3 as well, so really continuing to see strong growth and momentum in that product and are excited about the future. As a reminder, our strategy around selling Zoom Phone is we sell into the installed base. So all of those new meetings customers that came to us in Q1 and Q2 now create a tremendous opportunity to upsell them into Zoom Phone. And that's what we're seeing, and that's what we predict for the future. And then one of the other aspects of that is the international expansion, so international availability. Zoom Phone is available in 44 markets around the globe, and that really is key for us as well as all of our multinational customers want to have -- they want to have a native Zoom phone implementation globally are able to do that. With 44 countries, we're hitting most of the major markets, so very excited about the international potential there as well."

Five-9 (FIVN) on market penetration: "Well, it clearly is early innings on the penetration front, somewhere between 10% to 15% penetrated on cloud for a very large market. This is a $24 billion market and just barely penetrated. The enterprises, obviously, as you mentioned, that's why we're -- that's where we're placing a lot of our bets because we're seeing more and more of those enterprises start to get more interested. And our CAC LTV ratio is much stronger on the enterprise side, and they tend to buy more and stick around for longer. So it's been a big part of our strategy. That's the first leg of our strategy. And I mentioned that we added another leg to the strategy. So part 1 is like, get as many on-premises contact center, human seats transition to the cloud. Stage 2 is all about automation. We started sharing this story at our Financial Analyst Day and even beyond that. But we really fleshed it out at Financial Analyst Day last year around what is the opportunity to drive automation and labor arbitrage in the contact center, which is a 10x bigger spend for the contact center. Labor is 10x the cost of technology in the contact center. And with the Inference acquisition, we've now taken a leadership position in the next stage of this journey, which is automation."

Veeva (VEEV) on expanding applications: "Let me hit on some of the major areas of innovation that will help fuel our growth into the future. For the first time this year, we have announced applications that are for consumers, for doctors and patients. This is a big deal for Veeva, something we have not done before. MyVeeva is our brand for these consumer-facing applications. To make it clear to everyone about who is standing behind these applications, Veeva is behind these applications. We also had major innovation in the clinical area this year. Clinical trials are fundamental to life sciences. Today, clinical trials are inefficient. They're full of paper and not easy for patients. This slows down trials. It's a big problem for the industry and for patients. We have a bold vision to change the way trials are executed. We want to make clinical trials paperless and patient-centric. And Data Cloud, part of our Commercial Cloud. This started a year ago in November when we acquired Crossix. Crossix is a marketing analytics platform for life sciences. It's a great business, and it continues to grow. And we've integrated Crossix with our CRM system. But the real jewel in Crossix is the underlying data and technology asset, the Crossix data platform, that has terabytes of data on 300 million patients in the U.S. It's built in a unique way to ensure privacy and accuracy."

Tyler (TYL) on its offerings being critical and not discretionary: "I mean I don't think there's really an effect on fundamental demand. As we've talked about frequently, generally, our customers are buying something from us because they think they have to. The systems we provide are all software that automates mission-critical essential functions of government, whether it's property taxes or payroll or 911 or jails or courts, so -- and they're generally replacing a system that's at end of life that they've had often for decades. And that, for some reason, has finally reached the point where they think it -- that replacing it is a very high priority. So in our view, it's really a matter of timing. That these are not things that can be put off indefinitely. And generally, they're a very high priority in the budget. In some cases, they can say, I'm going to put this off for a budget cycle or I'm going to wait a quarter or 2 until I have more clarity around my budget situation. So our view is that it's not a lack of demand or things that can be put off indefinitely, but things where there is -- even when budget -- places that had budgets that went into place in, say, July or October, even if they have a budget, a lot of those places have maybe not a lot of confidence in that budget. And are waiting to see more indication of things starting to return to normal. And certainly, I think, just as in the private sector, the closer we get to a vaccine, the more confidence they have that things will return to normal, the more likely that some of these projects can sort of loosen up and start to move forward."

Uber (UBER) on its portfolio of businesses: "You saw that we took something like our JUMP business, which are bikes and scooters, and we sold them to Lime and have an ongoing interest. We actually bought Postmates, and we closed the deal probably faster than anybody would have anticipated. And so we think that, that was an important move as we think about consolidation and the global chest match on food, which I'm sure you'll get to. And importantly, we also thought through the rest of the business. We made -- we took money on our freight business and think we can get external funding to fund that growth business to get towards profitability. And this is all about how are we going to continue to build our business out. Over time, when I was on the road, 18 months ago, taking Uber public, there are lots of questions about, "Hey, you have a really good rides business, what are all these other bets?" 18 months later, and you're seeing the growth of food delivery now, it's pretty clear now that we have 2 very strong core businesses, our Mobility business, which we believe will rebound as part of the COVID recovery. And our Delivery business, which is largely Uber Eats today, where today, we are the largest food delivery business outside of China. Us as well as DoorDash, had a great IPO offering yesterday. We both gained during this time, and we think we both have momentum. And so we think that as we sit today with these 2 core businesses. And then we had to make decisions on some other businesses, including autonomous. Our team has made really, really good progress over time. What they're trying to solve is extremely difficult. As you think about building the computers to really think through all the things we as drivers just do innately."

Chegg (CHGG) on TAM and penetration: "So one of the things we started to do at the beginning of the year, I think maybe it was the end of Q1 or Q2. Tracey started to -- we expanded our -- the TAM slide that we put in our investor deck. And if you look up until earlier in the year, we would have said 36 million students, to your point, 20 million college students, 16 million in high school. And we added the international component to that. And that basically tripled, essentially. Something slightly north of 100 million, which gives me the confidence that, in fact, we would expect the international business to be bigger, ultimately, than the U.S. business. So yes, so we do believe that's -- that opportunity's there. Where we are in the U.S., I mean, we're still -- I still think we're fairly early innings in the U.S. I mean our view many years ago, and it hasn't changed, is that we believe we have an opportunity to have at least 10 million subscribers in the U.S. And if you just take a look at our total subscribers at this point in time, call it -- I'm going to round it up a little bit to 4 million from last quarter, it was 3, right -- and those includes the international students. And so we still think the opportunity in the U.S. continues to be large as far as acquiring more students. And then when you look outside the U.S., we're not at a point now that where we're anywhere close to the scale of the U.S., although it's growing extremely rapidly as we're expanding into multiple countries. But I do think that there's many more years of growth in the U.S. And obviously, internationally, we're just -- we're in inning one at best."

Unity (U) on some key metrics: " One of the KPIs we focus on is dollar-based net expansion rate, and for the third quarter, that ratio hit 144%, thanks to a combination of strong execution and some tailwinds from COVID induced work-from-home policies. And third, you can't deliver good financials without a strong foundation of innovative products and services as well as tuned go-to-market strategy. Here are some of the interesting statistics. In the first 9 months of 2020, we've seen an average of more than 5 billion downloads per month of applications built on Unity. And as of the end of Q3, we had approximately 2.5 billion monthly active end users who consumed content created or operated with our solutions. 94 of the top 100 game development companies by global revenue are Unity customers. And as of the end of Q3, 10 of the top 10 auto manufacturers are using Unity. Unity is the world's leading platform for creating and operating interactive real-time 3D content. Creators and developers use Unity to build, to run and monetize interactive real-time 2D and 3D content for more than 20 different platforms, including mobile phones, tablets, PCs, consoles, and augmented and virtual reality devices. Much of the content consumed today, like TV and movies, website, social media, YouTube and Tiktok, is static or non interactive and are 2D digital content."

Autodesk (ADSK) on addressing customer needs with Fusion 360: "So there are kind of 3 secular trends that we see our customers grappling with. The first is the products are getting smarter. You're seeing more and more integrated control systems as part of product development, which leads to a multidisciplinary product development process, which is more challenging than conventional [accounting] side. It's prevalent in consumer products, obviously, with things like wearables, but you're seeing it happen in automotive with companies like Tesla and Rivian. And you're starting to see it in industrial machineries [no one] is immune from this trend. So that sets up problems for customers. I think the second piece is that processes are starting to digitize more. They haven't designed to a large degree, but you're starting to see that across the actual production process as well. And you need a more consolidated data model that everyone has access to. And then the third thing is that everyone is grappling with how to manage and reconfigure supply chains more flexibly. It's been exacerbated by the pandemic, but I think it was a trend that was already prevalent way before that. So those are the kind of the 3 challenges that we're trying to solve with Fusion. As a result, we're focused on converging design and our manufacturing disciplines together in a single solution. Once you do that, you set yourself up for a couple of opportunities."

Synopsys (SNPS) detailing strength of its business: "Our excellent results and confidence reflects product differentiation and technical strength, bolstered by an intense multiyear innovation push and high demand for our advanced solutions. Even if the world navigates through the pandemic, a slowing economy and geopolitical uncertainty, the market in which we operate remains robust. Global design activity and customer engagements are flourishing, driven by unrelenting complexity of chip and system design, under both fabless and vertically integrated strategies. Growing segments, such as AI, 5G, high-performance compute, cloud and the proliferation of "Smart Everything" are especially strong for Synopsys.

As a result of extensive technology investments, our product platforms are the best they've ever been. In digital design, our intense multiyear innovation push is bearing fruit, with accelerated product adoption and revenue growth across our Fusion Design Platform. Most notably, our Fusion Compiler product continues to win benchmarks and drive increased competitive displacements that solidify plan of record status. Consequently, the adoption rate in production design is accelerating, especially in new projects and for the most advanced process nodes that require this high level of integration. In this quarter alone, we literally saw a doubling of tape-outs. Proliferation momentum is broad across many different markets, ranging from very large global semis, specializing in automotive and communication chips, to promising AI start-ups and notably a microprocessor leader who is expanding Fusion Compiler usage as plan of record across next-generation projects. Another dimension of continuous innovation is cloud enablement. Our collaboration with industry leaders, Microsoft and TSMC has delivered cloud-enabled sign-off product, showing dramatically higher throughput and 2x savings on cloud computing resources."

ANSYS (ANSS) on its value proposition and long-term drivers: "So we've talked about those areas as being incremental growth areas for us relating to the core of the business. So when you think about the ANSYS business, the core value proposition to customers, which has essentially been the value proposition for the decades that we have been a company, is that by using ANSYS technology, they can achieve 2 important things. They can drive product to market faster, and they can do so much more efficiently and much more cost effectively. And they can do this because they can use testing in the digital domain. They can design their product from the digital domain, which is much less expensive and much less time consuming than building physical prototypes. It also means that they can produce warranty costs because the products are of better quality. So the translates to our customers -- the translation to our customers from a financial perspective is that they can drive more top line because they're driving more products out faster and they can achieve bottom line savings because their R&D can be more efficient. They can reduce the cost of physical testing and they can reduce warranty cost. So it's a pretty compelling value proposition. That core value -- the foundation of ANSYS growth is based upon that core value. And that's something that continues to grow. And we're excited about that market opportunity. And that's the core of the business, the foundations of the business and it's very strong. Our flagship products support our customers in that area and support customers continuing to be able to validate the design ideas in the design and validation stage of the product life cycle. If you think about the areas that you mentioned, autonomy, electrification, IoT and 5G, we've talked about them. We've talked about them because they're important areas. They are disruptive market opportunities as far as our customers are concerned. There is a significant, large and growing customer investment in each one of those areas."

Palo Alto (PANW) on SD-WAN: "So as of 5 months ago, we have SD-WAN capability in our firewalls like everybody else out there. So you can follow the firewall, you can configure it to as part of an SD-WAN network. You can do that with our Prisma Access product as well on a native basis, even RBMs. What CloudGenix does is allows you to design, architect and build the SD-WAN capability across enterprise. So you can actually go build an entire into an SD-WAN. You have SD-WAN appliances, where you have SD-WAN boxes in branch, you have one from a firewall. We have firewalls, which are SD-WAN capable. So you can actually stitch the network of SD-WAN between our CloudGenix capability and the firewall capability. Again, it's kind of interesting. I think SD-WAN is also at an early stage as a trend. I think you're going to see more and more customers go down the SD-WAN route because it's a simple cost play to replace MPLS. But there, you've got to be very good at partnering with some of the people who are hired as network consultants because a customer is not going to design that SD-WAN capability themselves. They have to work through a network consultant. They have network architectures, a desirable network architecture. And what's happening is now because of the pandemic, because of what you read every day in the newspaper, it's no longer SD-WAN. It's like what about security? Wait, I don't want to put 2 boxes for SD-WAN and for security designed into our network? And why do I need to put a hardware box if I can do it soft, right? That's where the trend is going, and you'll see more and more of that. And hopefully, our strategy of Prisma SASE is right in that direction."

Okta (OKTA) in the cloud shift: "So the pipeline going into the first half of next year is looking good. And then beyond that, again, we are in the early stages of this shift to cloud. You can take any set of numbers you want that we could talk through about how -- I don't know if it's first inning, second inning. I don't even really like baseball. But it's like the first part of this mega-transition that's going to happen over the next 5, 10, 20 years that is frankly going to be once -- certainly a once-in-my-career-type shift."

CrowdStrike (CRWD) on its Falcon platform: " When you look at the platform we built, Falcon, it really delivers on what customers want. They want that single agent. They want the ability to collect data at scale and have a data repository. That's sort of the holy grail for many companies. And they want a modular framework that allows them to solve different use cases without adding a whole bunch of complexity. At the end of the day, they want something that works, stopping breaches. And also as we see more, helps enable the IT team. And I talked about it on the call. You can't just throw a PowerPoint up and call it good. You actually have to build technology that works. You have to have customers validate it, and we've done that at scale. And I think you've seen now the separation between us and many of the other competitors, whether it's a new competitor, a next-gen player that's out there or whether it's any of the legacy players. The technology works, the customers love it, and we're driving innovation into a true platform. That was my vision when I started the company. And we've executed on that, I think, quite well."

OptionsHawk Executive Summary and Top Picks

The Software group has more amazing growth stories than any other sector in this report so there are a lot of favorites, but on the other side each group has plenty of legacy/slower growth names that can make for good shorts.

Among the Digital Transformation Leaders, you have multiple high-quality operators. **Adobe (ADBE)** is the most attractive combination of value and growth while **Salesforce (CRM)** weakness in Q4 from its Slack deal makes it very attractive as well. **Service-Now (NOW)** is personally the favorite as a Rule of 40 leader that continues to spend the most R&D to invest in its business.

In Cloud Infrastructure and DevOps, we are again looking at a large number of names delivering very strong numbers and really the biggest decision throughout the investing year is whether to seek growth at value or hyper-growth where valuation does not matter, until it does. The high growth/valuation names tend to have multiple drawdown corrections through the year but at the end of the day tend to be buy the dip opportunities as long as there is no change to the fundamental story. **Splunk (SPLK)** is an example of a name that got beat up late in the year on an earnings report but also have to be mindful it is still in the transition to cloud/subscription and these selloffs tend to be overdone. **VMware (VMW)** is the value for growth name that is still delivering strong growth and posting very strong metrics for an investor looking to participate in a less volatile manner. **Datadog (DDOG)** is a favorite in this group with such a large opportunity and delivers extremely strong metrics while **Cloudflare (NET)** has a lot of market share left to take, run by a great team, and likely can at least triple its size. **MongoDB (MDB)** has always been a favorite due to the opportunity on database modernization and a potential M&A target, though some concerns with its lower margin profile. **Elastic (ESTC)** is a favorite in the mid-cap tier with its niche offering while delivering strong growth and stands out on incremental revenues per spend. **JFrog (FROG)** looks to be a hypergrowth long-term winner at a $6B market cap. There are two small cap standouts in this group with **PagerDuty (PD)** and **Sumo Logic (SUMO)**.

In the CRM/Marketing group, **Trade Desk (TTD)** is an absolute thematic growth winner on the digital advertising shift and despite its 50X EV/Revenues multiple it remains in the early innings and will continue to reap huge gains. **ZoomInfo (ZI)** is a 2020 IPO and you have to like it on its key metrics and unit economics. **HubSpot (HUBS)** is another high growth favorite that should benefit from the strength in entrepreneurship and new business startups. **Nice (NICE)** is the name for value players as it still delivers solid growth and drives strong returns on capital and FCF but at just 8.7X EV/Sales. **Svmk (SVMK)** trades at an attractive valuation while delivering high margins and overall impressive metrics and would be at the top of the M&A target list in this group. **eGain (EGAN)** is a compelling value for growth small cap name in this group while **Brightcove (BCOV)** a developing turnaround story I profiled in November in video and **Veritone (VERI)** on of my top discoveries in 2020 that made a huge move and seeing rapid growth in some high-tech areas.

Moving to Back Office & HCM, **Workday (WDAY)** trades too cheap on valuation to peers considering it is delivering impressive growth and is positioned well for 2021. **Coupa (COUP)** is a clear leader in business spend management and has a ton of growth potential despite its pricey 44X EV/Sales valuation. **Paycom (PAYC)** is the best-in-class growth story for the HCM market aimed at small & medium sized businesses. In the mid-cap tier we have several high growth niche stories all deserving of attention, **Avalara (AVLR)** in compliance, **Bill.com (BILL)** in back-office digitization, **Blackline (BL)** in finance & accounting, and **Anaplan (PLAN)** in connected planning. Of the four, **BILL/BL** are the two favorites but the others are also great stories. In the small cap names **Workiva (WK)** stands out as a winner with its large TAM and small penetration. **Intelligent Systems (INS)** is a very small $380M company that screens very well across all metrics. Both of these small caps would make nice acquisition targets.

In the Commerce & Web Development group, **Shopify (SHOP)** is an amazing growth story trailing only Amazon in terms of ecommerce activity and continues to expand offerings. **Wix.com (WIX)** is the other clear leader that continues to expand its ecosystem and is delivering impressive numbers. **Godaddy (GDDY)** looks very undervalued to peers while still delivering strong growth and FCF. There is an exciting growth newcomer to this group in **Lightspeed (LSPD)** which is an omni-channel platform specializing in deep knowledge of specific industry verticals. Both of the gig-economy plays have a long runway for growth with **Fiverr (FVRR)** the hypergrowth name and **Upwork (UPWK)** at a compelling valuation and starting to close the performance gap.

In Financial Applications, **Intuit (INTU)** screens as solid as ever and think its Credit Karma acquisition will pay off over the long run. **SS&C Tech (SSNC)** screens very cheap at 5.5X EV/Sales while delivering solid metrics across the board and looks to be a compelling name to own. **Q2 (QTWO)** at a $6B market cap is an attractive growth story in baking digitization. **nCino (NCNO)** a newcomer that is seeing rapid growth as it looks to modernize the commercial loan space and has high aspirations. In small caps **Sapiens (SPNS)** screens attractive particularly compared to its larger peers Guidewire (GWRE) and Duck Creek (DCT). **Envestnet (ENV)** is another small cap with solid metrics and a long-time favorite, one that fits as a likely M&A target.

For Data Analytics & Business Intelligence, **Snowflake (SNOW)** has been one of the big stories in 2020 and is a hypergrowth name at a wild valuation though on the perspective of it having just a $32B market cap, likely plenty of room to growth over the next five years. **Alteryx (AYX)** under new management should perform well in 2021 as it is just scratching the surface of its opportunity. **Liveramp (RAMP)** is the small cap favorite with it seeing very strong business trends and trading at attractive valuation while its story has gone relatively unnoticed.

In the Enterprise Resource Planning basket, both **Appian (APPN)** and **Pegasystems (PEGA)** are winners on the low-code revolution, though the latter you can get at 25% of the valuation. This group has a few very solid small caps and operating in a niche capacity makes them potential acquisition targets, **SPS Commerce (SPSC)** and **Descartes (DSGX)** two that stand out as attractive. **Progress (PRGS)** is another one that screens very well on profitability metrics that would make it an attractive target. **Model N (MODN)** is a $1.1B play in revenue management with a focus on high tech and life sciences that is transitioning its business model to SaaS and could be a candidate for multiple expansion.

The Collaboration & Storage group has seen some M&A as we close 2020 and remains one of the best positioned groups for the Work from Home trend. **Dropbox (DBX)** is very undervalued and hitting on its margin expansion goals, a likely M&A target, and has seen a lot of bullish options positioning for 2021. **DocuSign (DOCU)** is a major growth leader with eSignature markets still in the very early innings. **Atlassian (TEAM)** is a top play across workflow management and other solutions that has always screened as best-in-class, a name likely to continue to excel for many years ahead. **Asana (ASAN)** is a newcomer that just delivered a great quarter and in talks with industry participants has one of the best products out there, so a small cap favorite.

In the Communications group, **Twilio (TWLO)** is a best-in-class play targeting a massive and rapidly growing part of the digital transformation. **Zoom (ZM)** is closing 2020 weak on the idea of facing tough comps on a return to normal but it also is still at low penetration stages and though growth will surely decelerate it is still operating at a high level and generating impressive numbers across every metric. In the contact center and chatbot group, **Five-9 (FIVN)** continues to screen as the best-in-class operator though **Ring Central (RNG)** is also a high-quality name and **Zendesk (ZEN)** is the attractive value for growth name. **Bandwidth (BAND)** is a favorite small cap in the CPaaS space, **Cerence (CRNC)** with a big opportunity in the automotive software area and **Sprout Social (SPT)** a very intriguing growth story capitalizing on expanding social media advertising budgets.

For Specialized Applications, **Veeva (VEEV)** always screens as best-in-class and has a long runway of growth with a ton of whitespace opportunity with its focus on the Life Science industry but also room to expand across other verticals. **Tyler Tech (TYL)** continued to be a great software story inside the Government vertical. **Uber (UBER)** has the potential to be a top performer in 2021 trading cheap to some of these recent IPOs while its ride delivery business will recovery over time it is also participating in other key secular growth trends. **Chegg (CHGG)** is the best play in Education technology and has a massive runway ahead while already posting extremely impressive metrics. **Realpage (RP)** screens cheap to its closest peer APPF and looks good across all metrics as a real estate digitalization play. There are twelve small cap names in this group with less than a $4B market cap and if looking at which ones could really grow and scale over time I like **Shotspotter (SSTI)** as a play on civil unrest and gun violence, **Jamf (JAMF)** as a play on the growing Apple ecosystem, and **Phreesia (PHR)** as a low penetration name in a large $10B healthcare TAM optimizing patient intake and experience processes.

The Engineering & Design group is a large one and has several high-quality operators. **Unity (U)** is a newcomer that is an amazing "pick and shovel" play on the videogame and digital content creation industry that should be a multi-year compounder. **Autodesk (ADSK)** has completed its transition and now generating extremely strong FCF and positioned so well long term due to several secular growth trends. **Synopsis (SNPS)** and **Cadence (CDNS)** were top picks last year on chip complexity and continue to be a high margin way to play Semiconductor growth and generally better than playing the actual chipmakers, with **SNPS** a bit more attractive on valuation. **ANSYS (ANSS)** remains a world-class leader in the growing simulation software market with plenty of room to keep growing. **Bentley Systems (BSY)** is a newcomer but need to see more and peer **Aspen Tech (AZPN)** at the same valuation screens just as strong on growth and with better FCF & margins. **Ceva (CEVA)** is a name that continues to screen strong in the small caps with momentum in its licensing/royalty businesses.

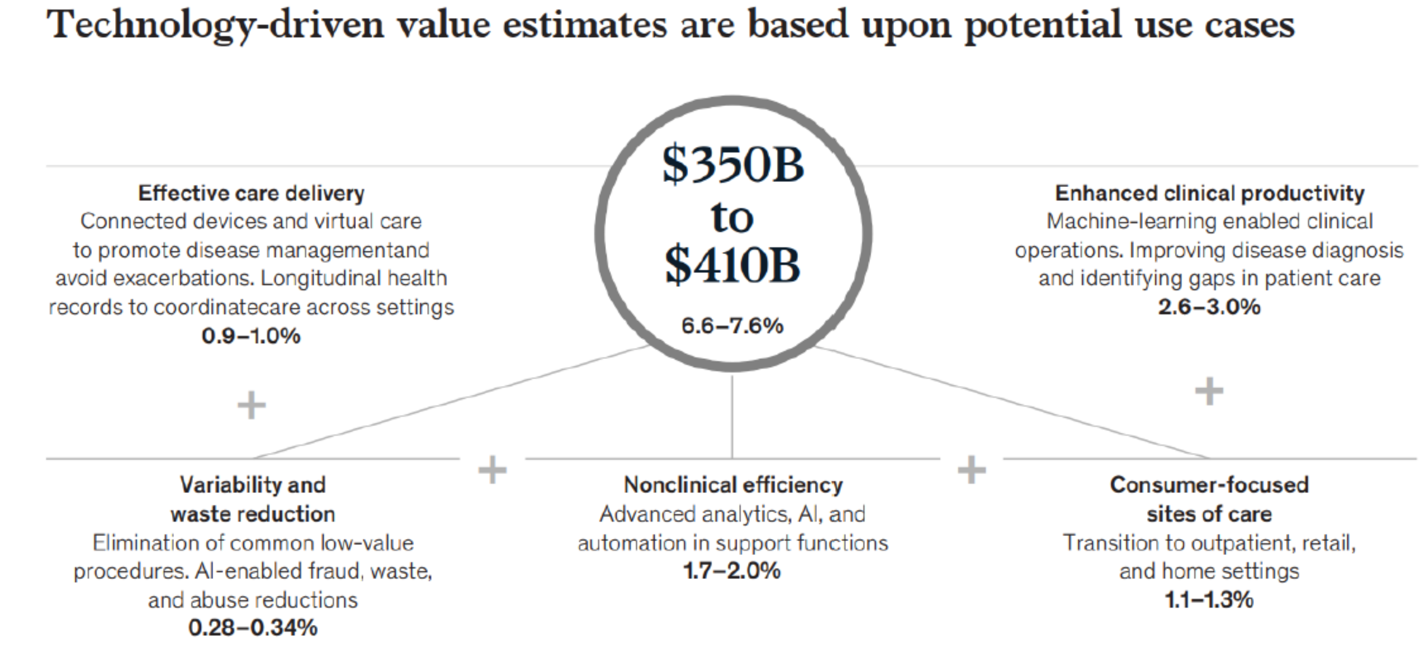
Cyber Security is a very large group that has seen strong performance the last few years and as it is always changing it is important to invest in the names focused on the ongoing IT budget spending trends. The low-growth legacy providers like Check Point, Norton Life Lock, and McAfee are of little interest to me considering the explosive growth options. **Palo Alto (PANW)** trades like a value name at 7X EV/Sales while delivering 15-20% annual revenue growth and strong profitability while continuing to innovate with strategic tuck-in deals. The big three hyper growth plays are **CrowdStrike (CRWD), Z-Scaler (ZS)**, and **Okta (OKTA)**. **CRWD** is my favorite cloud security name and **OKTA** the best play on the hot identity management theme. **Fortinet (FTNT)** is the other attractive value at 7.5X EV/Sales while also having strong FCF and revenue growth and ranking high on incremental revenue to spend. We then quickly move to a large group of sub $5B market cap names with **Varonis (VRNS)** a model transition play with an expanding TAM that invests strong into R&D. **Rapid7 (RPD)** screens attractive across the next market cap tier and among the smallest names **Mimecast (MIME)** in email security feels like a M&A target.

Healthcare IT Services: TDOC, CERN, GDRX, HQY, AMWL, MPLN, OMCL, SDGR, PINC, INOV, RCM, MDRX, EVH, NXGN, TRHC, OTRK, HSTM, CPSI, OPRX, CHNG, ONEM, ACCD, VCRA, HCAT

This group captures several technology trends disrupting the massive Healthcare sector including Telemedicine, Electronic Health Records, Prescription Drug Platforms, Payments and Cost Management, Digital Health Membership, Automation in Healthcare, Drug Discovery Software, Communications, and Analytics. Health tech is at the intersection of healthcare and technology, and health tech companies utilize various technologies (software, hardware, and tech-enabled services) to make improvements within the healthcare system. Healthcare is one of the least digitized industry and the potential TAM is more than $400B. There are opportunities across the Payers, Providers, Life Science Companies, Pharmacies, Employers, and Patients.

Payer	Provider	Life Sciences	Patient/Consumer
- Benefit coordination - Claims, prior authorization, billings and payments - Risk-adjustment solutions - Regulatory and compliance - New payment models - Telehealth & remote care - Chronic health management - Consumer engagement - Interoperability	- Electronic health record - Revenue cycle management (benefit coordination, claims, billings and payments) - Data analytics - Regulatory and compliance - HR procurement - Supply chain services - Medication and pharmacy management - Telehealth & remote care - Consumer engagement - Interoperability	- Use of Real World Evidence in designing market access and reimbursement - Silico / Computer-aided drug discovery -Data analytics for drug R&D - Clinical data management & clinical trial enablement - Digital clinical trials - Digital therapeutics	- Telehealth & remote care - Connected devices: wearables - Medication adherence tools - Patient engagement tools - Interoperability tools to access health data and pricing information

A Journal of American Medical Association (JAMA) publication suggests that roughly 30% of the $3.6 trillion annual healthcare spend goes to waste, about $935B each year. Approximately 40% of wasteful spend could become cost savings. The JAMA study grouped wasteful spend into six categories: administrative complexity (31%), pricing failure (28%), failure of care delivery (16%), overtreatment of low-value care (10%), fraud and abuse (8%), and failure of care coordination (6%). Almost all healthcare organizations point to improved patient satisfaction as a high-priority goal, and to achieve that, many believe that data sharing and strengthened collaboration could be the solution. Data is an indispensable part of many new initiatives, for example, new payment models (such as value-based care or others), new care delivery models (such as population health management), new therapeutics (such as precision medicine), and new disease management tools (such as connected device-enabled remote monitoring), as well as many other applications for healthcare processes and workflow.



Source: McKinsey

Management Commentary

American Well (AMWL) on the changes in Care: "Care is moving home. Digital technologies are ushering a new hybrid model of care, one that combines physical and digital care. With far better information about health status and gaps in care, providers will be able to craft more personalized, continuous and engaging care plans. New technologies will streamline consumer engagement in health care and simplify their interaction with health care services, insurers, providers and other participants. Finally, effective last-mile interventions will leverage technology and drive much better clinical and financial outcomes. High quality care will become more affordable and accessible to everyone. Coupled with dramatic changes in reimbursement, we believe that COVID provided strong tailwind to telehealth adoption and popularity. Today, only a small fraction of health care is leveraging the enormous potential of digital connectivity. As health care embraces connectivity, we will offer more collaborative tools. We are building a powerful global technology platform that will enable better, more affordable and convenient care to millions of people. We plan to realize this vision through both organic and inorganic investments."

GoodRx (GDRX) describing its value proposition: "So many consumers, even if you have insurance, are paying too much. Almost 3/4 of the people that use GoodRx actually have insurance, and yet they still can't afford their meds. And so we've really focused very hard on building a simple, easy to use technology platform. We process over 200 billion price points today at over 70,000 pharmacies. And it's really just a start, right? We have subscription products like GoodRx Gold. We started to do a lot of really cool things with brand manufacturers. We have a telehealth company now that is just an incredible experience, and I encourage everyone to check it out. We're really focused on being the leading consumer-focused digital healthcare platform. And for anyone who hasn't had the opportunity to use GoodRx, it's sort of one of those see it when you -- believe it when you see it kind of things, and it really is so simple. You just download our app, you present it at the pharmacy, it works just like a coupon does at the grocery store, and you actually can save 80% or more on prescriptions and now medical care as well."

1Life (ONEM) on fixing the US broken healthcare system: "So a lot broken in the U.S. health system: high spending on GDP, under-investment in primary care, lack of access, frustration with all the key stakeholders. And we've put together a member based technology-powered model that simultaneously address the needs of those multiple stakeholders."

Accolade (ACCD) on its market potential: "As we look at the future, we look at an opportunity to grow significantly. Our customer base, if you were to look at the top of the screen is, today, largely represented by self-insured employers that represented by the $11.7 billion target market in the heart of that -- those set of concentric circles. As we referenced earlier, self-insured employers and fully insured employers represent about 170 million people in the country. We've broken these market segments down by the segmentation list at the bottom of the screen: strategic accounts, enterprise accounts and mid-market accounts. You'll see that from fiscal '19 to fiscal '20, we more than doubled the number of customers in our base. And then halfway through fiscal '21, which is the year we're currently in, our fiscal operates from March to February, we've again almost doubled the number of customers."

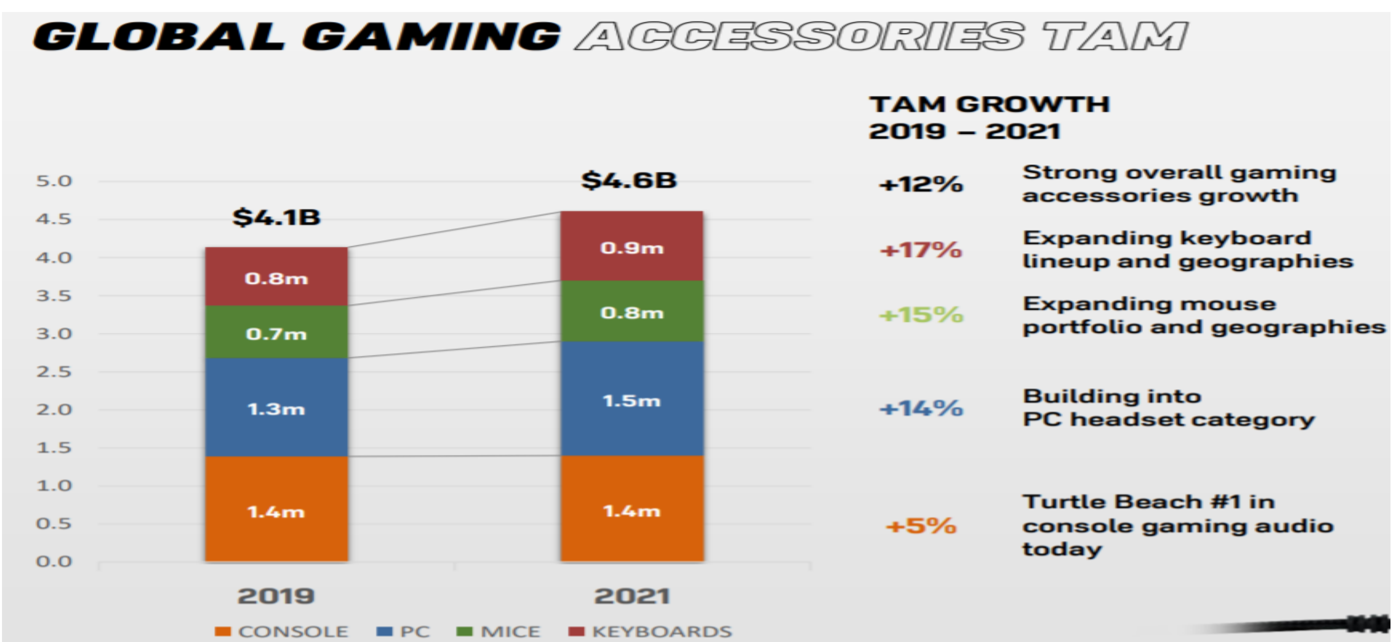
OptionsHawk Executive Summary and Top Picks

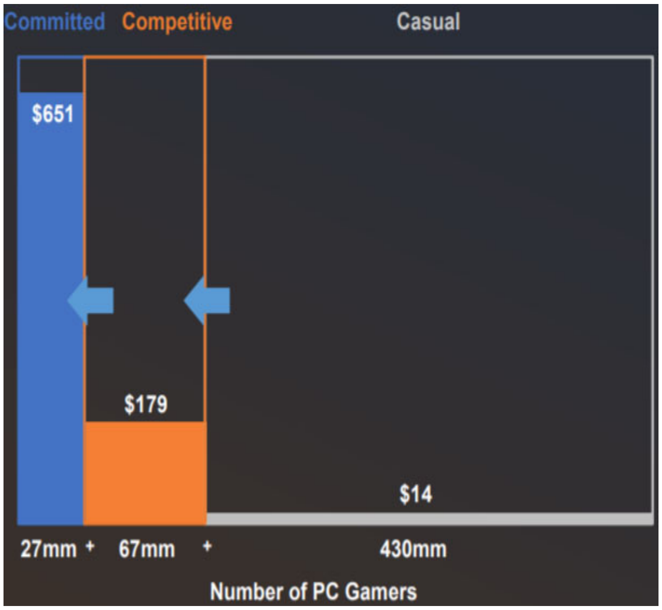
This group consists mostly of small cap growth names, **Cerner (CERN)** is the old school electronic health records play and trades cheap but also not generating much top-line growth and see it being disrupted. **GoodRx (GDRX)** is an intriguing digital health name with rapid revenue growth and though shares got hit on concerns of Amazon entering PBM, it seems overblown after speaking to management, and could be a long-term winner. In Telehealth, **Teladoc (TDOC)** is the clear leader and growing rapidly while also integrating several strategic acquisitions, and although it will face tough comps in 2021, the long-term story remains compelling while peer **American Well (AMWL)** is also worth consideration. **1Life (ONEM)** is another strong growth story with plenty of room to grow for many years into new markets and has just a $5B market cap. Moving to small caps, **Schrodinger (SDGR)** is a fantastic growth story in drug discovery and announced a partnership with Bristol Myers recently, a name that can grow for many years. **Health Equity (HQY)** continues to screen strong across all metrics and is integrating its deal for WageWorks. **Accolade (ACCD)** is a newcomer growth name that looks intriguing though want to follow it closely the next two quarters. There are five small cap growth stories to focus on as well in this group, **R1 RCM (RCM)** a revenue cycle management play, **Health Catalyst (HCAT)** a cloud-based analytics name, **Evolent (EVH)** a payment solutions provider that held a great Analyst Day in September, **Ontrak (OTRK)** as a smaller telehealth play, and **OptimizeRx (OPRX)** on the workflow and automation theme.

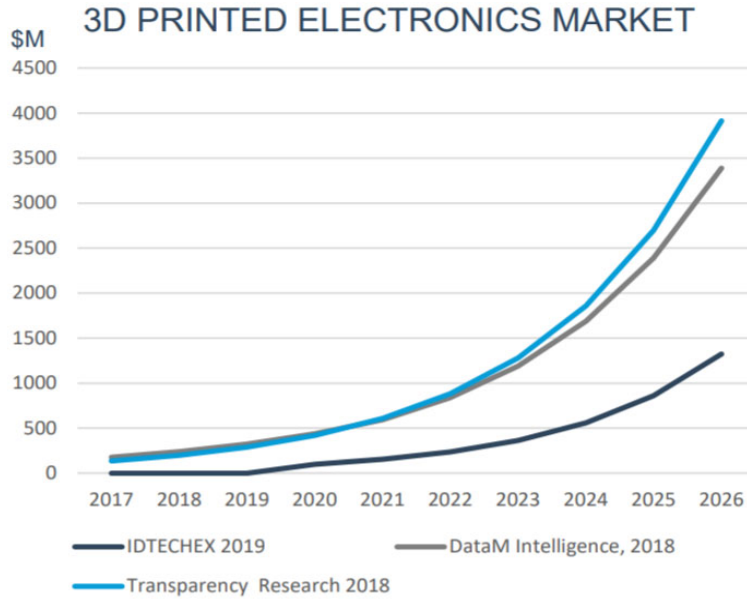
Technology Equipment

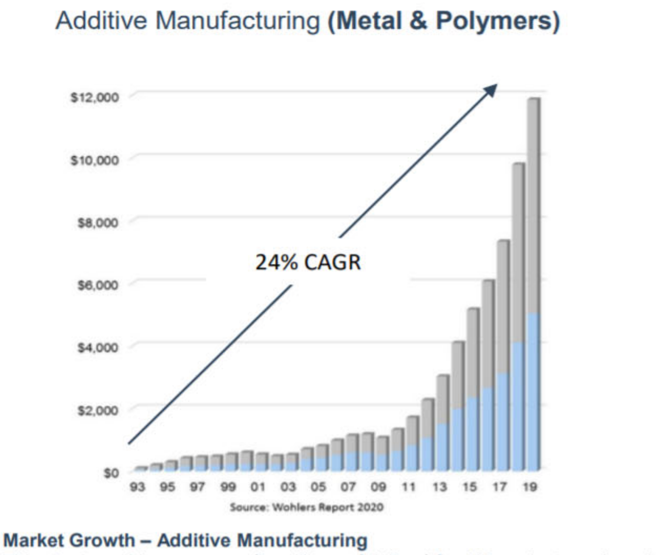
PC Hardware Components: IBM, DELL, HPQ, LOGI, LPL, CRSR, HEAR, KRNT, PRLB, DDD, SSYS, DAKT, DM, NNDM, DLB, CAJ

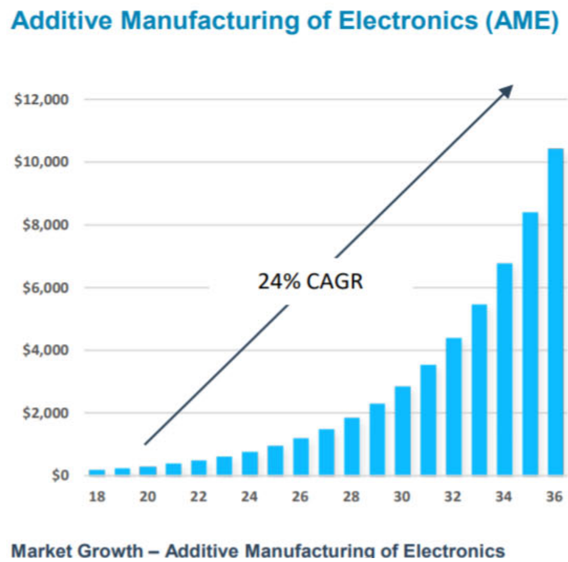
The work from home trend spurred sales in this group and in Q3 PC makers shipped 71.4M PCs, an 11.4% rise year/year and the best quarter in ten years. This is one area of Tech, however, where the pull-forward is clear and I do not see the trend as very sustainable to the length of the upgrade cycle in PCs. The more interesting areas for this group are plays off trends like Gaming and Additive Manufacturing. The PC Gaming Hardware market is seeing strong growth and around a $40B market while Peripherals a market seen reaching $7B by 2025 at a 10.4% CAGR. The 3D Printing and Additive Manufacturing markets are a focal point in this group, a group that generated $12B in revenues in 2020 and seen reaching $78B by 2028, a CAGR of 26-32%. Industry 4.0 is a rising trend that is anticipated to shift the global market dynamics and bring a radical change to manufacturing processes. Leading companies are making use of 3D printing as a means of technology to create complex designs that are designed as per client requirements therefore imbibing a smart industrial revolution. The testing of theoretical designs before setting up production lines is expected to change the process of product development in the coming years.





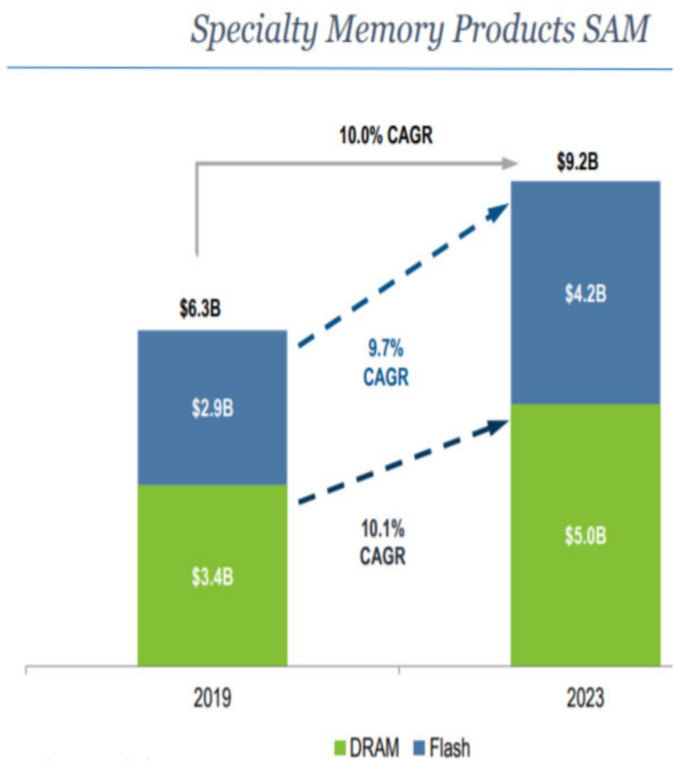


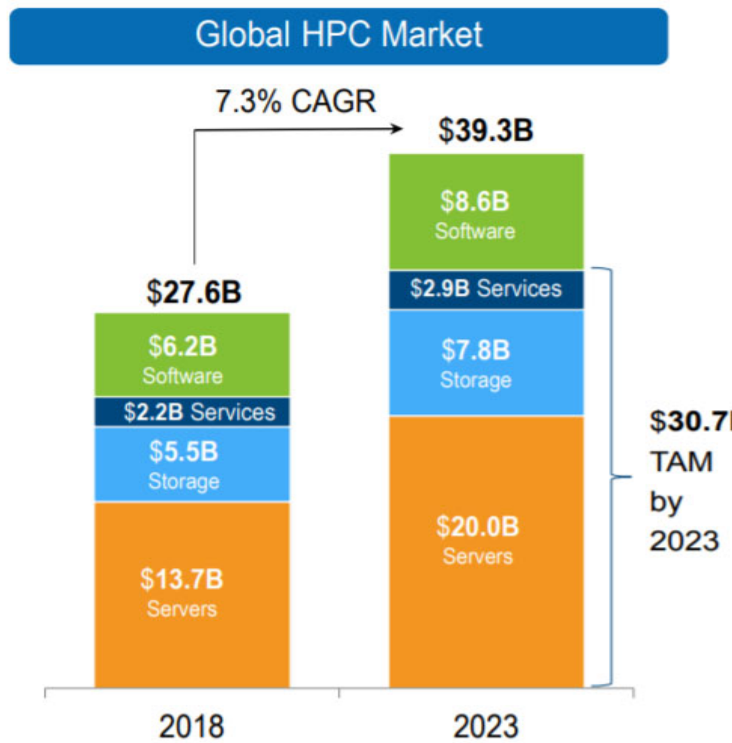


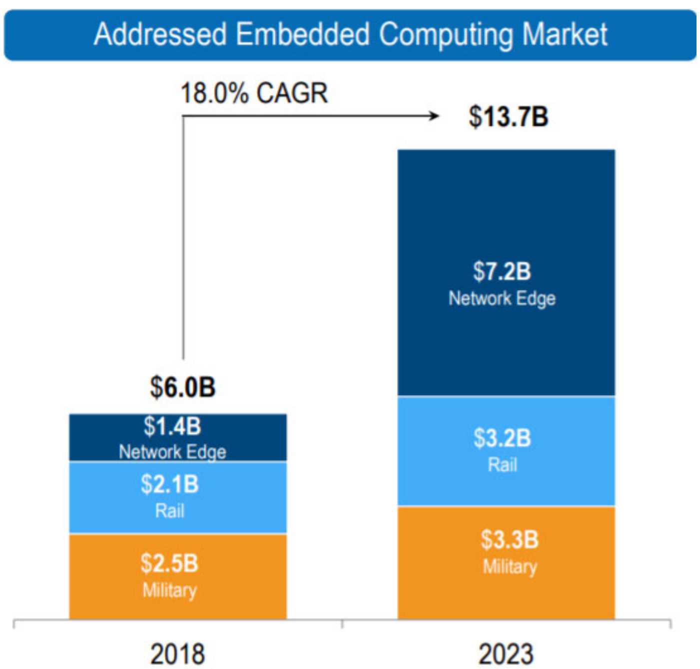


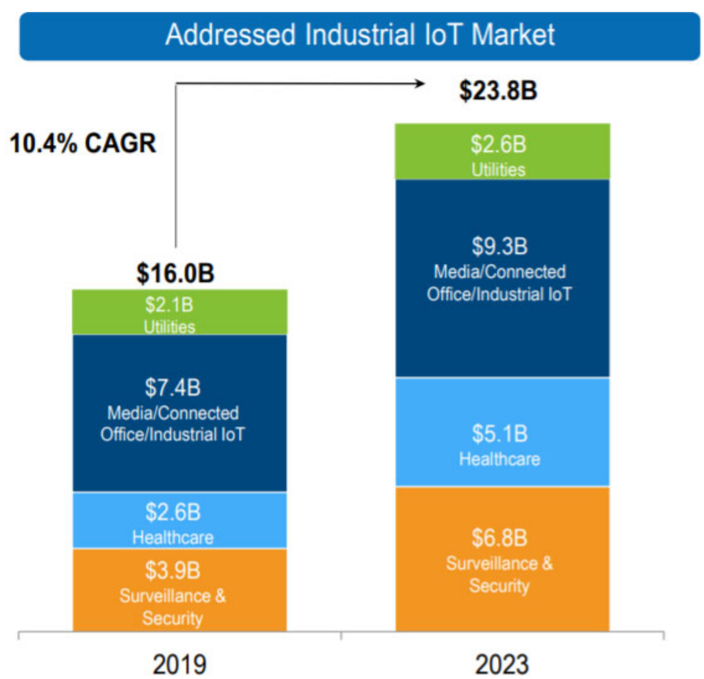
Storage Components: WDC, STX, NTAP, PSTG, SGH, TDC, MU, Hitachi

The storage markets primarily consist of the traditional hard-drive market, DRAM/Flash Memory markets, and the newer Cloud Storage markets. Direct-Attached Storage, Network-Attached Storage, and Storage Area Network are a few of the key segments for next generation storage. The global cloud storage market is expected to grow to $137B in 2025 from $50B in 2020, a 22% CAGR. Next-generation storage is being driven by growth in IoT, a rise in adoption of cloud computing, and escalated use of devices across most industry verticals. The next-generation storage market was valued at $24B in 2019 and is expected to reach a value of $45.5B by 2025, registering a CAGR of 11.4%. Rising penetration of the Internet, growing e-commerce industry, digitization of day-to-day activities, and increasing volume of media data transfer are expected to increase market penetration of solid-state drives and cloud solutions. Storage area network is expected to hold the largest share of the next-generation data storage market during 2020–2025. As an increasing number of companies have started utilizing cloud-based services to store their data with the use of virtual servers, companies aim to expand their storage capacities beyond existing infrastructural capabilities. SAN technology is widely used by cloud technology creators due to its ability to connect large numbers of servers to storage devices.



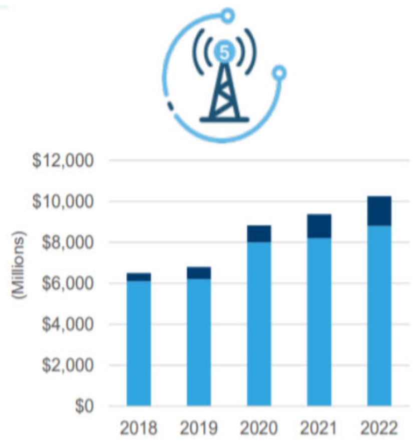






Networking Equipment: HPE, CSCO, ERIC, MSI, JNPR, SNX, CIEN, NOK, ANET, SMCI, NTCT, KEYS, LITE, VIAV, FN, COMM, CALX, ATEN, ADTN, PLT, NTGR, RBBN, AUDC, SWCH, HLIT, CMTL, DGII, CASA, SWIR, CAMP, CMBM, INSG, ALLT, CLFD, GILT, ITRN, SPOK, SCSC, VRT, WIFI, EXTR

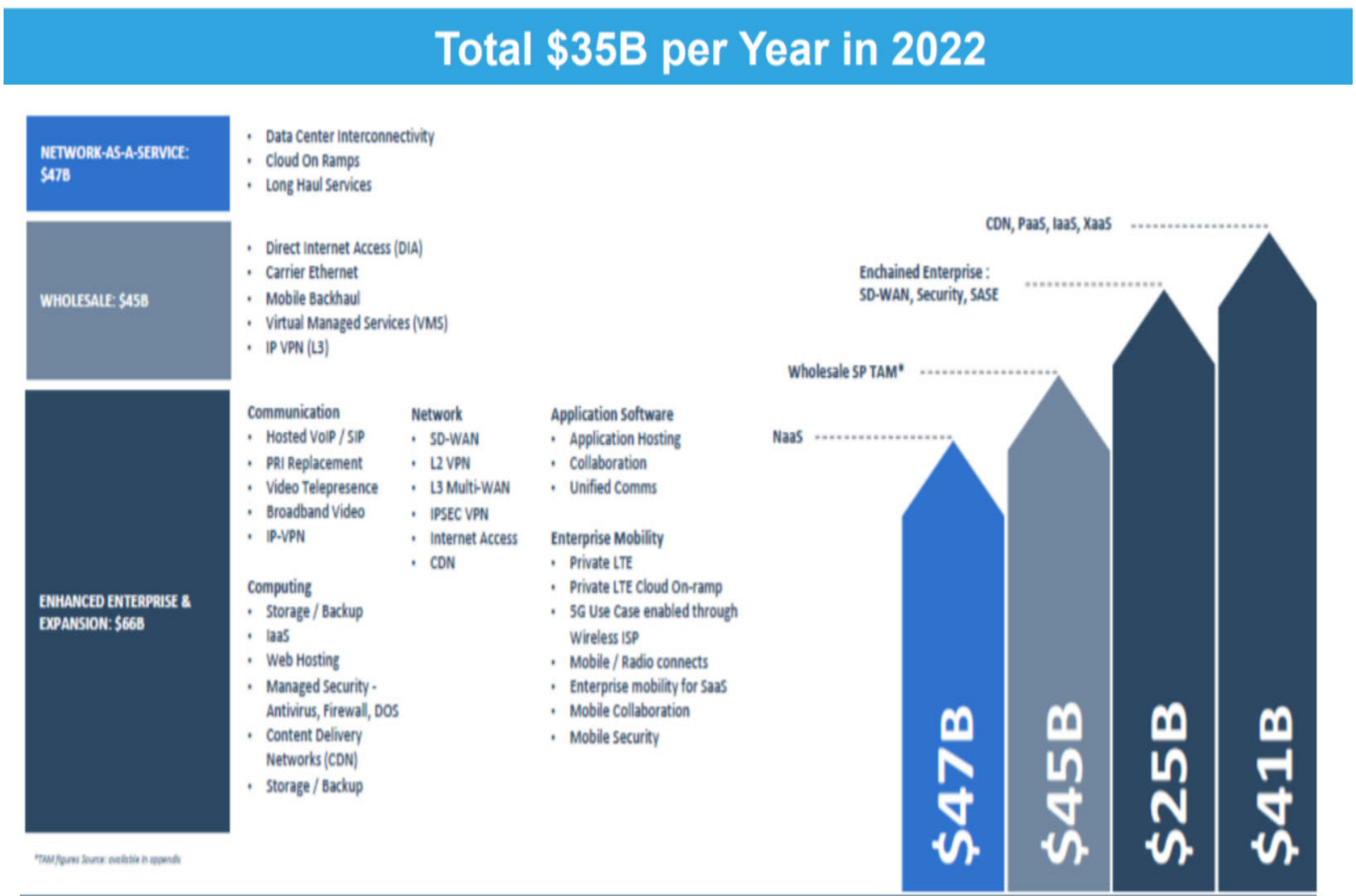
The main divisions in the Networking/Communications industry are Wireless, Wireline, Routing/Switching, Optical, and Voice/IMS. Fiber and 5G are expected to be strong growth themes moving forward. By 2022, Cisco estimates that 12% of all global mobile traffic will come from 5G connections, with the average 5G connection generating 2.6x more traffic than the average 4G connection. Networks will be more virtualized and more of the value is shifting towards the edge/RAN than prior generations. The key technologies of 5G networks from networking and semiconductor perspectives are Massive MIMO, Beamforming, NFV / SDN, CUPS, Network Slicing, FWA, mmWave, GaN, and BAW. The 5G spectrum is higher frequency than prior generations, meaning the wavelengths will travel shorter distances but with much faster data speeds (resulting in latency <10ms and speeds 10x faster than 4G). According to Gartner, 5G wireless infrastructure revenue for Service Providers will grow to $11.1B in 2023 and represent 29% of total wireless infrastructure revenue for operators. 5G infrastructure spending is expected to reach $26B by 2022 (+165% CAGR), with the 5G RAN representing ~50% of total infrastructure spending by 2022. The base station equipment market for semiconductors and RF mobile phone market is expected to reach $4.7B and >$20B by 2022, respectively.



5G Fronthaul/Backhaul Equipment – $10.1B/yr (2022)

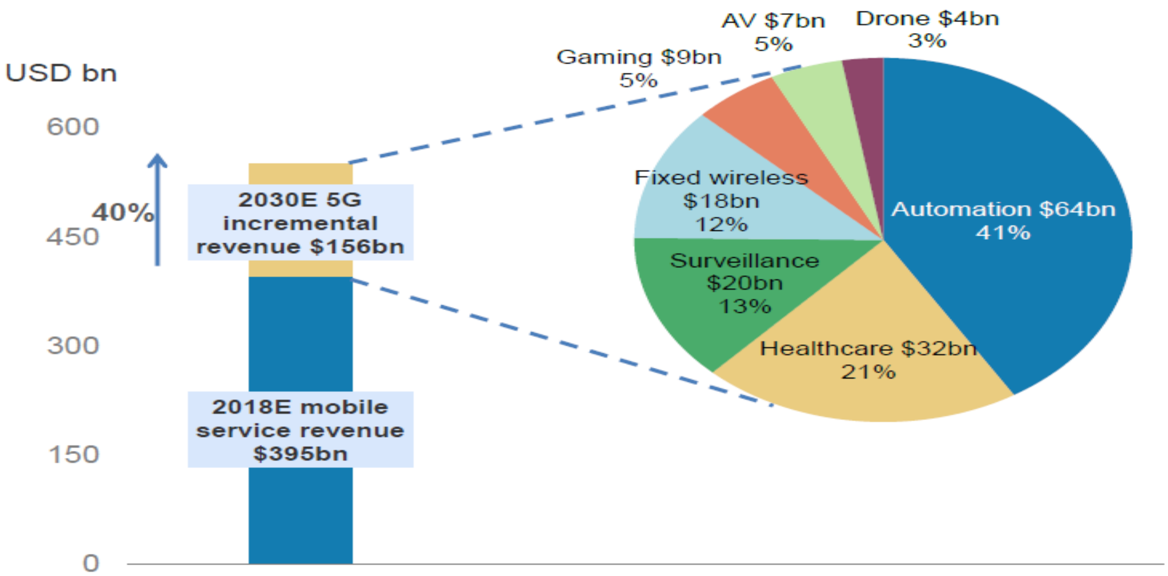
PON/OLAN/Switching/Routing – $20.3B/yr (2022)

Connected Premises (Wi-Fi/5G FWA $4.7B/yr (2022)



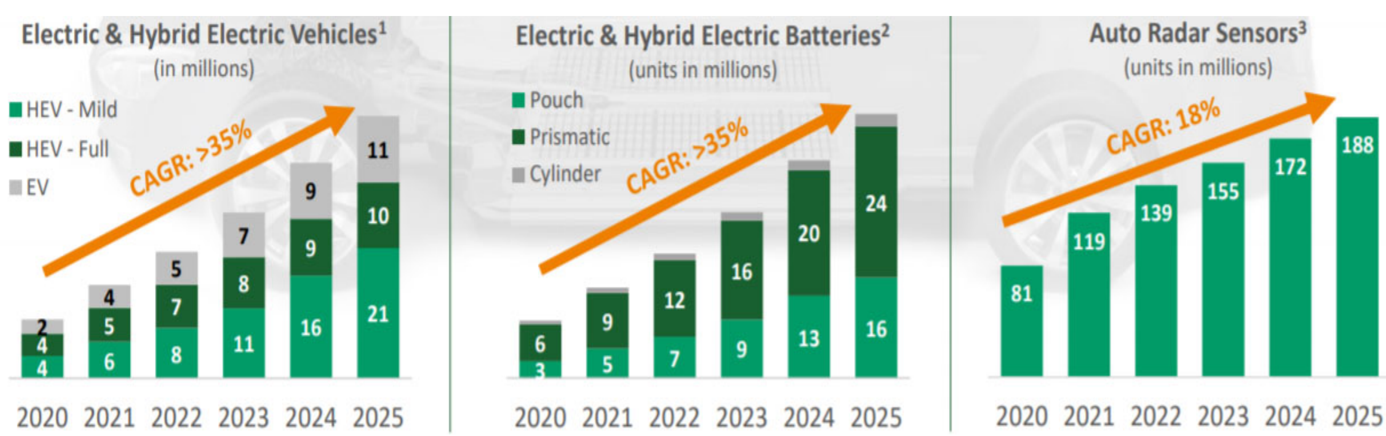
The notable trends in the group are the rise of 5G, the 400G switching cycle, stabilized enterprise spending, and the shift to UCaas over on-premise.

Incremental Revenue in 5G to come from Additional Use Cases, Unlikely to see Meaningful Investment without Use Case (2030 Expected Revenue Sources)

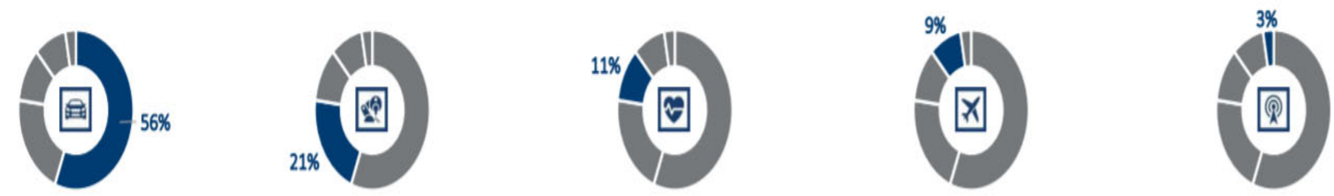


Electronic Components: GLW, APH, TEL, ST, TRMB, TDY, VLDR, ARW, LFUS, FLIR, NVT, AVT, ROG, SANM, PLXS, OSIS, KN, TTMI, MEI, FARO, CTS, PI, FLEX, JBL, CLS, BHE, VICR, VPG, MTSC

This is a hodgepodge group with names that all are providers of various electronic components across Communication, Automotive, Healthcare, Tech, Aerospace/Defense and other industries. Connectivity and Mobility are strong secular growth tailwinds for several names with EV, ADAS, Sensors, High Performance Computing and 5G key themes. The industry can be broken down into many segments and included some company presentations that highlight various end-uses for products of these companies and as well as market sizes.



	3D Metrology	Architecture, Engineering Construction (AEC)	Public Safety Analytics
Market Size (TAM)	$4.2B	$1.1B	$6.0B
CAGR Through 2022	6%	6%	16%



	Transportation	Industrial	Medical	Aero & Defense	Telecom & IT
Goal	LV 30-50% CV 10-20%	20-30%	10-20%	5-15%	5-10%
SAM	$3.4B	$2.2B	$0.4B	$0.9B	$1.9B

Transportation

- Booked Business, Share Gains
- Actuators – Asia/EU customers
- Sensors for Electric/Hybrid
- Inductive Accelerator Pedals
- Increased Sensor Content

Industrial

- 3D and textile printing
- Applications in flow, level and temperature sensing
- Up-integration into sensors and transducers
- Industrial automation and IOT

Medical

- Medical 3D/4D ultrasound
- HMI control for medical devices
- Wireless pacing and ultrasound-based drug delivery
- Increased temperature sensor needs
- Dental and therapeutic ultrasound applications

Aero & Defense

- Hydrophones for sonar applications
- Military communication
- Up-integration into sensors and transducers
- Penetration into European defense market
- Textured piezo material

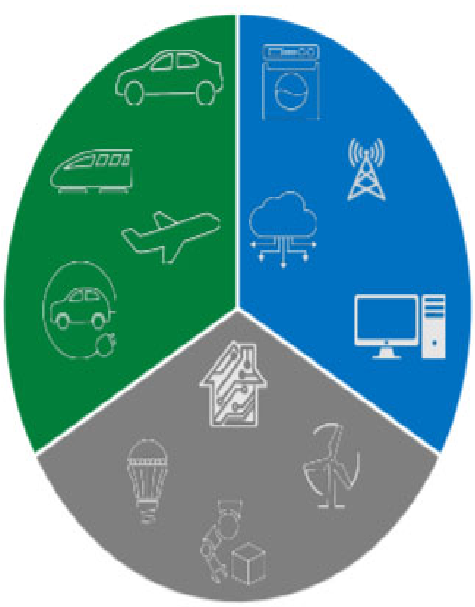
Telecom & IT

- 5G infrastructure build out – massive MIMO and small cell deployment
- High-speed wireline networks
- Advanced fingerprint security, haptics for mobile device applications

$10+ Billion* Addressable Market Opportunity

TRANSPORTATION

- Passenger vehicle
- x-EV and related infrastructure
- Heavy truck
- Material handling
- Specialty on- & off-road vehicles
- Agricultural machinery
- Construction equipment



ELECTRONICS

- Telecom
- Data centers
- IT hardware & infrastructure
- Consumer electronics
- White goods
- Building and home automation
- Medical devices

INDUSTRIAL

- Alternative energy
- Mining
- Power conversion
- Commercial construction
- Oil & gas
- Motor drives
- Energy storage
- HVAC

Littelfuse
Expertise Applied | Answers Delivered

*Company estimate

Management Commentary

Dell (DELL) on the telecom industry opening up $100B market opportunity: "It's -- the reality is the telecommunications industry hasn't been a focus. It's -- of all the vertical markets we serve, it's somewhere in the middle of the pack in terms of bookings. Those are almost exclusively sold into IT, where, in many ways, the network operators don't look any different than a bank. So we've kind of not participated much in the network side of telecommunications, which is where all of the capital is spent. But as you point out, going forward, the digital transformation trend I started with is really starting to hit the telecom industry for a whole bunch of reasons. The 5G inflection, all the geopolitics around the Huawei rip and replace and -- but I think most fundamentally, it's becoming clear to network operators that most of their network functions can run in a virtualized software-defined environment. And that environment is way lower cost, way more flexible. It's a basis from which they can become cloud operators, which is almost mandatory to not get over the top again. So it's funny, but in many ways, the telecom industry, because of digital transformation, is becoming addressable with our company like Dell Technologies doing a whole lot differently, not -- mark my words, we got to do a fair bit differently. But it's literally one of the last bastion of massive capital spending to embrace software-defined industry standard. And as it does, by our estimates, some $100 billion of TAM open up over the decade."

Logitech (LOGI) on four key work trends: "In my opinion, the biggest permanent changes we're going to happen anyway. But pandemic accelerated them. In fact, we are really fortunate at Logitech, years ago, we identified one by one, 4 major changes in global lifestyle and work-life that we felt we built our business on. They are, video calls will grow and replace audio calls over time. Work will increasingly spread outside of our offices, even though we'll continue to work in offices, too. eSports will become the biggest collection of sports in the world for spectators and participants. And most content we engage in will be created by hundreds of millions of people, even billions, instead of the dozens of media companies it was in the past."

Corsair (CRSR) breaking down its markets: "The global market for PC and streaming gear totaled $36 billion in 2019. Of that, 83% was spending from competitive and committed gamers. These are players who will spend between $1,000 to over $1,800 on gaming hardware and accessories. These are our core customers. What's incredible is these competitive and committed gamers, while accounting for 83% of spend, only account for 18% of the worldwide total of 524 million PC gamers in 2019, with the remainder being casual gamers, who often do not yet own the specialized gear. This highlights the significant growth potential for our team. We see that the average spend of gamers is still fairly low compared to spending on other sports gear and very concentrated at the high end. As casual gamers become competitive and committed gamers, their spending grows. If the average spend of this group of gamers were to significantly move up, then the market for gaming gear could grow by multiples. In gaming, where we see the biggest opportunity in market growth is in peripherals because while most entry-level gamers will have access to a console or some sort of PC in their home, they will likely not have specialized peripherals. We have seen the peripheral growth has exploded as teenagers play Fortnite or other online multiplayer games on PCs or laptops. Further, as more and more gaming is watched online, gamers aspire to emulate professional streamers, resulting in incremental spending on gear. Beyond success in gaming, these emerging applications represent a promising avenue for the continued expansion of the streaming gear market opportunity."

Pure Storage (PSTG) on is products growing: "FlashBlade continues to expand its market reach. For example, by adding a few features over the last couple of quarters, we've been able to deeply penetrate into the computerized design automation market. So that's -- and also given the rise in ransomware, that's also been a major area for growth in the FlashBlade market. We see continuing opportunities going forward. We're very positive on that product. FlashArray//C is one of the fastest growth, if not the fastest growth product we've ever had. The second-generation in your -- as you described it, there was -- when we were able to leverage the economics of so-called QLC flash to where now that product can actually cost less than hybrid disc arrays. So it's a very compelling product. Not only does it cost less, it takes 1/10 the space, 1/10 the power and cooling. So it's a very compelling product. And I'll just state that it's growing at a very rapid clip despite the fact that in the COVID environment, it is more challenging for customers to test and deploy new products or new vendors. Now what I would say, though, is that one of the fastest growth areas that we've seen is our Pure -- what we call our Pure as-a-Service offering, which is now where our customers can get the benefit of data storage and management entirely through subscription, regardless of whether it's on-prem or in the cloud. We have a unified subscription that allows customers to only pay for what they use when they use it, and where all of the storage is managed by us, regardless of whether it's on-prem or in the cloud. So it truly is -- looks like a cloud service to the customer, and that's been growing very rapidly."

NetApp (NTAP) on storage industry trends: "High-value data that drives real-time business insight is now being deployed on all-flash arrays. As flash costs compared to disk-based costs get better and better, bigger parts of data is estimated to be on flash. Our analysis estimates the growth of all-flash array market to be 9% over the next 3 to 4 years. And nearly double the number of companies that have already deployed all-flash array architectures are going to migrate to flash in the next few years. We, at NetApp, are the market leader with the best products in flash. We have the highest-performing products, the most efficient architecture in the industry and the ability to autonomously migrate workloads and data from expensive flash to cost-effective disk to managed cloud. Only NetApp can do so. This gives us opportunities to gain share as we see legacy architectures transition to flash, particularly in our competitors' storage installed bases. In addition to flash, unstructured data is growing, and between leadership positions in file-based NAS storage and object storage, we are very well positioned to address this part of the enterprise data center. So to summarize, data is growing in scale, scope and importance. Flash and hybrid multicloud architectures are growing, and NetApp is perfectly positioned for this next phase of growth. The enterprise data center market is a large market with several subsegments that are growing quickly. The overall market, inclusive of external storage, converged and hyper-converged storage and object storage, grows from $63 billion in 2019 and to $72 billion in 2023, paced by the fast-growing all-flash array market, the highest growth and the largest segment of the market. Now let's talk about the cloud services market opportunity. Today, we play into a $5 billion cloud storage market with 3 subsegments, shared storage, Desktop as a Service and monitoring and optimization. All of these segments are growing rapidly. Overall, these public cloud service segments grow from roughly $5 billion to $6 billion in 2019 to almost $19 billion in 2023, at a 32% CAGR."

Micron (MU) on increased need for memory/storage: "Memory and storage is growing faster than the semiconductor industry average. In 2000, memory and storage used to represent about 10% of the total semiconductor industry. Now it is nearly 30% of the total semiconductor industry. And with all the applications of AI with 5G, autonomous, IoT, from consumer to business, from data center to edge, you are seeing more and more applications where more data is being created, more data is being used, more intelligence is being derived from data, more processing is being done across all verticals, across all industries, which just points to more need for data solutions, which is memory and storage, which is where Micron is a pioneer."

Arista (ANET) shedding light on its strategy in its $30B TAM: "The past decade can be best characterized by Arista's momentum in cloud networking. But in the past 4 quarters, we have experienced a storm of cloud titan volatility, COVID pandemic and deferred revenue-related comps. Despite this tough reset year, we believe Arista will emerge stronger, not only returning to double-digit growth in 2021, but also aiming for consistent growth in the years beyond. We expect our multiyear growth cycle from 3 major product line contributors: one, our core cloud and data center products, our largest business, building upon our flagship Arista EOS, with the hallmarks of leaf spine topology across our 5 major verticals. Two, our second market is the network adjacencies with routing replacing routers and our recent entry into the Cognitive Campus workspaces. The routing market consists of core spine, edge and peering use cases for Tier 1, 2, 3 service, cloud and enterprises. The campus brings a cognitive unified edge for wired and WiFi endpoints as well as new IoT devices in a 2-tier leaf spine or spline network. We do expect to disrupt the campus and router incumbency of the last few decades in the next few years. Our third category is network software and services based on software subscription models, such as Arista A-Care, CloudVision, CloudEOS router for multi-cloud, big switch monitoring and our latest entry into advanced network detection and response with the acquisition of Awake Security."

Motorola Solutions (MSI) on the video market: " Well, so just to kind of -- if you take all the video assets that we have, fixed, body-worn, in-car, license plate recognition, domestically and internationally, this business, all in, for assets, hardware, software, is likely to be about $940 million, Paul, for this year. You've heard us talk about growing at 3x the market. That 3x the market is around the fixed video and access control piece, which we still believe we can achieve. If you take the size of the video market, all in, worldwide, and we always zero China out given their indigenous competitors, this is about an 18 -- $17 billion, $18 billion business, addressable market. It's actually the largest addressable market we have. So I think there's room to run here with the assets we've accumulated, along with the analytics that our team is developing and intelligent edge devices as well."

Lumentum (LITE) on new opportunities to grow: "I think what's also a major driver over -- as we look 3 to 5 years out in time, automotive is a tremendous opportunity. I mean, there's going to be some initial opportunities that are a little more modest in terms of in-cabin were used for driver monitoring systems for vehicles that have some level of autonomy or control, then you need to understand is the driver looking in the right place. And should the car takeover or let the driver do what they're supposed to be doing or are they falling asleep. We talked about on our call having an auto qualified product, and that will go into this emerging opportunity and Europe has issued requirements that starting in calendar '22, driver monitoring systems be installed in new models. So pretty exciting, but more exciting is the outside cabin, LIDAR, collision avoid and safety systems because there, you're starting to talk about tens of dollars of content at the lowest level, laser chip level where we're supplying. And then more broadly, after automobiles, we're also seeing a lot of other applications around security and access control, industrial applications and the world's experience with COVID it's actually -- it's an unfortunate situation, but it is driving people to want to have more contactless, touchless control. And for example, in a facility, getting rid of badge readers and having facial recognition for employee access to a facility. And there's a lot of security cameras out there in the world that can benefit from that."

Littlefuse (LFUS) on longer term trends: "The long-term macro trends of greater electronics content and the expansion of connectivity have been key drivers for electronics applications for many years. We are seeing those trends amplify in the current environment. Our innovative, diversified solutions, engineering support and customer relationships continue to set us apart from other suppliers. We secured broad regional design wins in the quarter for battery management systems and power supplies for cloud computing and consumer electronics as well as key sensor wins for smarter, more complex, large and small appliances as well as building at-home automation applications. Connected data-rich devices continue to drive demand for our products in data center and telecom infrastructure applications. For transportation applications, we see good customer engagement and strong design activity across several xEV platforms. The global long-term EV outlook is bullish, and the industry is seeing momentum in areas like commercial vehicles and high-end passenger cars. With our global infrastructure, technical expertise and deep OEM and Tier 1 relationships, we are well positioned to continue our growth and ongoing EV opportunities."

Sensata (ST) on EV driving growth: "As overall electrification trends accelerate, the increased opportunities for our solutions across all end markets represents an estimated $6.5 billion addressable market for Sensata by 2030. To date, we have closed electrification new business wins with some of the largest and the most innovative automotive OEMs around the globe. In our core markets, the average content on battery electric vehicle now materially exceeds that of the average combustion -- internal combustion vehicle. Sensata generates approximately $50 in content in these battery electric vehicles as compared to $38 to $40 on average in internal combustion engine vehicles, representing a significant growth opportunity for the company as electrified vehicles increase and become a larger portion of the vehicle fleet worldwide. Sensata has the strongest offering in the segment for longer-range and shorter charge time electric vehicles. All evidence indicates that this is where the industry is heading. While the automotive space will be a large beneficiary of electrified Megatrends, the projected growth from widening electrification should benefit all of our end markets."

Corning (GLW) on optical communications: "I think the really good news here is that network traffic is at an all-time high, and that is what is eventually going to drive investments in the networks. There's lots of data out there. Upstream traffic is -- in the U.S. is up 37%. VPN use, Verizon noted, was up 72%. Lots of peak network traffic. I think Nokia had some data that said it was up 25% to 30% versus pre-COVID. That being said, there were COVID-related factors that have hampered carriers' abilities to invest in the networks. But there's no doubt that from a longer-term standpoint, we'd expect demand for our products to be driven by increasing bandwidth demand, consumer preference for more capable access, deployment of 5G and shift to the cloud. And so right now, I think most of those carriers are making additional investments to reestablish kind of the network headroom that they've lost or capacity that has -- not that they've lost, they've consumed since COVID began. The issue always is, what quarter is that going to show up. But I suspect that as we go throughout next year, we're going to start seeing some of that investment happening."

OptionsHawk Executive Summary and Top Picks

In PC Hardware, **Dell (DELL)** is the large cap of interest at cheap valuation and with a lot of optionality, an overlooked story that saw shares rise 50% in 2020. **Logitech (LOGI)** will surely face tough comps in 2021 but is still a high-quality name with a lot of longer-term growth trends in its favor. Moving to small caps, **Kornit (KRNT)** is transforming the textile industry into the new age of digital and delivering robust growth with industry-leading margins. **Corsair (CRSR)** is a pure play on high performance gaming and there are no signs of growth slowing in that industry, so it is still a compelling own. This group also contains the additive manufacturing plays with **Stratasys (SSYS)** a solid operator while **Nano Dimension (NNDM)** a new discovery in Q4 2020 that has a massive opportunity to grow.

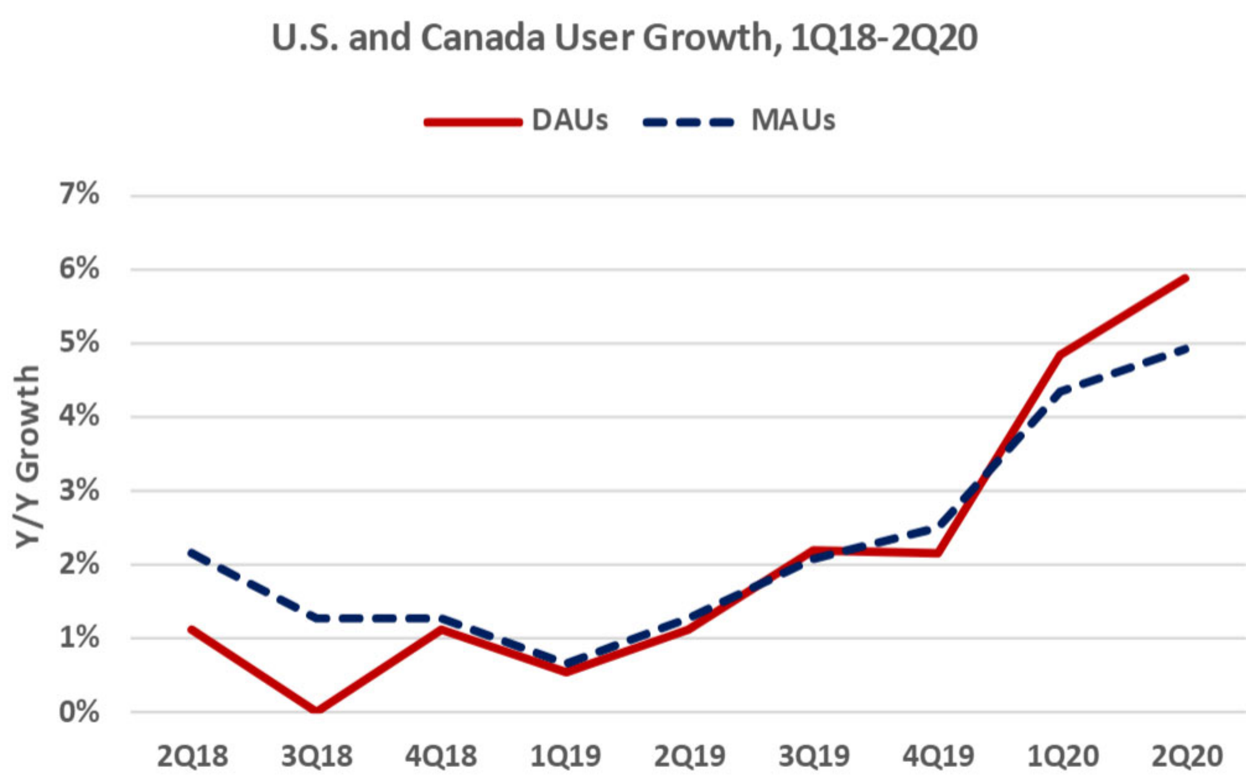
Moving to Storage, **Western Digital (WDC)** looks too cheap compared to peers as it shifts to higher growth storage segments and likely has the most upside. **Micron (MU)** is the DRAM/NAND leader that trades like a commodity with supply/demand always in play and impacting pricing, and thus margins. **Pure Storage (PSTG)** is the attractive small cap and ultimately a name I see as a M&A target.

The Networking Equipment group with more than forty components is a difficult one to breakdown and potentially needs to be broken into smaller groups in the future. Data Center, Cloud and 5G are consistent themes across the group. **Arista (ANET)** is the favorite large cap growth name in this group with its high margins and identified last year as a top value for growth name having a strong +40% year. **Keysight (KEYS)** remains a preferred play on 5G being in the early innings and is attractive across all metrics. **Motorola Solutions (MSI)** is a quality niche play but at current valuation want to see it deliver better growth. **Lumentum (LITE)** is a favorite in this group with consistent strong results and favorable long-term trends. **Vertiv (VRT)** a new discovery from October that trades cheap with strong growth with an opportunity for a margin expansion story to play out as a leader in data center technology. The three small caps that stand out as best to benefit from growth trends are **Calix (CALX), AudioCodes (AUDC), and Clearfield (CLFD)**.

Electronic Components is a group full of low revenue growth names so not gong to feature a lot of favorites. Of the four main connectivity component plays, **Amphenol (APH)** is a best-in-class operator across nearly every metric and also carries a premium valuation, a more diversified end-market business. **Sensata (ST)** looks undervalued to peers considering its higher margin profile. **Littlefuse (LFUS)** is a strong smaller cap name that is positioned well for EV and other growth themes driving the need for circuit protection. **Trimble (TRMB)** screens attractive and is delivering strong margin expansion and high FCF while **Teledyne (TDY)** a long-time favorite for its LiDAR positioning and is likely to embark on more acquisitions in 2021 while **Velodyne (VLDR)** a small cap player that has a long runway for growth as ADAS penetration increases. **Corning (GLW)** is always intriguing as one of the higher margin plays in the group and has a lot of optionality across its multiple business segments. **FLIR Systems (FLIR)** screens well at the mid-cap level with solid growth, high margins, and strong FCF and ROIC. For the small caps, **Methode (MEI)** a name that screens as attractive on valuation and solid across other key metrics. **Rogers (ROG)** is another favorite small cap play with its positioning in Communications while **nVent (NVT)** seems like a suitable M&A target.

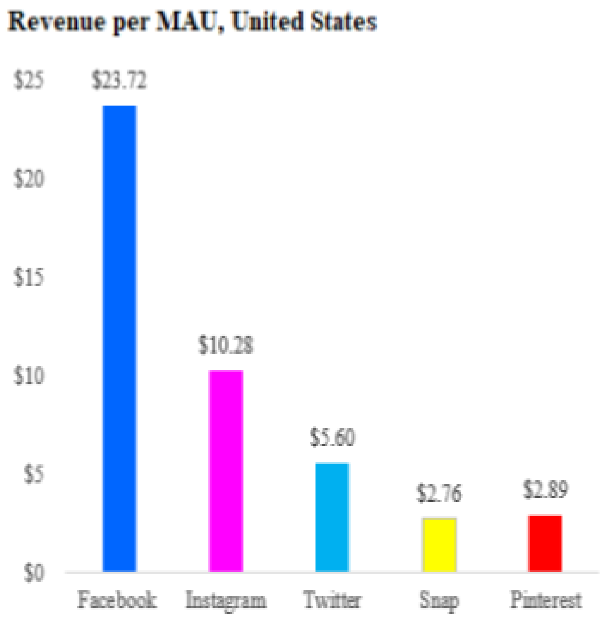
Internet

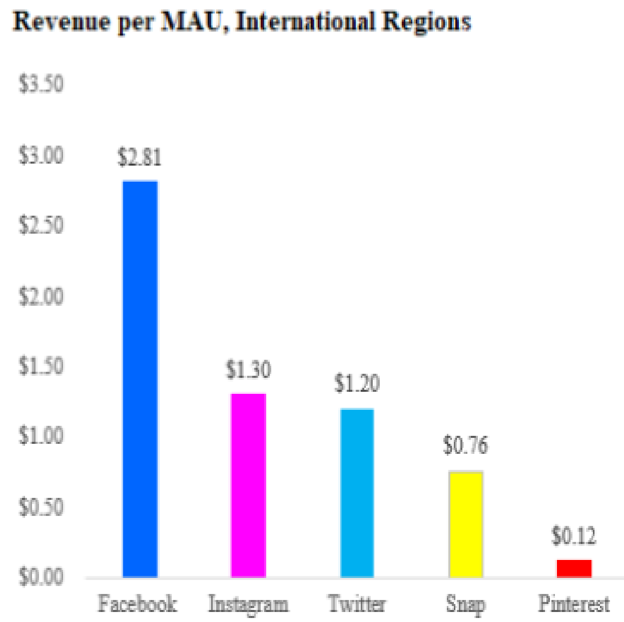
The Internet industry contains some of the major market leaders like Amazon, Google, and Facebook. Digital ad spending has now surpassed TV ad spending and it continues to take market share. Mobile and Social remain the main avenues of growth in digital ad spending. The ecommerce trend accelerated rapidly in 2020 and continues to increase overall penetration across most verticals and the shift is creating more users and more time spent online which thus creates a demand for advertising. Video advertising remains a key theme across most platforms and monetization has potential to inflect positively. We have seen the social media companies lean in strong to commerce and social commerce is becoming a major thematic growth trend.



Social & Advertising Components: BIDU, CRTO, IAC, GOOG, YALA, GOOGL, QNST, QUOT, YNDX, FB, TWTR, PINS, SNAP, WB, MOMO, OPRA, MTCH, OZON, YELP, DAO, SY, LN, YY

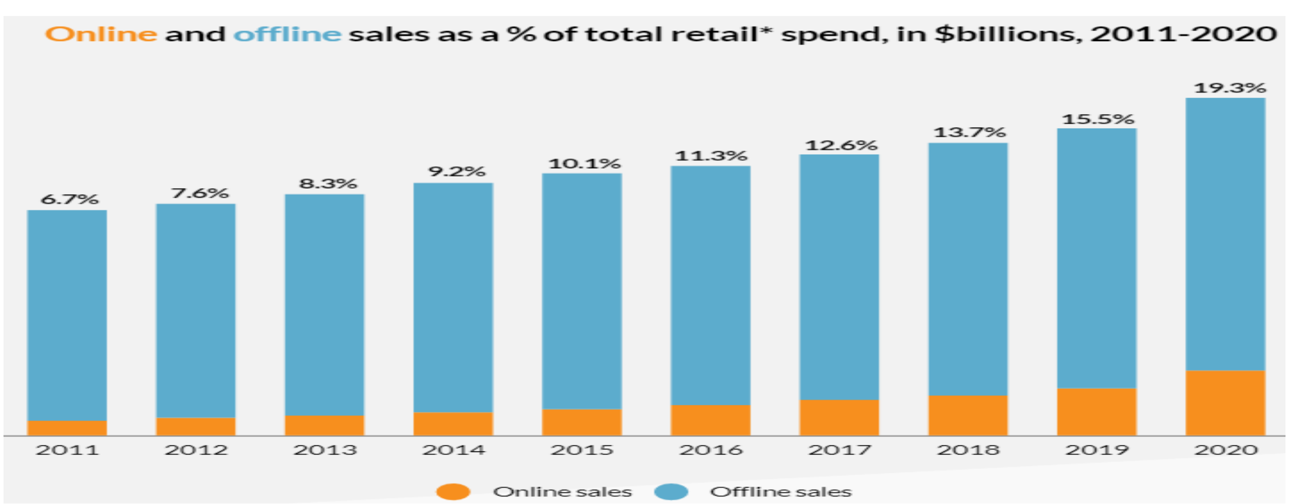
These components operate internet platforms with the focus typically on earnings revenues on advertising though most operate across multiple areas of tech such as media. Mobile has become a key focus as well as utilizing technology for user targeting and new formats such as video. This is a group where growing the user base, the ecosystem, is vital and from there monetizing that user base as we often look at ARPU numbers. The main overhang for this group remains on the regulatory side, the FTC recently going after Facebook and Google seemingly paying a new fine every few months.

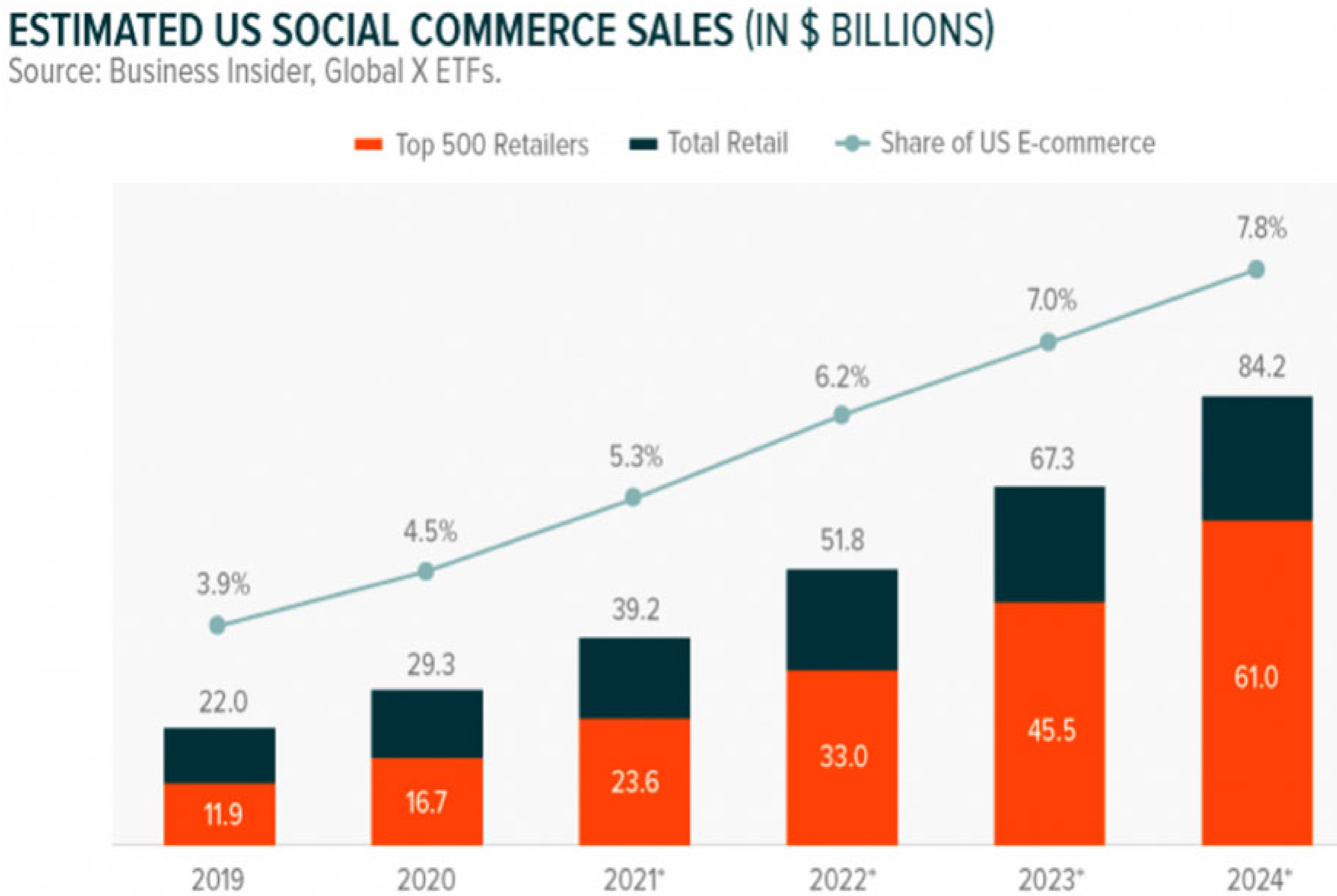




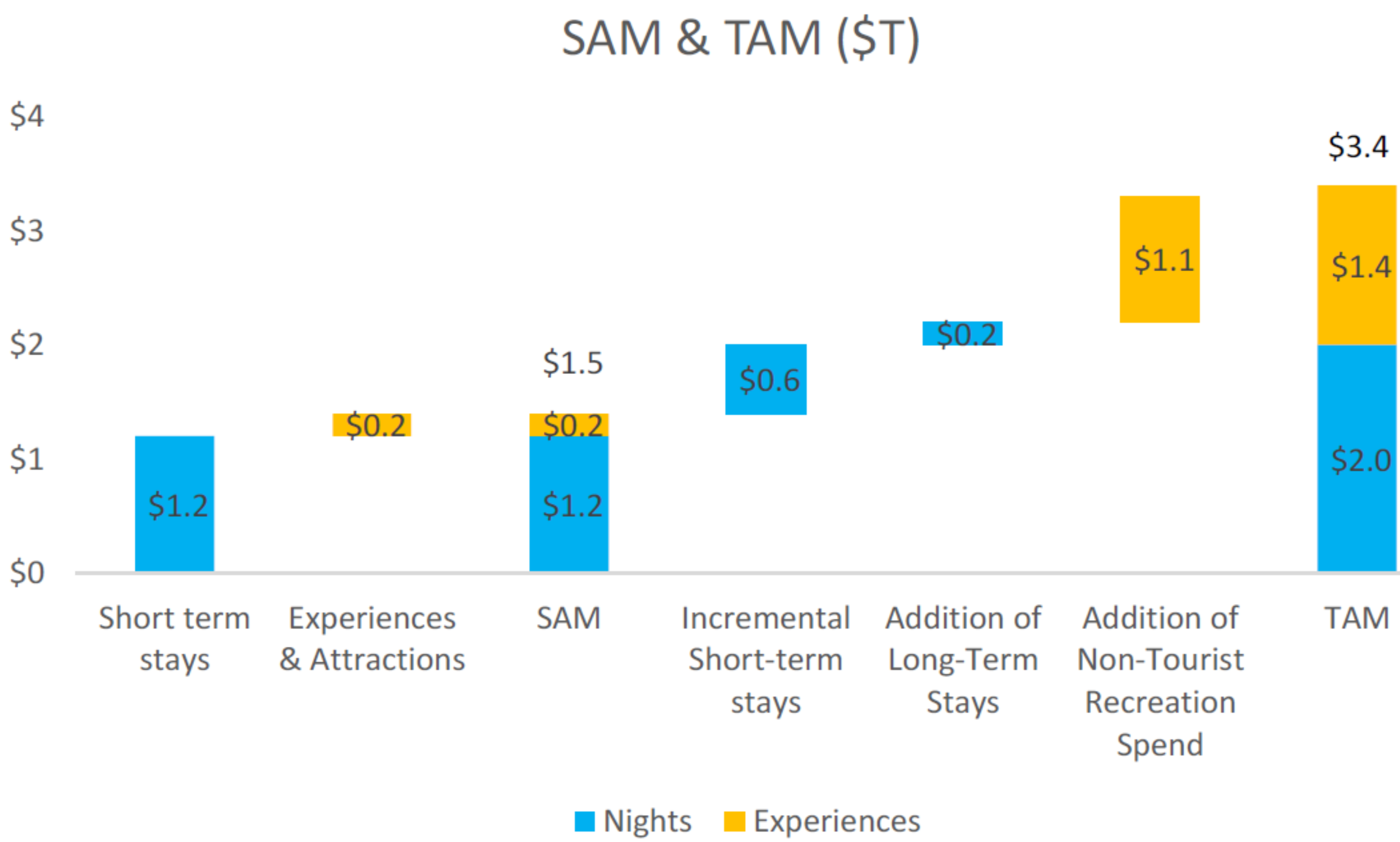
eCommerce: AMZN, SE, BABA, JD, BZUN, PDD, CHWY, W, ETSY, EBAY, MELI, JMIA, OSTK, SFIX, FTCH, RVLV, REAL, GRPN, STMP, VIPS, DADA, IQ, PRTS, MOGU, YJ, LITB, TTGT, LQDT

Through the first three quarters of 2020, consumers spent $546.62 billion online, up 32.6% year over year from $412.32 billion for the same period in 2019, according to Commerce Department figures. With Q2 and Q3's elevated penetration, online's share of total retail sales during the first three quarters of 2020 surged to 18.8%. E-commerce's next wave of growth is likely to come from greater penetration of retail categories that historically lagged, like groceries, health, and autos. Social commerce, which blends social media with e-commerce, has become a vehicle for new product discovery and sales. Technology is playing a key role, augmented reality and virtual reality facilitate further e-commerce penetration by giving consumers life-like shopping experiences that digitally integrate them in their purchase. Online sellers will spend $7.3 billion on AI by 2022. More than 120,000 stores will be using AR technologies to offer customers a rich buying experience by 2022. People are increasingly relying on voice assistant devices like the Amazon Echo with Alexa and the Google Home with Google Assistant to do everything, from waking them to buying products online. 75% of U.S. households will have smart speakers by 2025. Voice commerce sales are anticipated to reach $40 billion by 2022.





Travel Components: BKNG, DESP, ABNB, EXPE, LIND, MMYT, SABR, TRIP, TCOM, TRVG, TZOO

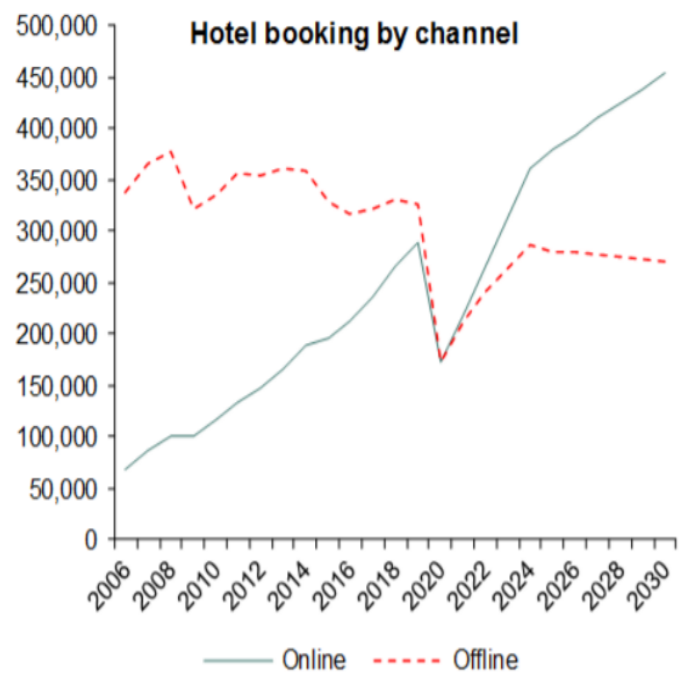


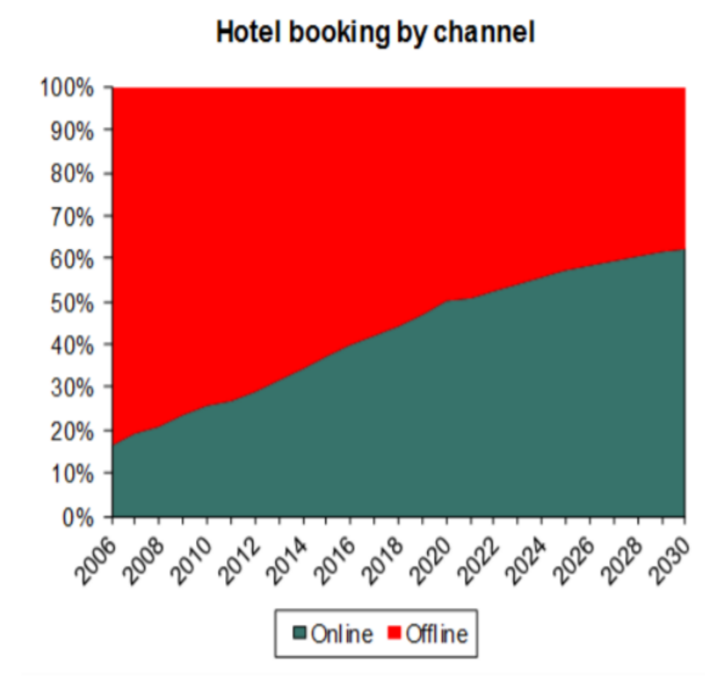
The core business of Booking and Expedia is as an Online Travel Agent (OTA). This means they sit between the travel product (we use hotels in this example) and the customer, facilitating the booking. They have two business models to achieve this:

- The Merchant model, where the contract is between the hotel and the OTA, whereby the OTA buys rooms from the Hotel and sells them to consumers at a marked-up price (10-30%). The OTA then sets the price, with some limits set by local price parity rules, and can also amalgamate the hotel room with other products such as flights. The model does not mean any capital is at risk from the OTAs as if the hotel room is unsold, they can return it to the hotel. The take rates, when the product is not packaged, tend to be higher, but because the OTA has to process the payment the margins tend to be lower.

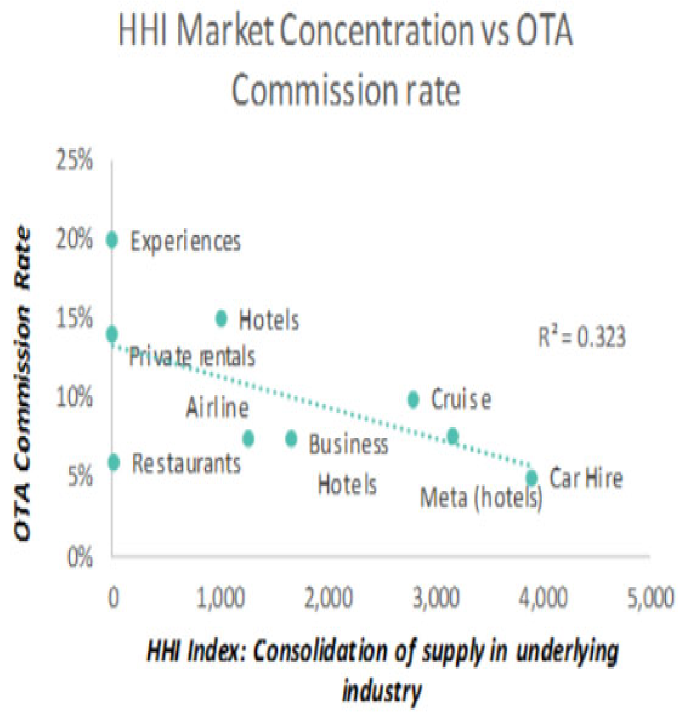
- The Agency model is where the OTA facilitates the booking but the contract is ultimately between the hotel and the customer. The hotel will collect the payment and then pay the OTA a commission (10-30% depending on how high up the list they want to go). Lower commission rates, especially given no difference in risk taken by the OTA, have seen the agency model win share but as the hotel processes the payment, margins tend to be higher.

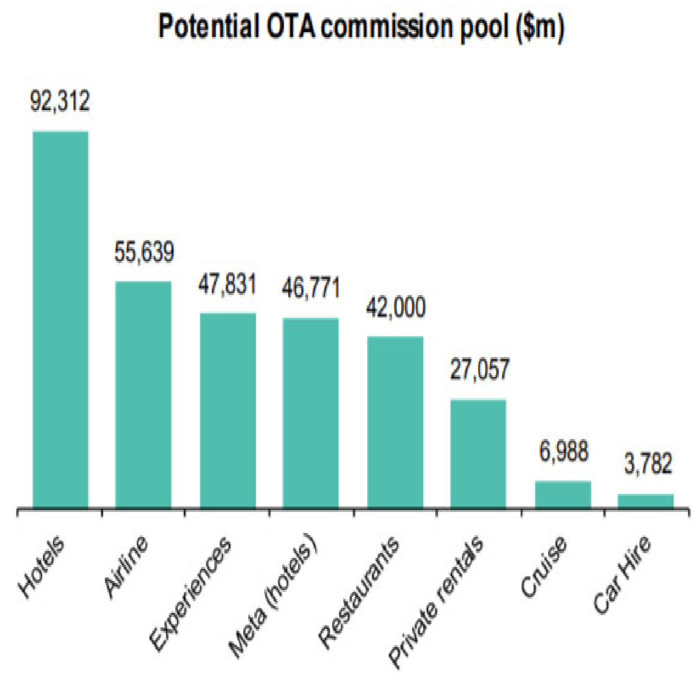
Booking is primarily an agency business, although a move towards private rental and connected trips have seen some share gains from the merchant business in recent years. Expedia is predominantly a merchant business. TripAdvisor acts as an OTA in some of its revenue streams, Experience and Private Rentals, but in the core hotel business it is a metasearch engine. This means it generates revenues from the advertising model whereby it charges for clicks through from its website. Online travel distribution is clearly a good business to be in: the OTAs have delivered substantial earnings growth and TSR in the last decade, and enjoy an asset-light business model which is high margin, highly cash generative and high ROIC. With no logistic cost, the majority of cost is discretionary (marketing costs) with bookings coming at almost 100% contribution margin.

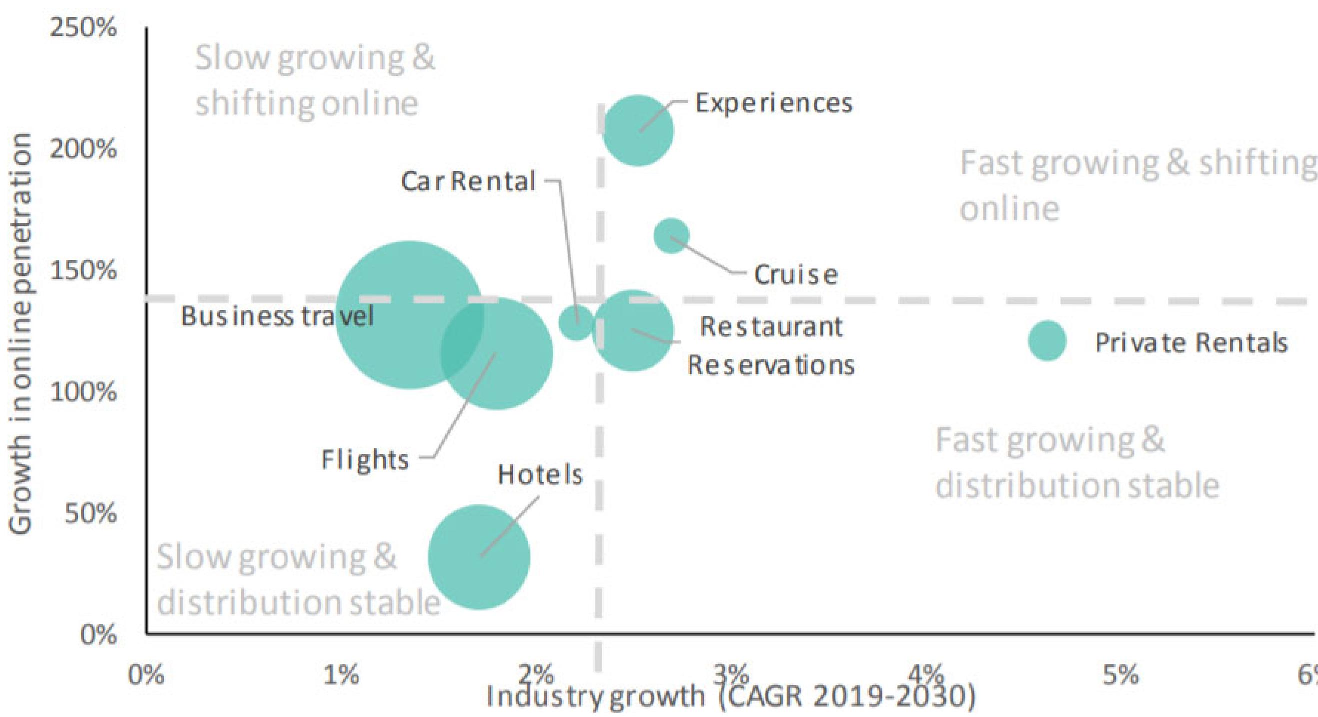




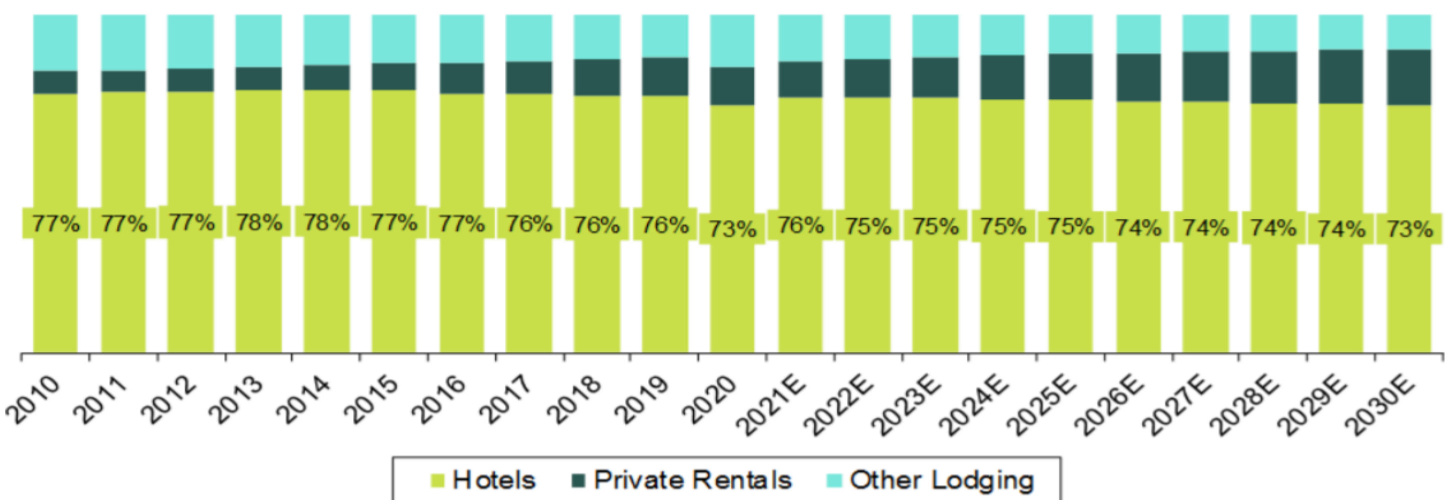
This is a tricky group to look at current numbers due to the transient event in play and mostly looking out to 2022 for a return to normalcy. Similar to the idea in Lodging, focusing on leisure travel is key as business travel may remain subdued for longer. The "live anywhere" trend redefining work is likely to benefit the home-sharing names. The core business of OTAs, hotel distribution/metasearch, is slowing and being disrupted by large Tech names like Google. Hotel OTA revenue growth is set to slow from 23% 2010-19 to mid-single digits post pandemic, with branded hotels taking back control of their distribution. k. Key to the success of the hotel OTAs has been the fragmentation of the underlying market, necessitating an aggregator to bring the product to market. However, the market underneath them is rapidly consolidating. Experiences is one of the more interesting growth TAMs estimates at $1.3 trillion in the Airbnb S-1, a space where **TripAdvisor (TRIP)** is investing heavily.


HHI Market Concentration vs OTA Commission rate
OTA Commission Rate
25%
20%
15%
10%
5%
0%
Experiences
Hotels
Private rentals
Airline
Restaurants
Business Hotels
Cruise
Meta (hotels)
Car Hire
$R^2 = 0.323$
0
1,000
2,000
3,000
4,000
5,000
HHI Index: Consolidation of supply in underlying industry

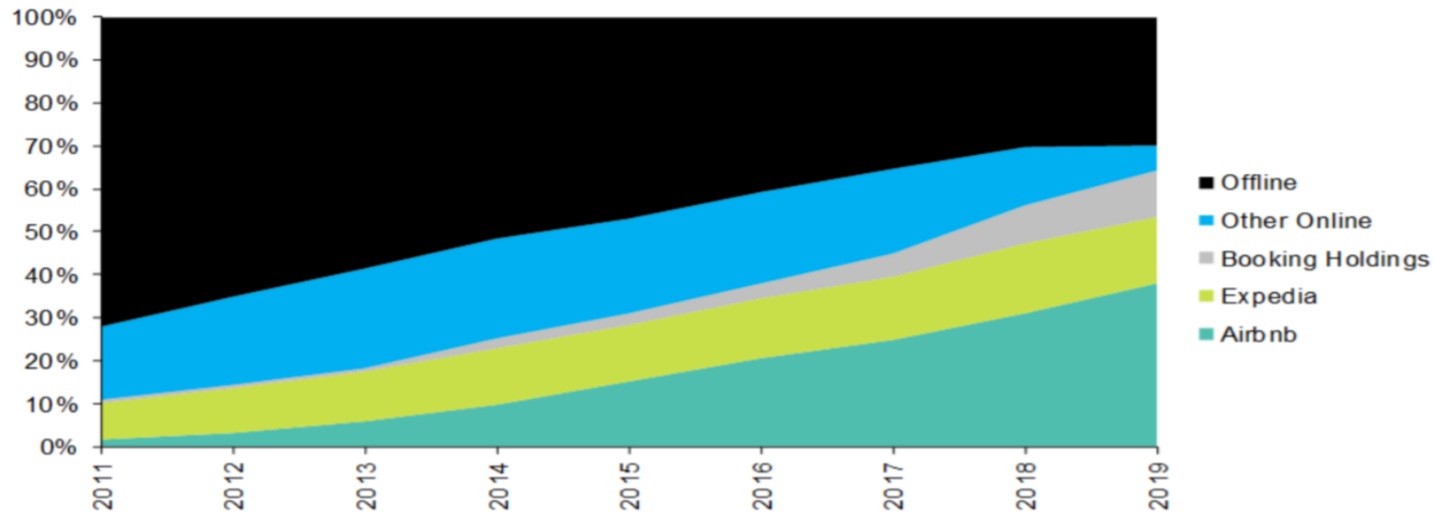

Potential OTA commission pool ($m)
92,312
55,639
47,831
46,771
42,000
27,057
6,988
3,782
Hotels
Airline
Experiences
Meta (hotels)
Restaurants
Private rentals
Cruise
Car Hire


Slow growing & shifting online
Fast growing & shifting online
Fast growing & distribution stable
Slow growing & distribution stable
Experiences
Car Rental
Cruise
Business travel
Restaurant Reservations
Private Rentals
Flights
Hotels
Growth in online penetration
250%
200%
150%
100%
50%
0%
0%
1%
2%
3%
4%
5%
6%
Industry growth (CAGR 2019-2030)

Share of Global Lodging



Private Rental Market Share



Management Commentary

Google (GOOG) discussing new monetization opportunities: "You can look at maps in 2 different ways. You can look at it as a pure utility. It basically helps you to get from point A to point B. That's one way of looking at it. There's another way of looking at it. We can see this is really an incredible discovery surface, where you can have consumers discover a lot of different new worlds for them that are really, really important. And I think the latter is actually a very interesting path if you think about intense -- or, let's say, increased monetization in the future. It's also really relevant for small businesses. Again, that's a theme we're pushing very hard because we really feel it's important to support them. So you look at some of our small business products here like business profiles, where we've made thousands of improvements over the years, and then you think about how this can come together with next-generation discovery areas and improvements on maps. I think that's a very, very interesting area for the future. And then there's obviously other products. Think about something which we've announced a while ago, our discovery ads that are cutting across a whole bunch of different services and surfaces, so not just the Discover feed but also across YouTube and across Gmail. And it's basically performance-focused image ads."

Facebook (FB) on ecommerce: "We now have more than 200 million businesses using our free tools across our platform every month to create virtual storefronts and communicate with customers. We also now have more than 10 million active advertisers across our services every month, the vast majority of which are small- and medium-sized businesses. These businesses rely on personalized advertising to reach potential customers and grow. As the number of businesses going digital accelerates during the pandemic, we have accelerated our efforts to support them. On the product side, our teams have been working around the clock to build new tools that make operating online simple and efficient. This quarter, we released Facebook Business Suite, a new interface for businesses to manage their pages and profiles across our apps, helping them save time and stay up-to-date with customers. We also expanded Facebook and Instagram Shops, Instagram checkout and launched the Facebook Shop tab, so businesses can showcase their products and consumers can discover brands and buy things they love. And with more and more businesses using live streaming when they can't host events in person, we introduced paid online events to help them generate revenue. On WhatsApp, there are now more than 40 million people viewing a business catalog every month, so we created a new shopping button to make it even easier for people to discover a catalog and find something they would like to buy. Soon, you'll also be able to click a WhatsApp icon on a Facebook Shop to chat directly with the business."

Pinterest (PINS) on its vision for automation: "The second thing, and you touched on this, is the vision for automation. But you can imagine a world -- and this will take us a long time to deliver in reality. But the vision is that an advertiser brings us their budget, their goals and their content, and we automate the rest. We started chipping away at this over the course of the last couple of quarters with our investments in auto-bid. It started with traffic objectives several months ago and over -- around 80% of our CPC or traffic objectives are now running through auto-bid. We launched auto-bid for conversion optimization in July, and we're now at 50-plus percent of revenue through auto-bid on that format. And we launched for shopping, as you mentioned, in September, and the uptake there has been quick as well."

Snap (SNAP) on some of its key focus areas for investments: "We continue to invest heavily in ranking, optimization and measurement in order to deliver measurable ROI for our advertising partners. It was our investments in our self-serve ad platform and our ability to service our customers during a challenging time that allowed us to onboard a record number of advertisers this quarter. We continue to invest heavily in ranking, optimization and measurement in order to deliver measurable ROI for our advertising partners. It was our investments in our self-serve ad platform and our ability to service our customers during a challenging time that allowed us to onboard a record number of advertisers this quarter. We continue to invest heavily in video advertising through Commercials, our nonskippable, full-screen video ad unit and Snap Select, which enables buying of Commercials in prepackaged, fixed-price premium inventory. We believe augmented reality is the future of immersive customer experiences like try-on, catalog browsing and showrooming. We invested heavily in our self-serve AR tools to provide advertisers with what they need to create, manage, and optimize an augmented reality campaign that drives measurable ROI. While this form of advertising is still nascent, we are encouraged by the early adoption we are seeing from advertisers."

JD.com (JD) on investing in Supermarket vertical: "On your question regarding supermarket and fresh, I think first of all, this is a huge market, and we have seen a structural opportunity for this category. So this will definitely be a strategic priority for our group. And we have -- as I mentioned just now, we have demonstrated or proved the business model for our traditional B2C operations. And now we have -- we have experimenting, and we are also exploring different business models or initiatives in this area, covering top-tier cities and lower-tier market. So because this is a huge market, we understand that there are many companies entering into the market. But we believe, by end of the day, there will be quite a few players, and we don't have to compete head-to-head at this stage. So the fact is fresh produce is even a more tough category for e-commerce or retail due to the low ticket size and high loss ratios during the production and fulfillment process. So we don't believe subsidy is a competitive advantage. The key to find a way or solution to improve the operating efficiency of the existing business processes and reduce operating cost, so this is exactly our mission or our operating philosophy. So we will continue to invest in infrastructure and our supply chain capability to build our core advantages in this category or this area."

Wayfair (W) on the opportunity in Europe: "Since I joined Wayfair, it's come a long way. Wayfair's European business has grown about a hundredfold since. It is now over $1 billion run rate revenue business and growing quite rapidly in the U.K. and in Germany on the back of a pan-European infrastructure. Our headquarters in Berlin are the company's second global headquarters, now tackling issues universal to Wayfair and exporting best practices to Boston and vice versa. Europe represents a tremendous opportunity for us with a total addressable market rivaling the size of North America at roughly $300 billion in B2C sales, another $100 billion opportunity in B2B and even lower e-commerce penetration rates relative to the U.S. We see the same structural tailwinds and a long runway for profitable growth ahead. Today, we are in the U.K. and in Germany, which together represent nearly 45% of the European total addressable market and we operate here with the Wayfair brand only. Like in the U.S., Wayfair in Europe is focused on the mass market consumer and helping her find the perfect item for her home by bringing the whole of the industry selection to her via a rich, visually engaging online platform and through an industry-leading service and delivery experience."

Etsy (ETSY) on its position as an alternative to Amazon: "But the more the world consolidates around these very, very few mass e-tailers, the more they're going to yearn for an alternative. Something that feels more personal, something that feels more human, something that expresses their sense of style, and Etsy, I think, is exceptionally well positioned to be that alternative to Amazon. And we're seeing in buyer research as well that when you ask people, where are the top 3 or 4 places you can go to buy X, Y or Z, home furnishings, clothing, jewelry, gifts, you name it, Etsy's name is coming to the top more and more often. When we ask our buyers, who would you have shopped at if you didn't shop at Etsy? They say Walmart, Target and Amazon and some eBay. These are all businesses that are 25x, 50x, 100x Etsy's size. And yet we have product selection that is very similar in terms of the breadth and depth across so many different categories. So I think there's just massive opportunity for us to grow and become much bigger. Most importantly, because we're doing something really different than what everyone else is doing. They are all competing to sell the exact same products a little cheaper, shipped a little faster. And that's not what we're doing. We're providing a really different shopping experience. And I think that's something the world is going to want and need."

Booking (BKNG) on its investment into Connected Trips: "So the connected trip really pulls together a lot of different initiatives we're driving within the company. So one of the big underlying enablers of the connected trip is the payments platform. And as you know, particularly Booking.com, our biggest brand, we started out as an agency model where we didn't touch the payments. And in the context of the connected trip, we want to basically sell and manage the full portfolio, payments becomes a big part of it. So we've been building out our payments platform. As you know, in 2019 about 15% of the TCV at Booking.com went through payments. That gives you a flavor for how far we have to go there. It will never become 100%. But as we go through time, it can certainly go over 50 points of mix from payments. Then the other part is to build out the different verticals. And the connected trip verticals include ground transport, where we've obviously got a very good, well built out offer. We have Rentalcars.com. And we moved that into Booking.com about 18 months ago to help facilitate this connected trip cross-pollination of assets. Air is an important one where we're much early on. We have launched air in Booking.com partnering with Etraveli in Europe. And now just in the U.S. and also between Agoda and Priceline, we're also building out an international air product. We kind of leverage those assets as best we can in the future across the company. And then the last piece of it from a vertical would be the attraction side, where we're now, in addition to building out some of our own capabilities, we're also partnering with Musement to access more supply. And of course, we invested in FareHarbor to help bring some of the long tail attraction to come online and plug into platforms like us. So that's where we're at. It's absolutely a journey and it will not roll out in a big bang. It will roll out on a market-by-market basis, and we want to get to critical mass of having that capability. But we see a big prize, right, and we continue to invest in it. We haven't slowed down our investment during the crisis."

OptionsHawk Executive Summary and Top Picks

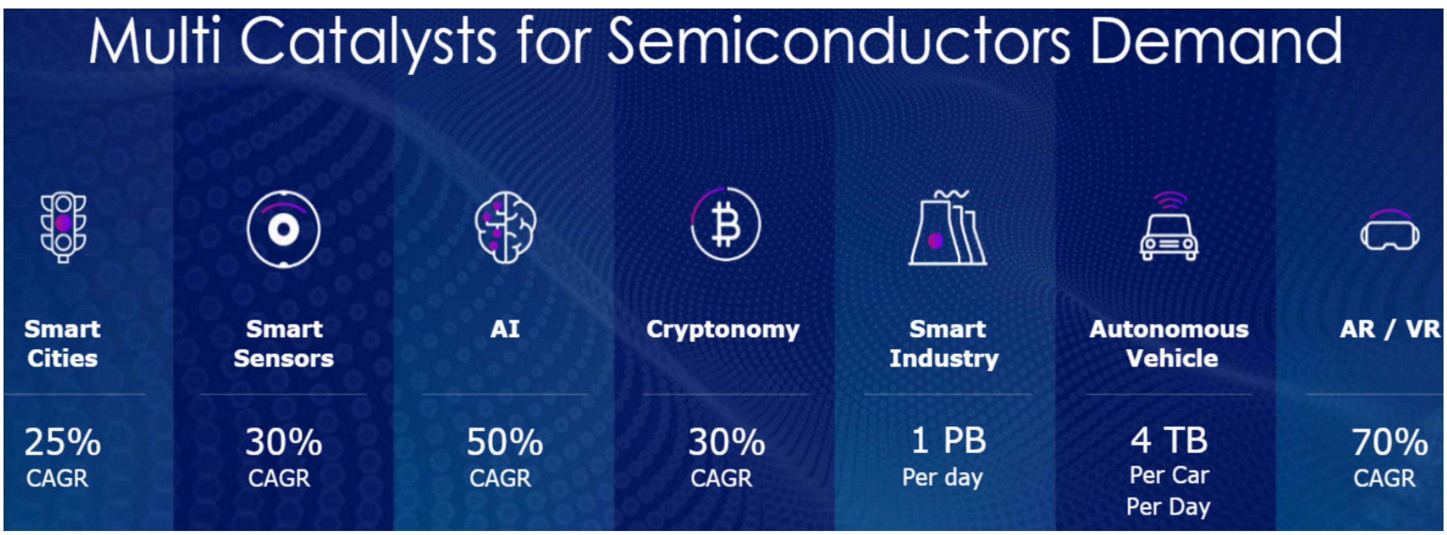
In Social & Advertising it is very difficult to pick favorites because nearly all of these companies are delivering strong results. **Google (GOOG)** and **Facebook (FB)** are mega-cap leaders positioned very well to continue to drive strong earnings and cash flow while topline growth rates still very high and are high-quality owns. **Snap (SNAP)** and **Pinterest (PINS)** both likely have more upside potential because they are in the nascent stages of growing ARPU and are capturing shifting advertising budgets through better ad formats while participating in a number of top growth themes and look to be better investments than **Twitter (TWTR)**. **Match (MTCH)** is a best-in-class operator in this group for its niche while **Interactive (IAC)** delivers solid returns and will be watching the **Vimeo** spin-off. In Russia, **Yandex (YNDX)** has always been a favorite with a strong collection of businesses while **Ozon (OZON)** a new ecommerce name we need to pay attention to in 2021. In small caps, **QuinStreet (QNST)** a $1B performance marketing company delivering solid results at reasonable valuation and **Yalla (YALA)** a recent social networking IPO in the Middle East is worth a closer look.

In Ecommerce, there obviously will be some tough comps in 2021 but the megatrend of online commerce penetration will continue over many years. **Amazon (AMZN)** remains the category leader and the best company in the World while expanding into new businesses with an opportunity in Advertising and all of its aspirations in Technology. The regulatory overhands at **Alibaba (BABA)** keep me Neutral into 2021 though it is attractively valued for the growth it delivers across its multiple businesses. **JD.com (JD)** is preferred in China wit options activity a solid indicator in it and has built out its logistics network that positions it well moving forward. **Mercado-Libre (MELI)** has ranked as a favorite every year and its opportunity in South America remains massive while also having FinTech upside. **Sea (SE)** is one of the most amazing growth plays in the market, a combination of ecommerce and gaming tailwinds. We then have the high growth names in the $20B-$40B market cap range with a niche focus, **Chewy (CHWY)** is delivering impressive numbers as a disruptor in pet care and has great customer loyalty, **Wayfair (W)** a leader in the home goods segment is seeing impressive trends and remains in the early stages of its growth potential, and **Etsy (ETSY)** is a marketplace attracting a massive number of new sellers and buyers. There are a few mid-cap Chinese plays with **Dada Nexus (DADA)** one that looks most compelling for the opportunity in local on-demand. **Jumia (JMIA)** is one of the most intriguing upside plays among small caps with it being one of the few ways to play growth in Africa. **FarFetch (FTCH)** had an incredible 2020 and its online platform for luxury retailers is disrupting a massive $300B market and continue to like its potential. **Stitch-Fix (SFIX)** has been another impressive performer and like the opportunity and founder, though think shares have gotten a bit ahead of themselves and need to pull back before a move higher. **Revolve (RVLV)** a small cap favorite with its online fashion platform addressing a major need, **US Auto Parts (PRTS)** a niche play on line auto parts, and **Tech Target (TTGT)** has always screened as a favorite, a buyer of IT products and services that recently did a very interesting $150M deal for BrightTalk, a platform for virtual events.

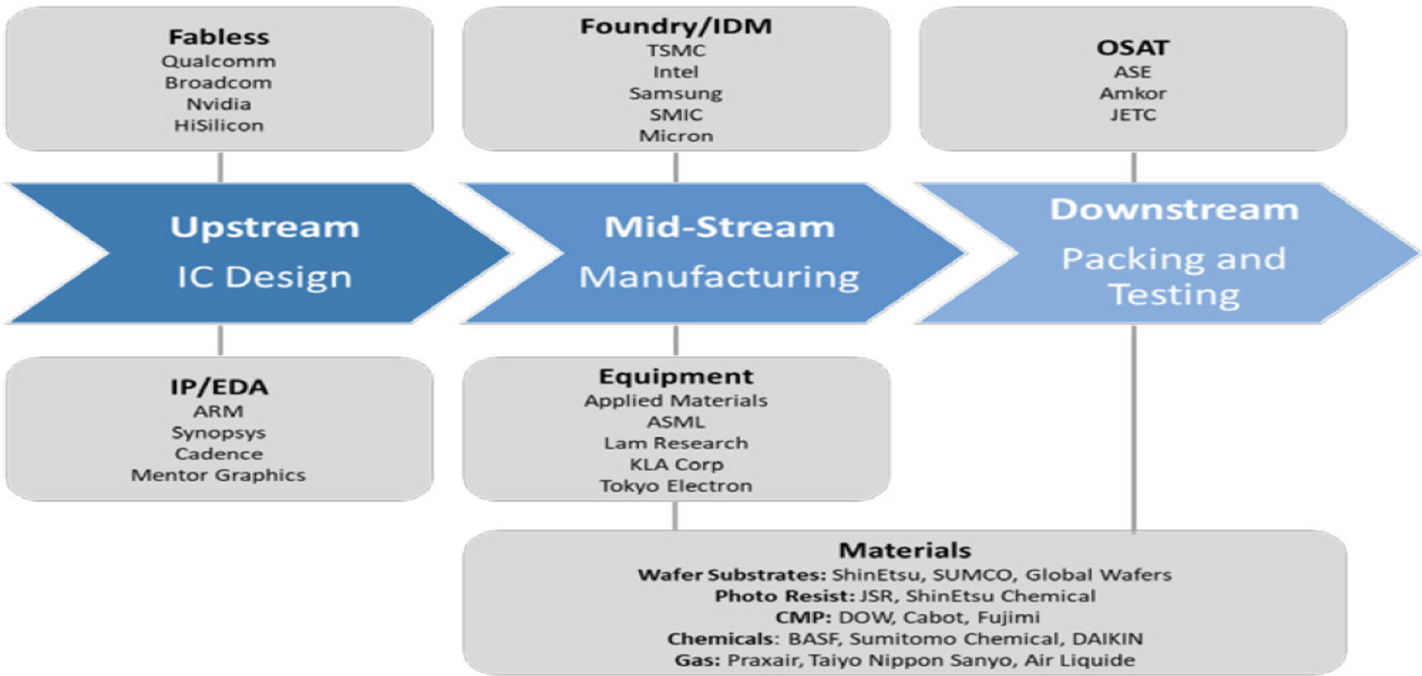
For the Travel group, **Airbnb (ABNB)** immediately becomes a heavyweight and have to see a few quarters from it but the opportunity in home rentals is massive. Of the established plays, **Trip.com (TCOM)** is emerging out of the crisis stronger and China recovering faster than the US, so it looks attractive. **Booking (BKNG)** is the superior operator to **Expedia (EXPE)** but also trades 12.8X EV/Sales compared to 4.6X, and I see Expedia's Vrbo/HomeAway business undervalued and prefer it as closing the valuation gap. Further, Booking's 90% revenue concentration to lodging is a concern. **Lindblad (LIND)** screens well as an adventure travel niche play that seems like a fit for a larger player, so a potential M&A target for the small cap.

Semiconductors

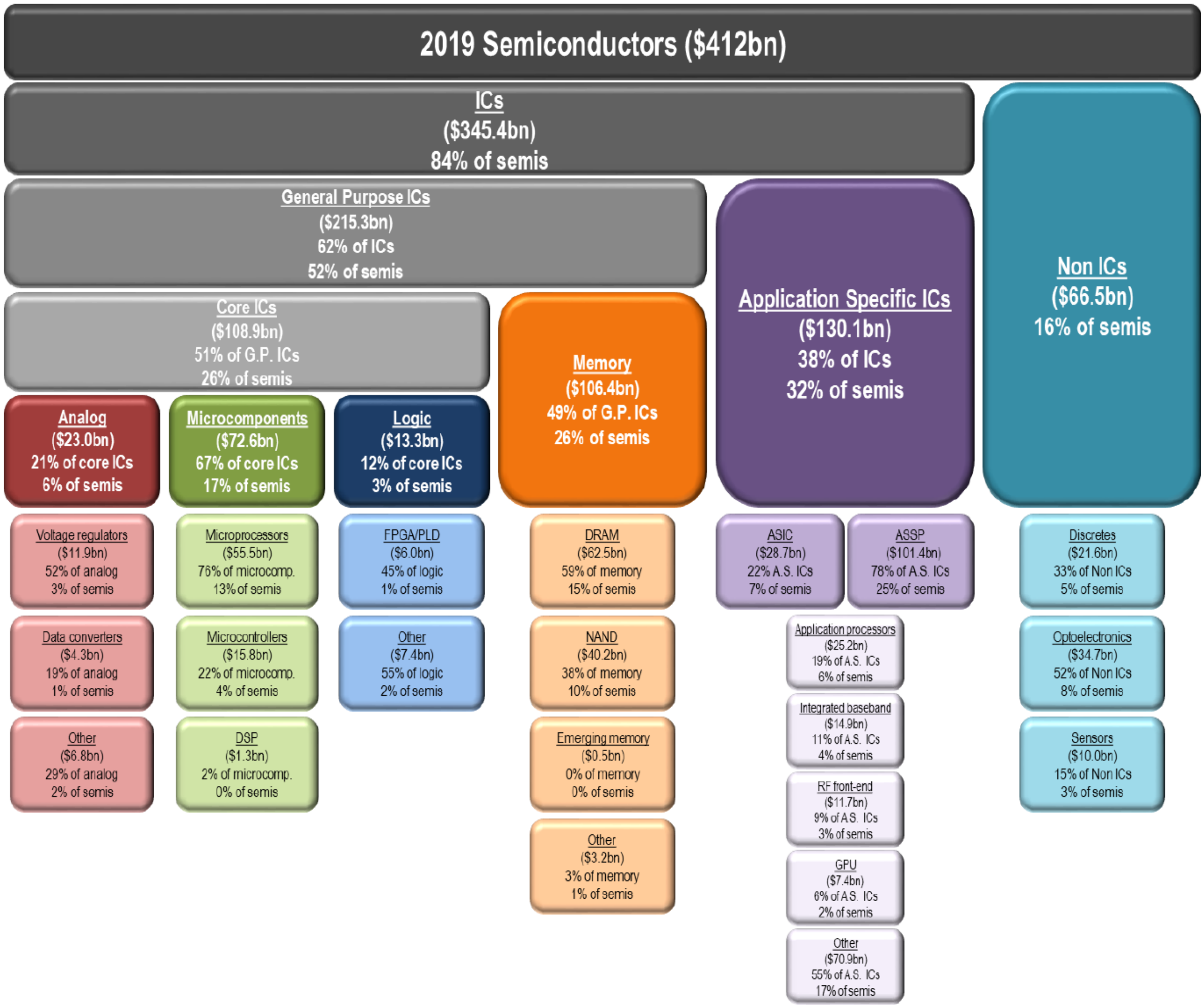
The global Semiconductor industry is valued around $440B. Over the past five years, semi sales have grown at a 5% annualized pace or 2x the growth of global GDP, enabling secular megatrends such as cloud computing, AI, ubiquitous mobile broadband (5G, Wi-Fi), Internet-of-Things, smart factories/robotics, and advanced industrial/electric vehicles. Semiconductors are integral components for virtually every electronic device used today from smartphones, to PCs, to servers, to automobiles, to industrial robotics, making self-sufficiency in semi technology and manufacturing critical for global superpowers. To remain competitive in the semiconductor industry, firms must continually invest a significant amount in designing chips. In the US, semi industry R&D intensity (16.4%) is among the highest in major sectors, 2nd only to US pharma & biotechnology. The design of modern-day chips is not possible without assistance of computer design software (EDA tools) at every step in the design process. This market is dominated by 3 US firms: Synopsys, Cadence, and Mentor Graphics.



Integrated Device Manufacturers (IDMs) manufacture their own devices. Typically, these are mature vendors dealing in high volume products. IDMs have lots of operating and cyclical leverage. Fabless companies design devices themselves but contract the manufacturing to others. These companies are more focused on design and enjoy more margin and earnings stability as well as lower capital requirements. Foundries and Assembly and Testers are specialized third-party manufacturers that perform wafer fabrication or back-end processing for others on a contract basis. The semiconductor industry has a large and relatively independent supporting industry that supplies wafer fabrication, assembly, and test equipment as well as factory automation and process control software and hardware. Few IDMs or foundries make their own equipment, though some of the larger manufacturers will partner with equipment suppliers to help define the functionality of next-generation tools. Top front-end equipment suppliers include Applied Materials, strong in deposition, RTP (rapid thermal processing), CMP (chemical mechanical planarization), and etch; Tokyo Electron, prominent in thermal diffusion, photoresist processing, and etch; ASML Lithography, dominant in lithography scanners; and Lam Research in etch. On the process control front and automation front, top vendors include KLA-Tencor, strong in wafer and reticle inspection/metrology; Hitachi, also strong in wafer metrology; Applied Materials mostly in defect review.



The Semiconductor industry can be divided into five key markets: Analog, Microcomponents, Digital Logic, Memory, and Discrete & Optoelectronics. Analog circuits are used to process real world signals, using electronic voltage patterns within the device to represent the original signal. Standard linear integrated circuits (SLICs) are standard analog components used in multiple applications, usually purchased "off the shelf," often through distribution. Analog application specific standard products (ASSPs) are more specialized analog devices targeted for a specific application. Microcomponents are programmable devices perform intensive compute processing and system control. Microcomponents include microprocessors, microcontrollers and DSPs. Logic devices perform specialized digital processing, and include gate arrays and standard cells (ASICs), programmable logic (PLDs, FPGAs), display drivers, general purpose logic and special purpose logic. Memory devices are used to store data either for short periods of time or permanently. Volatile memory loses stored information when the power is lost; key types are DRAM and SRAM. Non-volatile memory retains the information when the system is powered off; key types are flash, mask ROM, EPROM and EEPROM. Lastly, Discretes & Opto category includes all non-integrated circuit semiconductor devices. Discretes contain just a single transistor in a package. Optoelectronics are specialized discretes designed to emit and detect light. Sensors measure physical, chemical or biological properties. The six key end-markets are Computing, Wireless, Consumer, Networking, Telecom/Datacom, and Automotive/Industrial. Key emerging technologies include AI, 5G, and Wearables.



Unit Shipments, ASPs, Gross & Operating Margins, R&D and SG&A Cost Trends, Days Sales Outstanding, Inventory Days, and Debt Ratios are some of the main focus metrics for assessment.

Analyzing end-market exposure is always important for this group and this is a helpful graphic:

Company	Ticker	Semi Sales (CY2019)	Auto	Consumer	PC	Ent./Cloud Data Ctr	Industrial	Wired Network	Wireless Network	Mobile	Key Customers
AMD	AMD	$6,731	0%	14%	70%	13%	2%	0%	0%	0%	Sony, Microsoft
Ambarella	AMBA	$229	19%	17%	0%	0%	63%	1%	0%	0%	Hikvision, Dahua
AMS	AMS	$5984	37%	5%	0%	0%	31%	0%	0%	26%	Apple
Analog Dev.	ADI	$5,754	15%	4%	4%	0%	51%	9%	14%	3%	Apple
Broadcom	AVGO	$17,185	1%	4%	1%	33%	4%	30%	0%	27%	Apple, Cisco
Cirrus Logic	CRUS	$1,242	2%	9%	1%	0%	2%	0%	0%	85%	Apple, Samsung
Cree	CREE	$1,008	13%	3%	0%	0%	81%	0%	3%	0%	-
Dialog	DLG	$1,684	2%	10%	1%	0%	12%	0%	0%	75%	Apple
Diodes	DIOD	$1,249	10%	23%	10%	6%	28%	4%	0%	18%	-
HiSilicon	*	$7,964	0%	7%	0%	0%	7%	25%	27%	35%	Huawei
Infineon	IFX	$11,154	43%	7%	3%	11%	25%	1%	3%	7%	-
Inphi	IPHI	$366	0%	0%	0%	57%	4%	39%	0%	0%	Microsoft, Huawei, Cisco
Intel	INTC	$71,965	1%	0%	51%	32%	3%	6%	5%	2%	Dell, Lenovo, HP, Apple
Knowles	KN	$855	0%	16%	2%	0%	0%	0%	0%	82%	Apple, Samsung
Lumentum	LITE	$1,745	0%	0%	0%	10%	21%	38%	5%	27%	Apple, Huawei, Ciena
M/A-COM	MTSI	$468	0%	0%	0%	20%	41%	12%	27%	0%	-
Macronix	*	$1,056	7%	53%	3%	8%	6%	16%	3%	4%	Megachips
Marvell	MRVL	$2,699	3%	7%	8%	38%	2%	33%	14%	0%	WDC, Toshiba, Seagate, Samsung
Maxim	MXIM	$2,183	26%	9%	3%	7%	29%	10%	12%	3%	Samsung
MaxLinear	MXL	$317	1%	35%	6%	7%	1%	47%	2%	0%	Arris
MediaTek	*	$7,986	1%	24%	13%	0%	1%	3%	0%	58%	Samsung, Huawei
Microchip	MCHP	$5,278	20%	12%	4%	9%	35%	12%	6%	2%	-
Micron	MU	$19,926	7%	4%	20%	30%	9%	4%	0%	27%	Huawei, Kingston, Apple
Monolithic Pwr	MPWR	$628	14%	26%	18%	12%	16%	0%	12%	2%	-
Murata	*	$14,037	32%	7%	0%	0%	11%	6%	21%	23%	Samsung
Nanya	*	$1,666	10%	44%	7%	8%	4%	16%	0%	12%	Kingston, HP, Lenovo
Nvidia	NVDA	$10,918	6%	4%	62%	27%	0%	0%	0%	0%	Dell, Asustek, Lenovo, HP
NXP	NXPI	$8,877	47%	7%	6%	3%	18%	2%	3%	13%	Continental, Apple
ON Semi	ON	$5,518	32%	11%	7%	4%	26%	5%	3%	12%	Robert Bosch, Denso
Qorvo	QRVO	$3,132	1%	3%	0%	2%	9%	6%	6%	73%	Apple, Samsung, Huawei
Qualcomm	QCOM	$14,391	3%	4%	2%	0%	1%	1%	0%	89%	Samsung, Apple
Renesas	*	$6,589	51%	12%	8%	2%	13%	10%	1%	4%	-
ROHM	*	$3,371	38%	32%	7%	1%	13%	1%	0%	8%	-
Samsung	*	$64,940	1%	6%	23%	20%	1%	2%	0%	48%	Apple
Semtech	SMTC	$554	3%	27%	14%	12%	33%	10%	0%	9%	Samsung, Trend-tek, Frontek
Silicon Labs	SLAB	$837	11%	20%	0%	0%	17%	11%	6%	36%	Samsung
Silicon Motion	SIMO	$457	0%	0%	76%	16%	0%	0%	6%	2%	SK Hynix, Intel, Samsung
SK Hynix	*	$23,169	1%	5%	28%	20%	1%	1%	0%	44%	Apple, Huawei
Skyworks	SWKS	$3,301	2%	11%	0%	0%	19%	0%	0%	68%	Apple, Samsung
Sony	*	$8,654	1%	11%	0%	0%	10%	0%	0%	78%	Apple, Samsung
STMicro	STM	$9556	30%	4%	5%	3%	30%	3%	3%	22%	Apple, Samsung, Bosch
Synaptics	SYNA	$1,357	0%	0%	6%	0%	0%	0%	0%	94%	Samsung
Texas Instr.	TXN	$14,383	20%	12%	8%	4%	37%	7%	7%	5%	Apple
Tsinghua Uni	*	$1,694	0%	0%	0%	0%	0%	0%	0%	100%	-
Vishay	VSH	$1,502	29%	5%	3%	3%	46%	7%	3%	4%	-
Western Digital	WDC	$6,353	2%	2%	52%	17%	1%	0%	0%	26%	Dell, Apple
Xilinx	XLNX	$3,235	9%	2%	0%	4%	45%	20%	20%	0%	ZTE

Semicap Equipment Components: TSM, LRCX, KLAC, AMAT, ASML, TER, AEIS, UMC, ENTG, KLIC, RMBS, SITM, ACLS

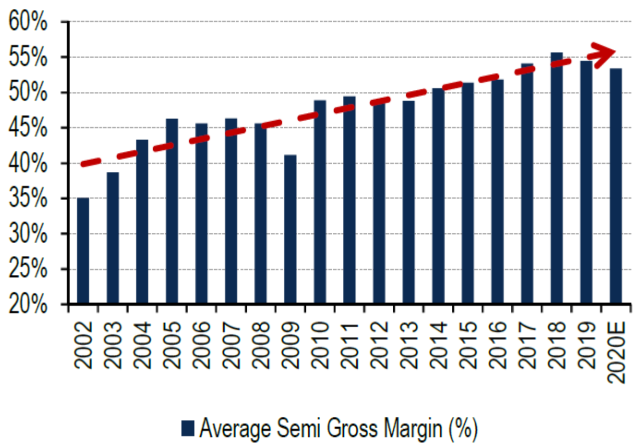
Datacenter, Networking & Gaming: AMD, NVDA, MRVL, INTC, IIVI, MTSI, TSEM, IDCC, NPTN

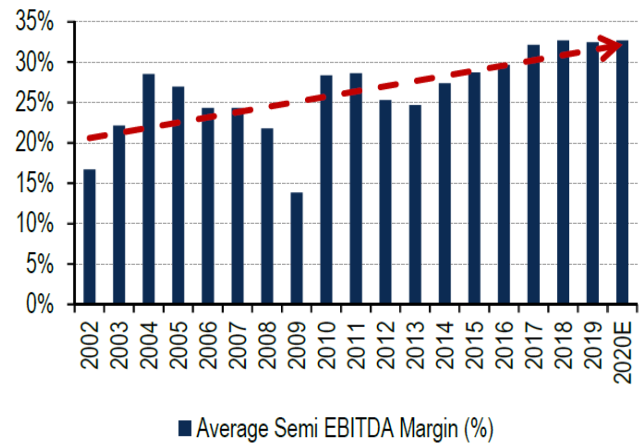
Industrial, IoT & Auto: TXN, ADI, NXPI, MCHP, STM, ON, MPWR, SLAB, SMTC, CREE, POWI, AVGO, ALGM, DIOD, VSH, MX

Consumer Electronics & RF: SWKS, QRVO, QCOM, CRUS, OLED, LSCC, SYNA, AMBA, MXL, XPER, SIMO, HIMX, AOSL, DSPG, AKTS

Semiconductor Services: CGNX, IPGP, MKSI, COHR, NOVT, BRKS, LASR, ASX, CCMP, AMKR, FORM, ONTO, NVMI, ACMR, UCTT, COHU, VECO, IMOS, PLAB, ICHR, CAMT, AXTI

The Semiconductor industry has seen a strong 2020 with the Semi ETF (SMH) gaining more than 50% with the growing use cases for chips as growth has been driven by Automotive, IoT, Data Center and Gaming markets. Consolidation has remained a theme with several M&A deals in 2020 highlighted by Marvell (MRVL) buying Inphi for $10B, AMD (AMD) buying Xilinx for $35B, NVIDIA (NVDA) buying ARM Holdings for $40B, and Analog Devices (ADI) buying Maxim for $20.5B. A decade of consolidation has created an enormously profitable industry with ~30%+ EBITDA margins, up 800bps since 2013. Global sales of semiconductor manufacturing equipment by OEM's are projected to increase 16% from USD 59.6 billion in 2019 and register a new industry record of USD 68.9 billion in 2020, SEMI reports. The wafer fab equipment segment – which includes wafer processing, fab facilities, and mask/reticle equipment – is projected to rise 15% to reach USD 59.4 billion in 2020, followed by 4% and 6% growth in 2021 and 2022, respectively. The foundry and logic segments, which account for about half of total wafer fab equipment sales, will see a mid-teens percentage increase this year to reach USD 30 billion in spending driven by investments in leading-edge technologies. Spending on NAND flash manufacturing equipment will surge 30% this year, surpassing USD 14 billion, while DRAM is expected to lead the expansion in 2021 and 2022. The assembly and packaging equipment segment is forecast to grow 20% to USD 3.5 billion in 2020, followed by 8% and 5% increases in 2021 and 2022, respectively, driven by advanced packaging applications. The semiconductor test equipment market is expected to rise 20% in 2020, reaching USD 6 billion, and continue to expand in 2021 and 2022 on demand for 5G and high-performance computing (HPC) applications.





General-Purpose	2019E Market Size	2020E Market Size	2020E Growth	2020E Market Percentage	2018-2023E CAGR
Analog	$23,085	$24,534	6.3%	5.2%	3.0%
Discrete	$22,317	$24,053	7.8%	5.1%	5.1%
Memory	$111,497	$136,058	22.0%	28.9%	0.8%
DRAM	$62,435	$70,700	13.2%	15.0%	-5.2%
NAND	$44,544	$60,499	35.8%	12.9%	8.3%
Microcomponents	$73,537	$76,472	4.0%	16.2%	1.8%
MCUs	$17,952	$19,111	6.5%	4.1%	3.3%
MPUs	$54,117	$55,845	3.2%	11.9%	1.1%
Optoelectronics	$32,689	$34,296	4.9%	7.3%	5.1%
Nonoptical Sensors	$10,628	$11,390	7.2%	2.4%	7.3%
General-Purpose Logic	$13,771	$14,556	5.7%	3.1%	5.5%
Total Semiconductor	**$418,302**	**$470,698**	**12.5%**	**100.0%**	**3.2%**

The industry is expected to see sales growth through 2022 at an 8% CAGR which is 4X the rate of the past few years where impacts from China tensions, the pandemic, and a maturing 4G smartphone cycle were a drag. Secular growth drivers in place include cloud/AI, gaming, and smart industry & IoT. A cyclical recovery in Automotive and Industrial will provide an additional boost while expanding 5G adoption and stabilization of memory pricing further tailwinds across almost every industry vertical. The main risks to the industry are geopolitics with China/US and new large cap Tech entrants like Amazon and Apple providing competition leveraging their own R&D forces to insource products they used to buy from semiconductor vendors.

	2019E Market Size	2020E Market Size	2020E Growth	2020E Market Percentage	2018-2023E CAGR
Automotive	$41,848	$46,624	11.4%	9.9%	8.3%
Communications	$137,960	$162,102	17.5%	34.4%	3.4%
Wired	$21,072	$22,020	4.5%	4.7%	1.0%
Wireless	$116,888	$140,082	19.8%	29.8%	3.8%
Consumer	$42,798	$47,436	10.8%	10.1%	2.9%
Data Processing	$145,689	$159,352	9.4%	33.9%	-0.7%
Compute	$119,872	$127,373	6.3%	27.1%	-2.3%
Storage	$25,816	$31,979	23.9%	6.8%	11.5%
Industrial	$50,007	$55,183	10.4%	11.7%	6.7%
Total Semiconductor	**$418,302**	**$470,698**	**12.5%**	**100.0%**	**3.2%**

If we further break down some key trends in the industry we can see the growth opportunities are abundant. AI/Machine Learning is a $25B TAM by 2022 growing at a 58% CAGR, Cloud Infrastructure is a $90B TAM by 2022 growing at a 13% CAGR, IoT a $43B TAM by 2021 growing at a 25% CAGR, EV/Autonomous Vehicles a $60B TAM by 2022 growing at a 25% CAGR, and 5G and Gaming also large markets. 5G could drive nearly $2.2 Trillion in global economic activity over the next 15 years, per GSMA, the telecom industry's trade association.

Management Commentary

ASML (ASML) discussing 2021 growth: "We also said that we expect EUV revenue -- system revenue growth around 20% next year. I think if you look at the ongoing transformation in the digital infrastructure, and I think you could argue, it's accelerated even as much as we dislike it and are so ready to get -- move on this COVID world as we're talking, I think you can see that it clearly has accelerated. And you see this in addition to some of the secular end market drivers such as 5G, AI and high-performance compute. They'll continue to fuel this demand for advanced process nodes. And this impacts both logic and memory, which obviously drives demand for our products. So if you look at how we see -- obviously, it's too early to provide too much detail on our guidance, but we expect logic demand, as it looks today, will remain healthy. We expect memory recovery will continue."

Applied Materials (AMAT) on the strength of the industry: "I do think we're at a special point in our industry where the opportunity has never looked better. And if we take a look at the fundamental drivers of the industry, I do think there's something pretty important, pretty profound happening as it relates to end market demand. You're seeing digitization take hold. You're seeing an interdependence of global economic growth and technology enablement. And we think those trends only accelerate going forward, that they don't slow down. And when we think about the drivers of end market demand for semiconductors in the handoff from handset cell phones as the predominant driver, a consumer-oriented device to something that's nonconsumer discretionary spend, largest companies exposed to the largest industries, where investment as a key enabler of their business' success, it's existential. And when you think about every industry on the planet being transformed by technology, you're talking about an economic pool that's orders of magnitude greater than a consumer-oriented device. And if you take a look at third-party research, whether it's VLSI or an industry organization like SEMI, they're talking about the semiconductor industry doubling in size in the next decade. So close to $1 trillion by 2030. And if you look at it, it took the semiconductor industry about 20 years to double, 2000 to 2020. And now they're calling for it to double again in the next 10 years. So growth is accelerating in the industry, not slowing down."

Teradyne (TER) on complexity driving strong growth for the test business: "The principal driver of mobility test demand continues to be increases in complexity of cell phone silicon. This is especially notable in 2020 when smartphone unit shipments are expected to decline about 10% to 1.2 billion, yet the collective test intensity of each unit continues to grow at a rate in excess of this unit decline. Within smartphones, the mid-to-high tier is the place to be in test, and that's where Teradyne is solidly positioned. These phones are seeing disproportionate growth and complexity related to multiple high-density camera arrays, and the associated processing power and storage to manage this data. Another complexity driver is 5G, and these high-tier phones are early adopters of the extra silicon needed to enable these features. Less than 250 million phones are expected to be 5G-enabled in 2020, and only a fraction of those will support millimeter wave communication. So despite the bump in 2020, we are still in the very early stages of 5G adoption. Memory test is another bright spot. The market is likely to be up about 50% from $600 million in 2019 to about $900 million in 2020. The shipment ramp of our Magnum EPIC product LPDDR5 win last year, combined with continued strength in flash demand, has driven our year-to-date memory revenues up 70% from 2019."

Advanced Micro (AMD) on market share gains and an accelerating TAM in Server market: "So I think if you just talk about AMD from a server CPU share aspiration standpoint, we are not giving a new share target, but in the past, with Opteron, we were up at 26% or greater at our heights. And I think the road map is stronger today. I think the road map is stronger today. I think the customer relationships are stronger. I think the market is different than it was back then. And so we do see an opportunity for significant share gain within a market that, as you say, is extraordinarily important. And so the compute TAM, if you now include to CPUs, GPUs, accelerators, we'll talk a little bit, hopefully, a little later on, about our acquisition of Xilinx, it's a TAM that will continue to grow and will continue to favor those who have been very aggressive in technology. And so we think the data center market is extremely important. It's a great overall market for us and our capabilities as well as the opportunity to partner more deeply with our customers."

NVIDIA (NVDA) outlining its Data Center business: "So our overall data center business right now is firing on all cylinders, both with the overall A100 ramp, our inferencing is also in full throttle. And the overall Mellanox growth has been great to see both before the overall acquisition and the continuation after we acquired them. We expect the overall A100 to gain further adoption. It has great overall cloud adoption at this time with areas such as GCP, overall Azure and will likely expand into other vertical industries, particularly with what we've released within this last quarter with DGX and our server OEMs. Now we're well positioned for the future within data center. Our full stack of end-to-end accelerated solutions really optimizes across both compute networking and also with storage, enabling the most powerful and scalable data center solutions that are out there. This includes areas such as our NVLink or NVSwitch, our Magnum IO and InfiniBand. This full stack of incorporating silicon, systems and software to support this growing diversity in applications and workloads is very key to our overall strategic story. Now we offer this in many different types of computing platforms. We offer right now HGX, DGX, DGX on SuperPODs as well as completing inferencing cards as well as also GPU boards. So we support each and every overall CPU that's overall in the industry as well with an overall platform. We couldn't be more pleased with what we've built from both a systems from an overall performance perspective and also the keys in terms of the programmability, the software, the SDKs that we have to advance this overall market. We're in the early stages. We're in the early stages of AI and accelerated computing. So our growth has been great both sequentially as well as overall year-over-year. We don't have an outlook past the quarter that we had just guided. And we'll have to see how things go. But again, we feel we are just well positioned for the future at this time."

ST Micro (STM) on end-market growth outlooks: "After 2 years of strong growth, our served markets had low or no growth in 2019 and 2020. For 2020, the current WSTS forecast is for our SAM to be up overall 2.4% with significantly different dynamics by end market. Looking at our served markets, we see that for automotive and industrial, 2020 is a kind of a reset here. In the midterm, the automotive SAM will grow at 13% on average over the next 3 years, but from the very low 2020 levels. Industrial will be growing 5%, but again, from low 2020 levels. And these dynamics are somewhat reversed for the other 2 markets. The automotive semiconductor market is driven by the combination of car volumes and silicon content. After a difficult 2020, car volumes are forecast to recover and grow over the next 3 years with still quite some variability in the forecast and with a significant shift of mix between internal combustion engine and electric or hybrid vehicles. This is an important factor, being one of the key drivers for silicon content growth in the coming years. If we look now at the total automotive semiconductor market growth, not just our served market here, we can see that the majority of this growth is clearly coming from car electrification and digitalization, both of which are doubling in value in the next 3 years. The silicon content is highly dependent on the type of car produced, varying from around $400 in an internal combustion engine vehicle to $700 in a hybrid to well over $1,000 in a fully electric vehicle. This is driving the electrification TAM growth. Looking first at the key industrial market developments. The pandemic had a negative impact. This is particularly true for factory automation, an important part of this market. This has resulted, as we have seen, in a significant industrial market forecast declining versus previous expectation, but with favorable growth rates in the next 3 years. This growth is mainly driven by automation and motor electrification as well as a need for higher power efficiency, battery charging, sensors and data-centric industrial IoT."

Universal Display (OLED) describing its business and smartphone penetration: "Universal Display is a developer and -- a technology developer, a material seller in the OLED's field. We are a company that has developed the materials and the architecture that is in pretty much all the commercial OLED displays that are in the marketplace today. And OLED is a new type of screen that is essentially layers of film that light up. And the layers are 11,000 the thickness of a hair. And so these give you very thin lightweight devices and they could be made on glass, plastic, stainless steel foil, a lot of the new screens, such as the ones that are in the iPhone and the Galaxy products and others are actually displays that are made on plastic with a glass cover. So it gives you a lightweight device and that you don't have 2 pieces of glass. So we have long-term agreements that we've signed with Samsung, with LG, with the BOE, with China Star, a number of others. So anybody who is in the display business, whether they're making LCDs, which most of them were making, until OLEDs were invented, is a customer of ours. We get revenues from license fees and royalties, and we get revenues from selling the material that we make. We actually -- we're fabless. We have a partner, PPG Industries, who makes the material for us, with our help, and there is a number of trade secrets in the manufacturing process. Well, today, there's about 500 million OLED smartphones in 2020. It's the estimates. The TAM for smartphones is about 1.4 billion units. So OLEDs are about 1/3 of the market today. Some of the reasons that I discussed a little earlier is: a, the picture quality of an OLED display is rated the best display, and it is power efficient. And as we move into the 5G replacement cycle, one of the major drawbacks of 5G is that it's very power hungry. And the OEMs are looking for ways of managing the power and putting an OLED display in your device reduces the power consumption compared to the -- comparable LCD. So we think that OLED penetration in the smartphone market will continue to grow. It's estimated by market analysts that it will be about 600 million units in 2021. And going almost half of it, I think, within a couple of years."

Skyworks (SWKS) on trends: "And we're at a tipping point now where the WiFi 6 phenomenon is coming in, 5G is going to be more than just a handset play. We have the IoT tail behind that. So this whole push for touchless, high-speed connection is going to continue, and it's just a matter of how it is ported. And again, I'll just harken back to our opportunity and our business model is to support any of those protocols, dependent upon the data rate that's needed, the cost profile, the range that, that device needs to carry, the signal and then offer the customer the best possible solution for their usage case and application. So I think we've got numbers in the 200 million or so for this year. I think you're going to see that accelerate dramatically into 2021. And there was some data I just looked at here last night on -- it was an Ericsson report that was showing an estimate of about 3.5 billion 5G subs by 2026. Think about global subs today are probably about 6 billion. So even though this is a great opportunity right now, and I think, as I said, the demand environment is great, it's still extremely early. You've got 6 billion subscribers, less than 10% have a 5G phone today. As more applications and usage cases emerge, that need for upgrade is going to continue. So it's very early in the cycle, albeit we're really pleased to see the initial kickoff."

OptionsHawk Executive Summary and Top Picks

In Semiconductor Capital Equipment, **Taiwan Semi (TSM)** is a best-in-class operator and screens attractive to the other mega-cap **ASML (ASML)**, though that is also a quality play with the rising EUV demand. For the US big four they screen at similar valuations and growth profiles with **KLA (KLAC)** always standing out with superior margins and FCF, while **Teradyne (TER)** a growth favorite with strong inventory metrics and R&D investments. **Applied Materials (AMAT)** remains undervalued to peers. It is a group characterized by a rising tide lifts all ships, so not a lot of deviation in performance. The large caps dominate this group and the small caps not overly attractive, **Kulicke & Soffa (KLIC)** a high FCF yield and solid metrics could be a M&A target while **SiTime (SITM)** up 400% in 2020 after writing it up in March as a disruptor in the global timing market, real interesting growth play.

In the Data Center, Networking & Gaming group, **Advanced Micro (AMD)** has taken a leadership role despite the steep valuation as it takes market share and is involved in all the best growth verticals. **NVIDIA (NVDA)** screens better on margins and FCF and remains a quality leader though think AMD can close the current 60% valuation gap on EV/Revenues. **Marvell (MRVL)** is transforming itself back to a growth name and bought one of my favorite companies in Inphi, and trades at reasonable valuation. **II-VI (IIVI)** trades way too cheap for being positioned so well in key secular growth markets like 5G and EV and think it could be an acquisition target. **MACOM Tech (MTSI)** the small cap standout here positioned well for the 5G cycle and as China tensions abate, sets up well.

For the Industrial, IoT and Automotive group the 2020 performances across the top six large caps are nearly identical. **Broadcom (AVGO)** remains undervalued for the growth it delivers as well as its moves into higher margin software businesses, a FCF monster. In the next market cap bracket **Analog Devices (ADI)** screens as best-in-class on nearly every metric with a long history of making the most of acquisitions and positioned well for the Auto/Industrial recovery. **ST Micro (STM)** is cheap to peers but brings a lower margin profile, though options action continues to be robust with call buying. I would be more Neutral on **TXN, MCHP,** and **NXPI**, though the latter has long been a favorite and still a quality name. There are three $10B+ names left in the group, **ON Semi (ON)** a long-time laggard and low margin play but the activist interest and new CEO making it a potential turnround/M&A name. **Cree (CREE)** screens really weak on past metrics but is about to enter a major growth phase and options activity been quite bullish, being a name exposed to the EV growth trend. **Monolithic Power (MPWR)** always screens well and have long seen it as a likely M&A target with most of its peers acquired over the past five years and it screens much better than smaller peer **Power Integration (POWI)**. **Allegro (ALGM)** is a newer small cap name that looks attractive, a leader in magnetic sensors positioned in the recovering Automotive segment with exposure to ADAS and EV growth themes. **Semtech (SMTC)** is the standout of the smaller cap names with margin expansion potential and an ideal M&A target.

In Consumer & RF we have names that are really going to benefit from 5G content growth, and **Qualcomm (QCOM)** remains a top way for exposure to the multi-year 5G trend. **Qorvo (QRVO)** has screened as best-in-class for two years now and nothing has changed, a real impressive string of reports this year, high FCF yield and impressive inventory metrics. **Universal Display (OLED)** is a high growth business and brings high margins, strong FCF and has outlined a clear long-term growth strategy. Among the small caps, **Cirrus (CRUS)** screens well though carries the high customer concentration risk with Apple at 80% of its sales but sets up well for this next-gen phone cycle. **Ambarella (AMBA)** is a likely M&A candidate in my view as it sees growth tailwinds in robotics, automation, smart home and other applications. **MaxLinear (MXL)** screens fairly cheap and delivering solid numbers while the Industrial recovery should provide a lift in 2021 and **Xperi (XPER)** a high-margin licensing model and has been pursued as an acquisition target.

Lastly, in Semiconductor Services we have a diverse group of mostly smaller cap names operating in smaller sub-segments of the semiconductor production process. **Cognex (CGNX)** the largest name here also the best-in-class as a play on machine vision, offering strong FCF, high margins, and high R&D. **IPG Photonics (IPGP)** another favorite with high return on inventory metric that sees increased usage for lasers in several growth areas like medical, EV, and solar. In small caps, **Cohu (COHU)** a recent write-up for members that is positioned nicely in 5G and trades very cheap on EV/Sales. **Cabot Micro (CCMP)** underperformed in 2020 but screens well across all metrics as a high margin and strong FCF name. **Camtech (CAMT)** and **ACM Research (ACMR)** are high revenue growth names that make the cut in small caps, both solid stories.

Communication Services

Telecom Components: VZ, T, TMUS, VOD, BCE, ORAN, TU, TEF, RCI, SKM, MBT, PHI, KT, USM, SHEN, TDS, SJR

Internet/Cable Service Providers: CHTR, DISH, LBRDA, LBRDK, LBTYA, LBTYK, LILAK, SJR, CABO, IRDM, ATUS, SATS, VSAT, CCOI, GOGO, LUMN, WOW

A few notable themes for cable/satellite include expanding EBITDA margins with stable to lower cable capital intensity due to a mix shift toward connectivity driving FCF growth, increased video competition from new DTC offerings, extension of cable's push into wireless, and increased 5G launches.

Management Commentary

T-Mobile (TMUS) on its Network strategy: "So there's a bunch of different ways to translate our network strategy. Clearly, for me, our ambition and our goal and our set of objectives is to be the leading wireless network in the U.S. And we believe we're in a position whereby we can now make that happen. We have the assets post our combination with Sprint. We have the asset base in terms of spectrum. We have the sites. We have the team. We have the execution capability. And I'm sure, as we'll talk this morning, we're rolling out our network upgrades at a furious pace here. And I mean this is, 5G is finally becoming real despite a lot of noise and promises and many of them broken over the last 2 to 3 years. I think with the advent of the iPhone this year with 5G capability, 5G started to become very meaningful in this tail, last part of 2020. And so for us, I mean, this 5G opportunity is enormous. We see the capability to lead in this 5G space. We're hands down the coverage leader on 5G today. And our intent is to rapidly deploy 5G capability at a pace that's going to be difficult for our competition to match and thereby start to drive a network leadership story at T-Mobile. And we've spent much of the last 7 years leveling the playing field with AT&T and Verizon, who had an advantage with spectrum. If you go back 7, 8, 9 years ago, we were bereft of low-band spectrum as a company. But we leveled that playing field as we moved into the last 2 to 3 years. And so here we are now with a tremendous set of assets for us to go roll out at the advent of this 5G era and in a position to go execute and become the leading company on network in the U.S."

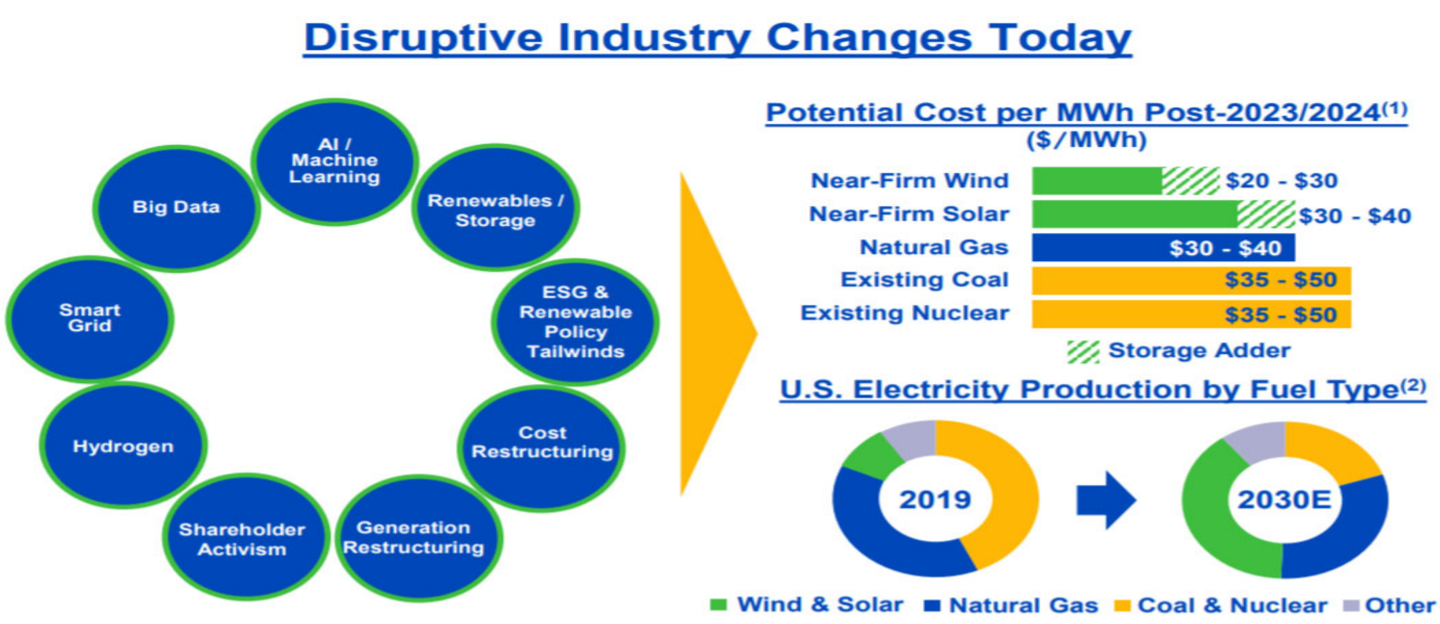
Altice (ATUS) on Cable fundamentals: "I'd say there are elements of both. I do think there was a onetime surge there in the first half of 2020 that was fueled by all the elements you mentioned. Certainly, the utilization of the broadband product has never been higher, right, because of work from home, because of telemedicine, because of remote learning, what have you. And so we did see record -- we saw -- first quarter, we set a record for customer gains for Altice USA, which lasted all of 3 months until we blew those numbers out of the water in the second quarter. I do think we've broken through what we previously perceived to be certain penetration ceilings."

OptionsHawk Executive Summary and Top Picks

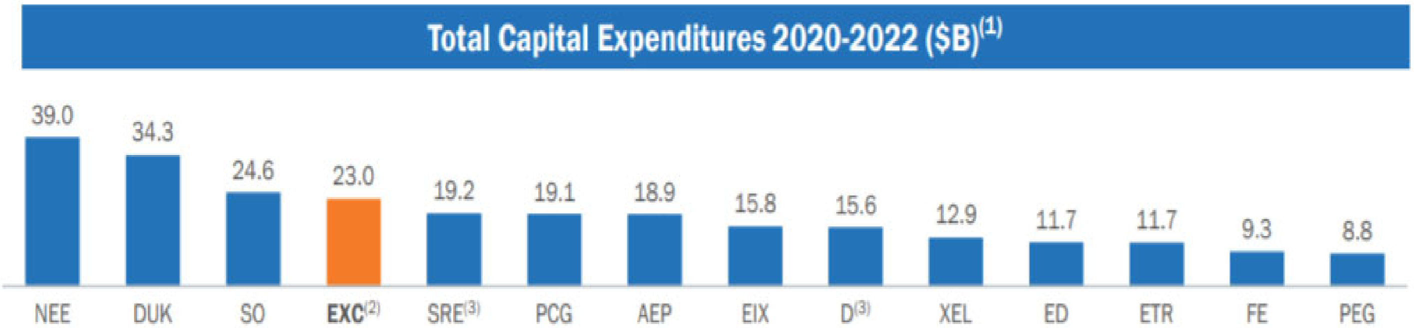
The Telecom group is mainly for dividend investors without a lot of exciting growth opportunities but **T-Mobile (TMUS)** has been our favorite for years and gained over 70% in 2020 outperforming peers by a wide margin as it continues to take market share while **Verizon (VZ)** next best and positioned well in Fiber and 5G. **PLDT (PHI)** is one of the more intriguing names, a telecom operator in the Philippines showing strong numbers.

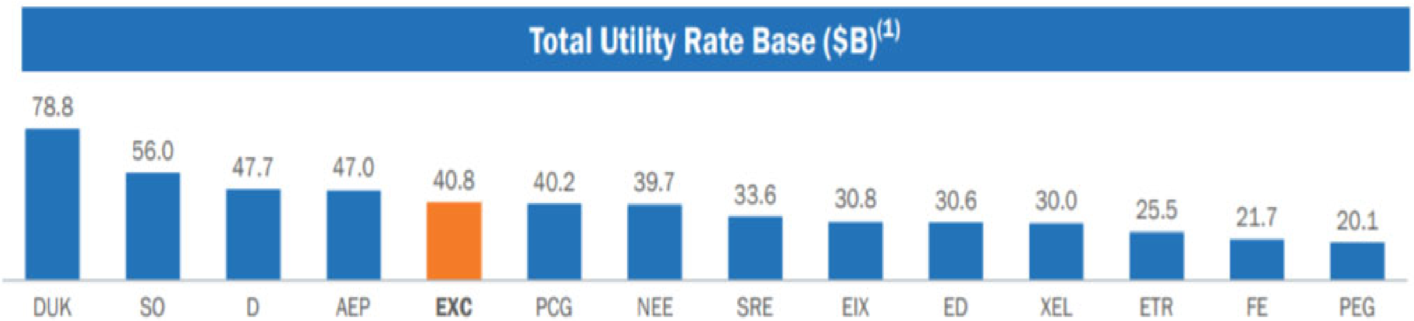
The Cable/Internet group is a similar story, **Charter (CHTR)** always a favorite as it is extremely well managed and is winning business as a play on expanding broadband penetration. **Dish (DISH)** an interesting story as its core Satellite business remains very weak but is positioning itself to become a major player in wireless and building out its 5G network, also potential for M&A. **Comcast (CMCSA)** is a favorite that was included in the Media group earlier in this report, its internet & cable businesses are best-in-class and screens better than **Altice (ATUS)** which is investing in the Fiber rollout. **Gogo (GOGO)** a small cap intriguing opportunity as it sold the commercial aviation business and is now focusing on Business aviation as a leader in in-flight broadband connectivity which has low penetration and a long runway for growth. **Iridium (IRDM)** is a higher growth, higher margin small cap in this group, focused on L-band mobile satellite with some key partnerships like Amazon and Garmin.

Utilities:
The Utility group has lagged the broader market in 2020 trading flat YTD, though a group with a lot of bifurcation as thirty-four stocks are down 10% or more while eleven are up 15% or more. The best performing names were ones with high exposure to Alternative Energy which is seen to have a much stronger growth outlook and many traditional utilities are starting to expand alternative offerings. The underperformance was a bit surprising considering the move lower in bond yields in 2020 which typically makes the Utility yields look more attractive, but the market was mainly risk-on and the safety of utilities did not draw investor flows. The group is not very exciting with minimal growth and one we pay more attention to the balance sheet and regulatory changes for rates and often can just focus on a handful of quality operators. Location is also important due to the regulatory environment for allowing customer rates to be raised, notably Florida, Texas and California are utility-friendly states. The surge of popularity in ESG investing has also excluded many of these names from portfolios and further enhances the allure of the alternative energy focused utilities as does the administration change with a focus on elimination coal. Water is another small sub-segment that is likely to continue to outperform with the need for further infrastructure investments. Despite a surge in electricity usage residentially from work from home, the benefits were mostly offset by higher costs to supply electricity, and weather remains the most important driver in the short term.

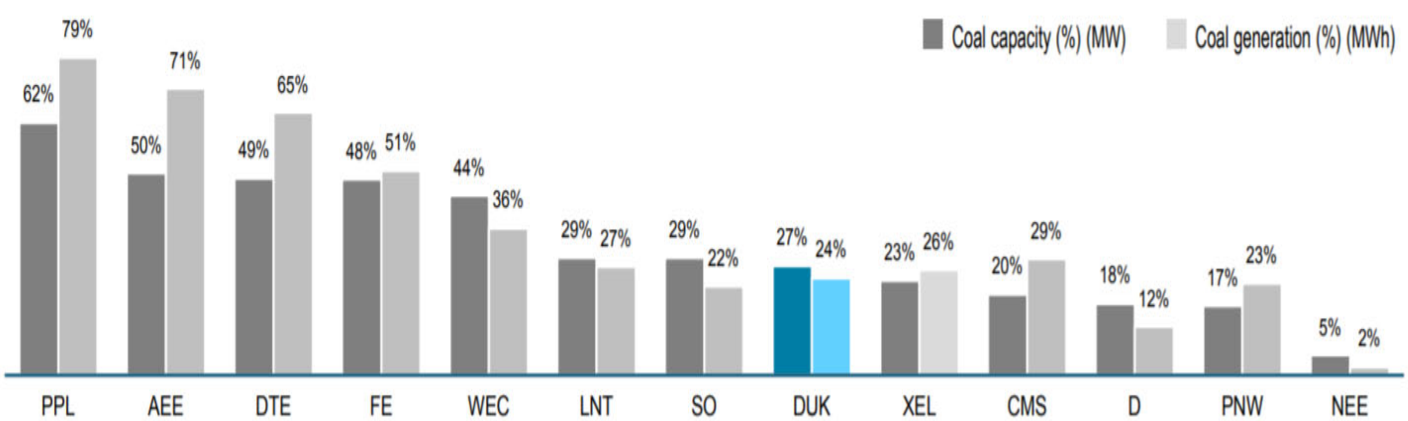


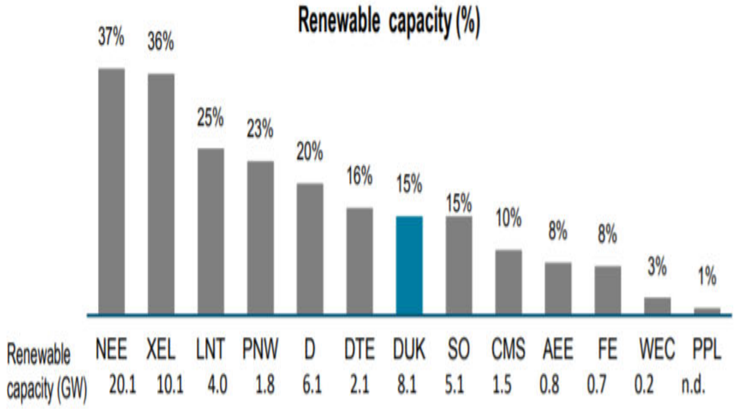
Diversified Components: NRG, ORA, CNP, D, NGG, EXC, SRE, PEG, ETR, BIP, FE, AES, BKH, NWE, ALE, AVA, MGEE, SJI, OTTR, UTL

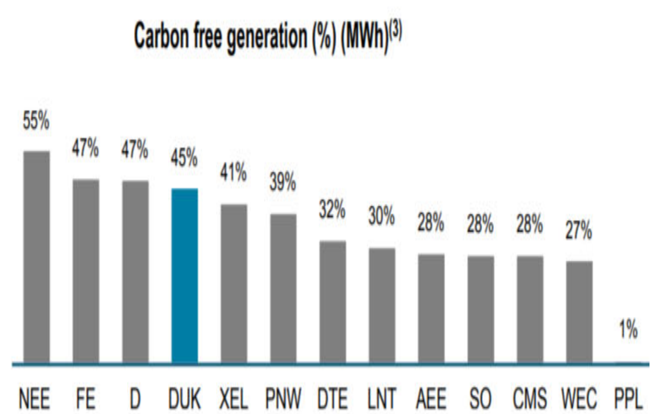




Electric Components: NEE, BEP, VST, DUK, SO, AEP, XEL, ES, WEC, ED, DTE, PCG, EIX, PPL, AEE, FTS, CMS, AGR, LNT, KEP, EVRG, PNW, OGE, IDA, HE, PNM, POR, PAM

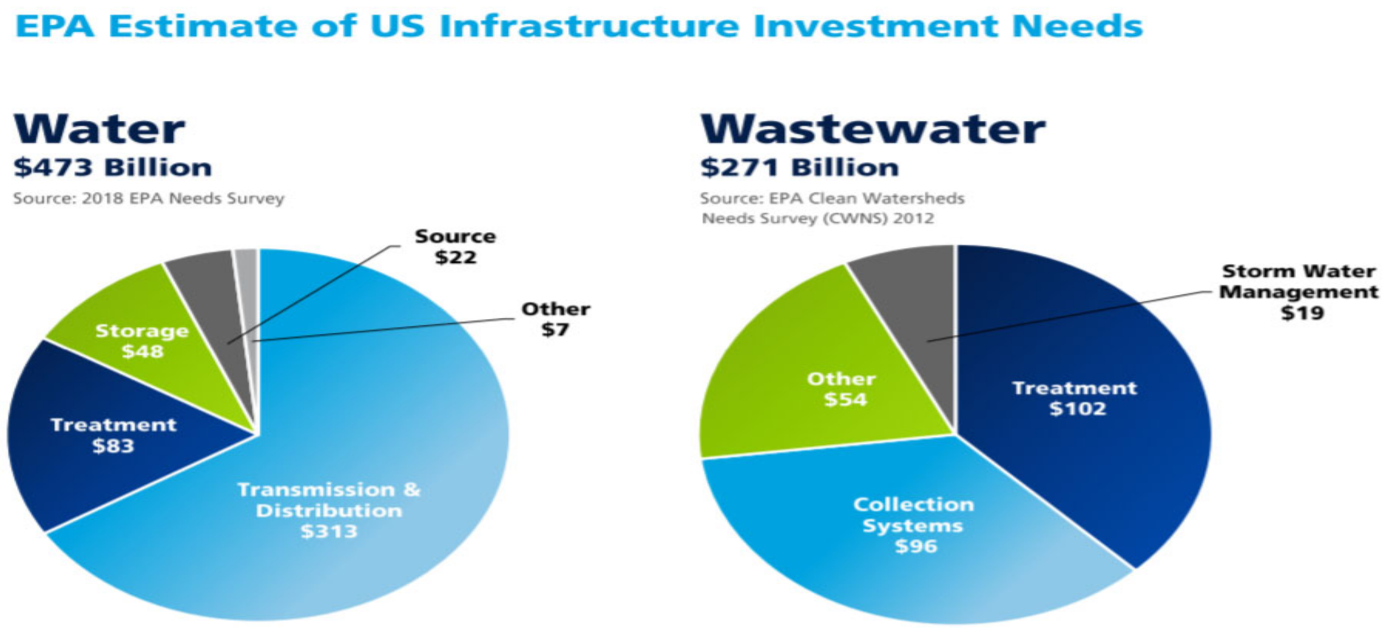






Gas Components: ATO, NI, UGI, NFE, OGS, SWX, NJR, SR, BIPC, CPK, NWN, SPH

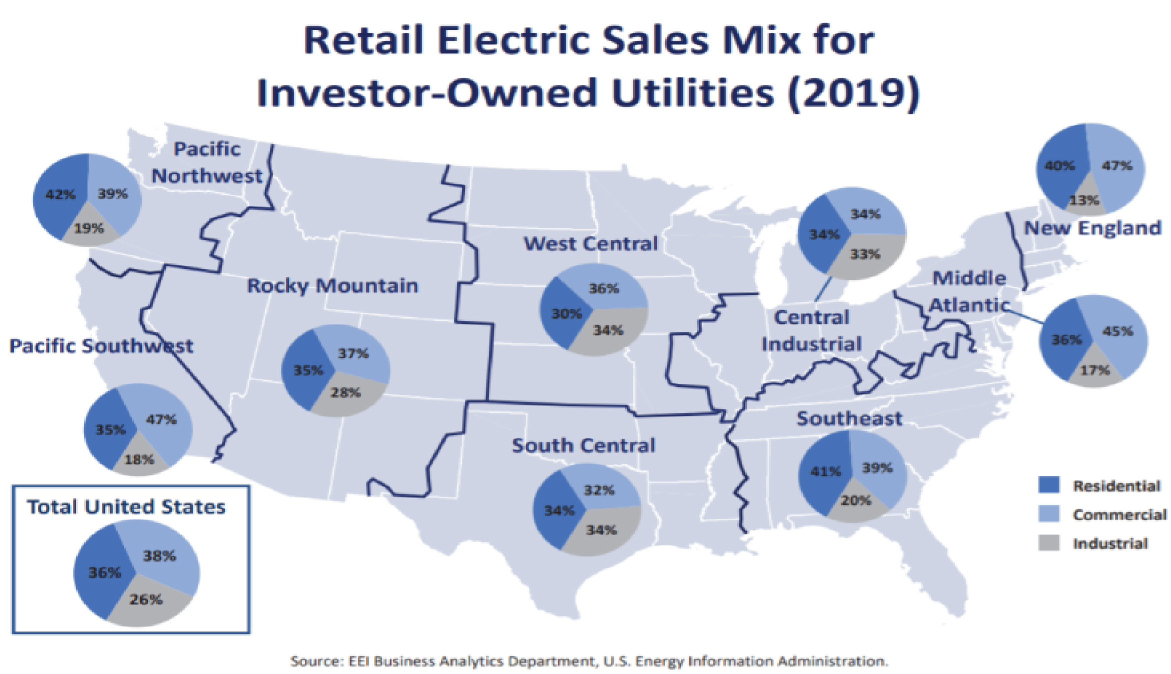
Water Components: AWK, WTRG, AWR, CWT, SJW, MSEX, YORW



Utilities are natural monopolies that end up being regulated monopolies that recover expenses from customers/consumers of energy and earn an allowed, reasonable rate of return on capital invested. The spark spread is the most well-known measure of net revenue for power producers. The spread is the difference between the sale price of electricity less the price of generation. The spark spread is the appropriate term for natural gas fired generation only. Other spreads include the dark spread (coal) and quark spread (nuclear using uranium).

The Utility industry is one that we go back to an old-school analysis with valuation using EV/EBITDA, P/E, and P/Book while also looking at EPS growth and ROE as key metrics. There are also custom metrics like Non-Fuel Operating & Maintenance (O&M) per MWh to measure operating efficiency. On a company-specific level investors may look at CAPEX plans and the rate outlook as well as customer and load growth trends. Dividend growth and FCF growth are also important indicators.

Residential demand is about 35% to 40% of total U.S. electric consumption — it varies regionally, and among utility service territories and higher consumption is generally good for Utilities as residential has higher mark-ups.



In the Diversified group **Ormat Tech (ORA)** has always stood out with its high margins as a Geothermal leader. **AES Corp (AES)** is an attractive value that has some interesting alternative energy assets, a likely turnaround story that can re-rate higher. Lastly, **CenterPoint (CNP)** is also cheap to peers yet solid across all metrics and carries less debt.

In the Gas generating group **New Fortress (NFE)** is an interesting growth name that has seen shares rise 180% YTD as it capitalizes on LNG, and a revenue growth name that could attract more growth-centric investors. **UGI Corp (UGI)** stands out as cheap valuation with a high ROE and one of the top dividend yields at 3.5%. **Chesapeake (CPK)** a small cap that trades at a premium valuation but a very strong ROE and impressive growth numbers. Lastly, **Atmos (ATO)** appears undervalued to peers considering strong ROE, high margins, and solid EBITDA growth.

In the Electricity group **Next Era (NEE)** is always the best-in-class operator and has strong exposure to alternative energy while reports late in 2020 are the company is looking to do a large acquisition to expand its footprint. **Xcel Energy (XEL)** is another strong one that stands out when looking across the metrics and trades cheap to peers with better growth, a stronger ROE, and less debt.

In the Water group **American Water Works (AWK)** remains the clear leader and with an 11%+ ROE. **York Water (YORW)** stands out across all metrics as an attractive small cap and potentially a M&A target, and **American States Water (AWR)** as well.

Conclusion

I have now covered each of 182 sub-industries I custom broke the market down into for easier and more efficient analysis. I covered some more extensively than others and this is an ongoing process, much like investing, continuously learning about companies and their industries. My plan for 2021 is to create a web-based platform for each of these groups and can contribute more insights and information throughout the year as I read a lot of research, follow management calls and pay attention to thematic growth trends. I am currently designing the template for this project. Through this report I also kept track of the quality names highlighted to put them all in one place for readers, helpful for watchlists, and broke them into unique categories that I will put below. Some may say there are too many names but if you look at performance numbers there are also a lot of strong performers in the market each year, so this process is more about creating an investable basket. While the portfolio top picks section is tailored to longer term investors, this basket of names is for active traders to quickly access the best names to be trading when the market conditions call for it, for me, typically a combination of notable options flow and technical set-up.

Thanks for Reading!

Best-in-Class & Long-Term Growth Stories (Valuation Agnostic): NFE, NEE, APD, SHW, SMG, FMC, PRLB, SEDG, ATR, TSLA, CVNA, MNST, YETI, LULU, GRMN, PTON, POOL, JPM, KNSL, BLK, XP, MKTX, PYPL, STNE, FOUR, MSCI, BEKE, Z, CSGP, REXR, GDS, SGEN, HZNP, ZTS, TMO, RGEN, NVTA, BLI, TWST, UNH, RMD, WST, MASI, ALGN, ISRG, ARWR, GNRC, ZBRA, TREX, SITE, COST, RH, FND, ROKU, NFLX, SPOT, BILI, GLOB, PENN, DKNG, NOW, DDOG, TTD, WDAY, COUP, BILL, SHOP, FVRR, SNOW, PEGA, TEAM, DOCU, TWLO, UBER, VEEV, CHGG, ADSK, U, SNPS, CWRD, OKTA, ONEM, ANET, SNAP, PINS, MTCH, AMZN, JD, SE, MELI, CHWY, W, ETSY, FTCH, ABNB, AMD, AVGO, OLED, TMUS

High-Quality Leaders: ORA, AES, LIN, EMN, CE, PPG, NTR, STLD, ARNC, SCCO, PAAS, RUN, DQ, DAR, TSN, BLL, AMCR, RACE, APTV, GNTX, CMI, BC, CPRT, ATHM, LAD, SAM, STZ, MDLZ, MKC, NOMD, HELE, TPX, PG, CLX, HLF, NKE, DECK, CPRI, AAPL, SNE, AAXN, SVB, PNC, NTRS, WAL, CB, SLF, PGR, AIZ, AJG, BRO, TROW, BX, LPLA, ICE, SCHW, MA, SQ, PAGS, SPGI, TRU, RKT, BKI, SUI, EXR, PLD, EGP, ARE, SBAC, DLR, COR, XLRN, CRSP, ACAD, IOVA, MRTX, EBS, ALNY, ZLAB, JAZZ, VRTX, ABBV, BMY, IDXX, RPRX, MCK, DGX, CRL, MTD, TXG, PKI, GH, EXAS, ANTM, CHE, AMED, GMED, EW, NVCR, ECL, TFX, DXCM, HOLX, BAH, LMT, LHX, TDG, HON, TTC, URI, GGG, OTIS, ROP, VNT, PH, AME, IEX, CSL, WMS, FAST, CARR, LII, ALLE, SNA, EXP, DHI, ROL, WCN, J, CP, ODFL, UPS, ZTO, EXPD, ORLY, TGT, ROST, HD, TSCO, DIS, CMCSA, NYT, EA, NTES, SBUX, YUM, DPZ, TXRH, CNXC, INFY, EPAM, TNET, CTAS, CHH, CZR, ADBE, NET, MDB, ESTC, HUBS, ZI, PAYC, BL, AVLR, PLAN, WIX, LSPD, INTU, QTWO, NCNO, AYX, APPN, ZM, FIVN, TYL, RP, CDNS, ANSS, PANW, ZS, FTNT, GDRX, TDOC, OMCL, LOGI, KEYS, LITE, APH, TRMB, GOOG, FB, TCOM, EXPE, TSM, KLAC, TER, NVDA, IIVI, ADI, QRVO, CGNX, IPGP, CHTR

Quality at the Right Price: UGI, ATO, AWK, XEL, CNP, KWR, TROX, RIO, NUE, RS, TKR, AU, SBSW, COP, PXD, FANG, COG, HAL, PSXP, MMP, EPD, MPLX, MPC, ARRY, AVY, SEE, GPK, GM, BWA, ALSN, ABG, SJM, USFD, PFGC, WHR, CL, CHD, UL, CROX, HAS, EWBC, MET, EQH, FNF, RE, AON, BAM, APO, CBOE, FISV, VRSK, EFX, BR, FICO, FDS, RDFN, ALLY, WPC, CPT, INVH, LAMR, STOR, LSI, KRC, GWPH, PTCT, BHVN, INCY, HALO, REGN, MRNA, ASND, NVO, VTRS, RDY, PPD, ICLR, DHR, A, TECH, QDEL, NTRA, ADPT, DVA, OSH, EHC, MDT, INSP, JNJ, ABT, PODD, TNDM, CACI, BWXT, HEI, BA, HWM, CAE, WWD, DE, WSC, ROK, XYL, WAB, ITW, JHX, AOS, MLM, PHM, GFL, TTEK, LUV, DAL, CSX, FDX, XPO, UHAL, FIVE, LB, CASY, ULTA, LYV, NWSA, ATVI, TTWO, ZNGA, CMG, LAMR, G, PAYX, EDU, LVS, CHDN, MSFT, CRM, VMW, FROG, NICE, GDDY, SSNC, DBX, AZPN, DELL, WDC, MU, MSI, VRT, ST, TDY, GLW, FLIR, YNDX, IAC, EBAY, DADA, SFIX, BKNG, ASML, AMAT, MRVL, STM, CREE, QCOM, VZ, DISH

Neutral: ALB, KRA, GOLD, SLB, BKR, WRK, IP, PKG, LEA, PII, THO, VRM, KO, PEP, GIS, EL, VFC, BAC, TRV, AFL, GL, MFC, ALL, WRB, ARES, TW, NDAQ, COF, V, GPN, WEX, MCO, IT, TREE, SYF, AVB, ESS, PSA, DRE, AMT, EQIX, RARE, LH, IQV, ILMN, WAT, BIO, CI, CVS, HCA, SYK, ABMD, NVRO, CTLT, STE, COO, SAIC, LDOS, HII, NDSN, PNR, MIDD, GE, ETN, DOV, IR, OC, GWW, TT, JCI, SWK, LECO, VMC, LEN, TMX, ANGI, WM, CLH, ALK, UNP, JBHT, LSTR, WMT, TJX, DG, WSM, ACI, ACN, EXLS, ADP, MSA, TAL, WYNN, DT, CDAY, VERX, GWRE, DCT, SMAR, NUAN, DASH, LYFT, CDK, TRMB, PTC, PLTR, PFPT, CYBR, SAIL, AMWL, CSCO, CIEN, SNX, JBL, FLEX, BIDU, OZON, TWTR, BABA, PDD, STMP, LRCX, INTC, TXN, NXPI, SLAB, SWKS

Avoid/Short: NWN, SWX, BKH, WLK, SXT, FOE, GCF, ASIX, UNVR, KMT, AEM, INGR, SAFM, BERY, SON, JCI, ALV, NKLA, REVG, CWH, GPI, TAP, K, FRPT, JJSF, PM, LEG, KMB, IPAR, SBH, PVH, RL, GIL, CRI, SHOO, GIII, WFC, L, CNA, PRU, LNC, UNM, PRI, RGA, AMP, AMG, RJF, SF, CME, AXP, EEFT, WU, EPAY, CATM, GDOT, JKHY, CBRE, JLL, HRB, ADS, UDR, GEO, WRI, SLG, WELL, AVTR, NEOG, PNTG, SNN, IART, BDX, PSN, GD, TXT, TEX, ABB, ITT, MMM, EMR, FTV, MHK, AZEK, MSM, AIT, BLDR, TOL, RSG, SRCL, NSC, MNRO, DLTR, WPP, CMPR, CTSH, GSX, AKAM, RXT, NEWR, DOX, CSOD, VRSN, BIGC, JKHY, OTEX, APPF, BLKB, NATI, CHKP, MCFE, FEYE, MPLN, IBM, JNPR, WB, LN, YELP, OSTK, POWI, T

Small Cap Attractive (Under $5B): CPK, YORW, AWR, NEU, NGVT, CSWI, CCF, AIN, BCPC, ODC, CMC, HCC, KALU, CINR, BOOM, MTRN, LTHM, AZZ, NWPX, SVM, XEC, PDCE, GTLS, CHX, NESR, ERII, VVV, EVA, REGI, BE, TPIC, JBSS, PTVE, PACK, UFPT, FOXF, XPEL, LCII, CTB, THRM, SHYF, DOOO, MBUU, WGO, CANG, CRMT, CELH, SMPL, UTZ, IIPR, TPB, IRBT, LOVE, EBF, LZB, ELF, EPC, GOOS, CLAR, SONO, ELY, AOUT, GBCI, HOMB, PRK, LFKN, BANF, TBK, LOB, RLI, KMPR, CNO, GSHD, MCY, PLMR, TRUP, JRVR, SLQT, APAM, CNS, FOCS, HLNE, HLI, EVR, FRHC, PJT, TIGR, EVTC, FOUR, IIIV, IMXI, CDLX, FSV, EXPI, RDFN, CIGI, ENVA, CNNE, STEP, NXRT, ABR, PCH, SAFE, ADC, FCPT, NSA, IIPR, TRNO, STAG, ILPT, DEA, CTRE, CHCT, RETA, ZEAL, ALBO, AMTI, SPRB, AKRO, ARNA, APLS, KYMR, QURE, RPTX, HRMY, KRTX, CMPS, PRAX, FATE, ALLO, TPTX, TGTX, SWTX, ALXO, ZYME, PMVP, NRIX, TCRR, CLDX, MRSN, KRON, GRAY, TARS, DYN, VCEL, PCVX, ALVR, ARCT, INSM, GBIO, STOK, TBIO, PETQ, PCRX, MEDP, BLFS, SLP, CYRX, BEAM, CSTL, PSNL, QTRX, CDNA, JYNT, SEM, ENSG, SIBN, ATEC, NARI, LMAT, SILK, SWAV, LUNG, AXNX, UTMD, INMD, ESTA, MANT, MAXR, OSIS, AL, SPCE, AVAV, PKE, AIN, ACA, LNN, MGRC, AIMC, HLIO, BMI, WTS, MWA, TRTN, FTAI, CW, RXN, KAI, ROCK, ATKR, CSWI, DOOR, IBP, AAON, SSD, NSSC, USLM, LGIH, MHO, MDC, FTDR, MEG, CWST, AMRC, STN, ROAD, NVEE, CPA, VLRS, HTLD, MRTN, SAIA, ATSG, FWRD, DHT, PRG, FPAY, ZUMZ, AEO, BOOT, GO, EYE, FLWS, HZO, HIBB, FUBO, IH, SCPL, SHAK, WING, PLAY, DIN, TTEC, DAVA, PRFT, EXPO, FCN, HHR, ASGN, SP, BRC, ASPU, VSTA, GHG, EVRI, GAN, SGMS, COHU, SUMO, PD, VERI, SVMK, BCOV, EGAN, INS, WK, UPWK, SPNS, ENV, RAMP, SPSC, DSGX, MODN, PRGS, ASAN, BAND, CRNC, SPT, SSTI, JAMF, PHR, CEVA, VRNS, SDGR, HQY, RCM, HCAT, EVH, OTRK, OPRX, KRNT, CRSR, SSYS, NNDM, PSTG, AUDC, CLFD, CALX, LFUS, MEI, VLDY, QNST, YALA, JMIA, RVLV, PRTS, TTGT, LIND, KLIC, SITM, MTSI, ALGM, SMTC, CRUS, MXL, EXPER, AMBA, COHU, CCMP, CAMT, ACMR, PHI, GOGO, IRDM

DISCLAIMER:

Data Accuracy: This report was prepared from 10-01-20 to 12-31-20 so some of the figures may not be exact as of the end of 2020, but due to the time-intensive nature of the project it was required. The data provided is deemed to be reliable and was collected from multiple sources such as company presentations and documents.

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