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Big Debates 2021 | North America

Key Investor Debates Likely to Drive Stocks in the Coming Year

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Our Global Economists maintain their view that the V-shaped recovery will continue into 2021, and they forecast global growth of 6.4%, 100bps above the consensus. With that backdrop, our US Equity Strategy team remains bullish into 2021, but they argue that the coming year will be much more about stock picking (alpha). They recommend focusing on stocks with strong operating leverage to above-trend economic growth — cyclicals and reopening beneficiaries — and growth stocks with reasonable valuations given our house view that interest rates will be higher than the consensus currently projects.

As 2021 cycles past the extraordinary events of 2020, our analysts are particularly focused on which industries and firms exit with stronger market share and more efficient cost structures; how the pandemic has accelerated existing trends and presented new opportunities; how competitive moats have changed.

Critical underpinnings of these views are subject to vigorous debate in the marketplace. Our call on rates has been a frequent point of pushback. Given the clearly positive news flow about vaccines, there are divergent views about additional economic stimulus measures. Another debate swirls around equity market leadership given recent momentum shocks; lingering uncertainty on a new growth path and a re-rating of cyclicals off the lows leave questions about the durability of any rotations.

Against this backdrop, we publish our annual edition of *Big Debates*. In this signature product and longstanding cornerstone of our research offering, we highlight key debates that we think will shape industries and drive stocks in the coming year.

We emphasized debates that are likely to matter, that are likely to be settled (or significantly advanced) in the coming year, and where we have a view that differs meaningfully from the current market consensus.

Our job as securities analysts starts with conversations with leading investors. We look to identify which debates matter today, and more importantly, which will matter in the future. These conversations, and a growing array of data and analytic tools, give us a sense of "what's in the price" — and what we believe should be, but is not yet.

As always, we look forward to your feedback, and we thank you for your partnership.

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Banks & Consumer Finance

Reasons to be Bullish in 2021 for US Banks and Consumer Finance Stocks

Morgan Stanley & Co. LLC

Betsy Graseck

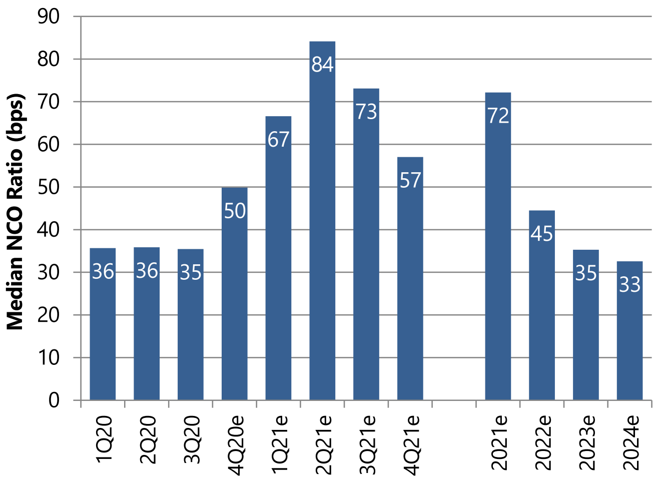
Ken Zerbe

Our View	Market View
Market is missing that a vaccine is a crystal ball. Vaccine distribution enabling US normalization by the end of 2021 is bullish for our coverage. We expect it to drive up long end interest rates, accelerate loan growth, drive down unemployment and allow banks to resume buybacks. We recently upgraded US Large Cap Banks & Consumer Finance to Attractive and have materially increased PTs on the US Midcap Banks as we believe banks are set to fire on all cylinders. Our 2022 earnings estimates land ~8% above consensus, with a median 18% upside in our base case. **Where are we most different from Consensus?** 1) Lower credit costs, as banks are already reserving above our forecasted unemployment levels; 2) More share buybacks. We think banks will be able to optimize their capital structure over the next 2 years as we exit the pandemic and the economy recovers. Taking the current combined $109B in excess capital above our estimated board requirements and adding in earnings accretion lands our estimated capital return at a median 15% of market cap over the next 2 years. 3) Steeper curve, as we estimate the 10-year yield to be at 1.65% by YE22 driven by higher inflation. This compares to current forward curve estimates of ~1.3% by 4Q22, landing our 2022 NIM estimates above the street across ~65% of our coverage.	**Need to see it to believe it.** With credit costs a median ~12% higher than our estimates in 2021 and the forward curve only implying ~1.1% 10-year yield by 4Q21, we believe consensus view is baking in too conservative a view for bank stocks – consensus view is the vaccine's impact will be insufficient to drive material growth in the economy, inflation, or interest rates.

There are three areas where we are most different from Consensus

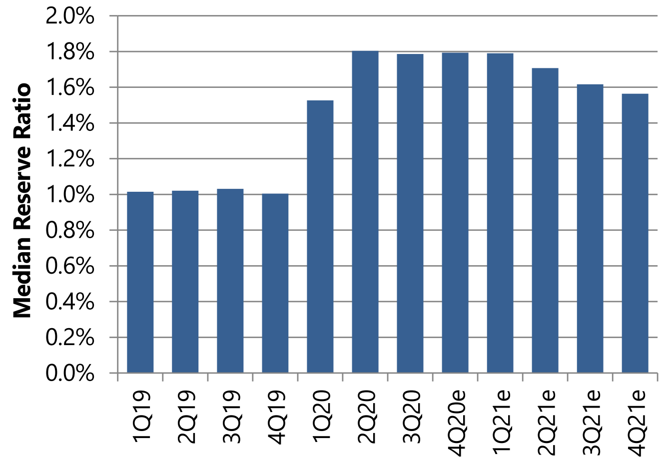
1) Credit costs likely to surprise on the low side. As we look out to unemployment levels of 4% in 2022, we think the probability is higher that losses are lower and reserve release is faster than what we are currently forecasting. Why? Banks have already reserved for unemployment of 8-11% as of YE20 and 6-9% as of YE21. Unemployment stands at 6.7% currently. Even if the country re-enters lockdown to battle the coronavirus and unemployment increases back to 9% or higher, we all know it will be a temporary event as vaccines are expected to be widely available from around March. Any stimulus would further reduce the peak losses we are forecasting.

Exhibit 1: NCOs to Peak in 2Q21



Source: Company data, Morgan Stanley Research estimates. Median includes Midcap banks covered by Ken Zerbe, and Large Cap Banks and Consumer Finance stocks covered by Betsy Graseck. ADS covered by Jeff Adelson.

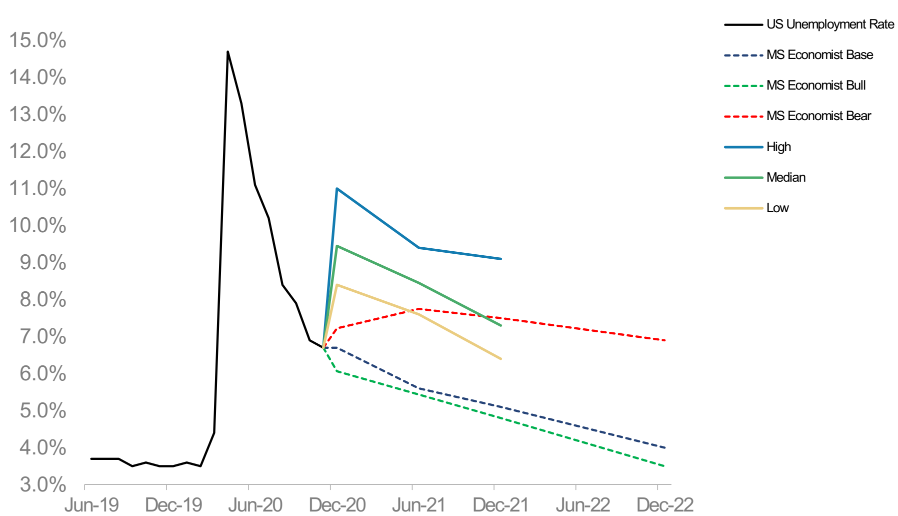
Exhibit 2: Median Reserve Ratios



Source: Company data, Morgan Stanley Research estimates. Median includes Midcap banks covered by Ken Zerbe, and Large Cap Banks and Consumer Finance stocks covered by Betsy Graseck. ADS covered by Jeff Adelson.

Exhibit 3: Banks built reserves using much higher unemployment estimates for year-end 2020 and 2021 than our economist currently forecasts. The unemployment rate would have to increase well above our economist's bear case in order to hit earnings.

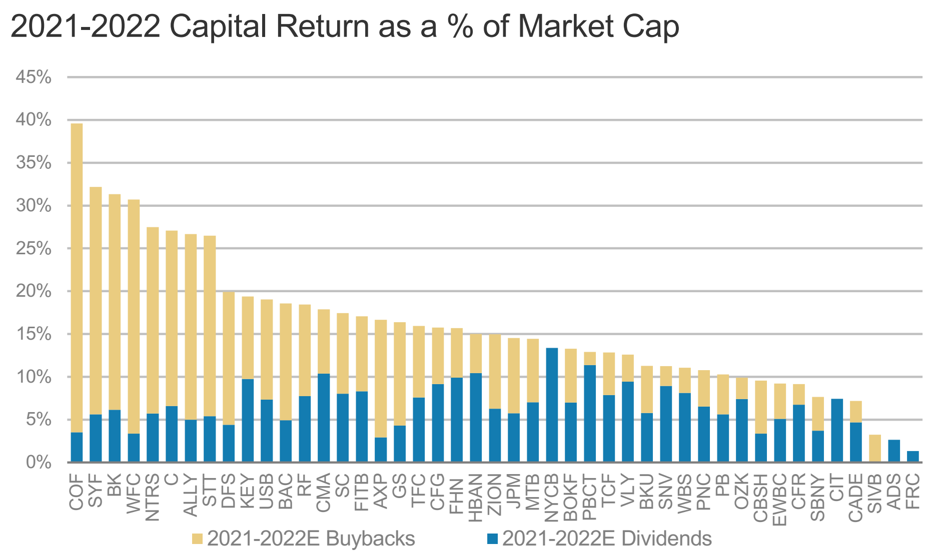
Unemployment rate: MS estimate vs. bank estimate used in reserve build



Source: Company data, Morgan Stanley Research estimates. Note: High / Median / Low above represent data for Large Cap Banks and Consumer Finance stocks that disclose unemployment assumptions used in reserving methodology.

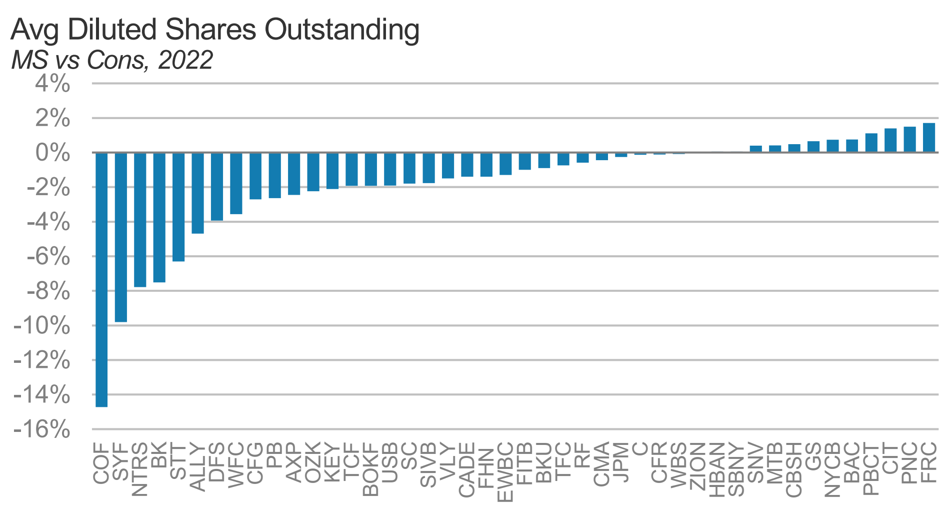
2) We expect accelerating share buybacks in 2H21. Currently, as of 3Q20, we estimate that the banks and consumer finance companies we cover have a combined $109B in excess capital (range 0% to 44%), and a median 12% above what we estimate boards require. Some banks, like PB have already begun buying back stock, while other such as banks with little credit exposure like BK, STT, and NTRS could begin in 1Q21 after CCAR results are announced in December. We expect the rest of the banks we cover will be able to resume buybacks in 3Q21 post the regular CCAR stress test results are announced in late June 2021. By then we expect the Fed's range of outlooks for the economy will be tighter after vaccines are likely to have been distributed. Buybacks could be larger if credit losses are lower (i.e., even greater reserve releases). Buybacks could also come earlier if the Fed lifts the restriction on December 18, and the SCB rule could enable faster buybacks than we forecasting. Banks might also consider accelerating repurchases ahead of a new Vice Chair of Supervision potentially starting in November 2021.

Exhibit 4: We expect banks to return a median of 15% of market cap over the next two years



Source: Thomson Reuters, Company data, Morgan Stanley Research estimates

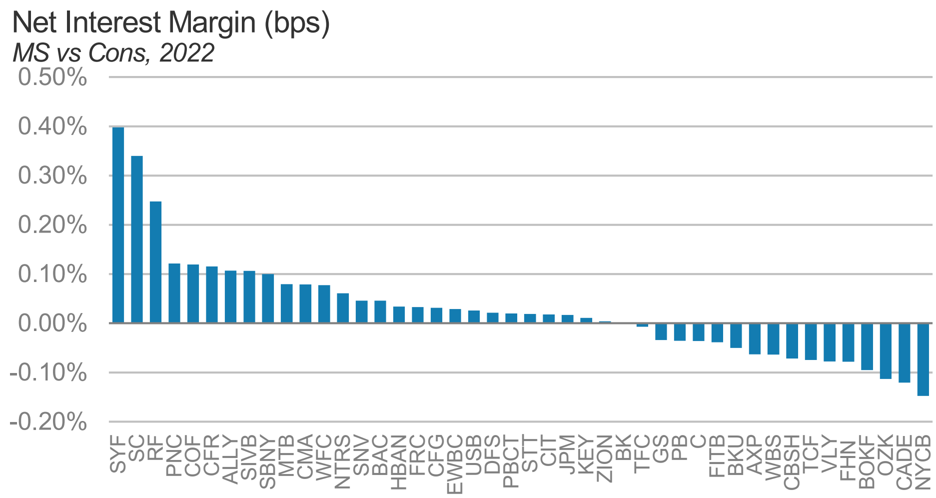
Exhibit 5: ...driving 2022 diluted shares lower vs consensus across ~70% of our coverage



Source: Visible Alpha, Morgan Stanley Research Estimates

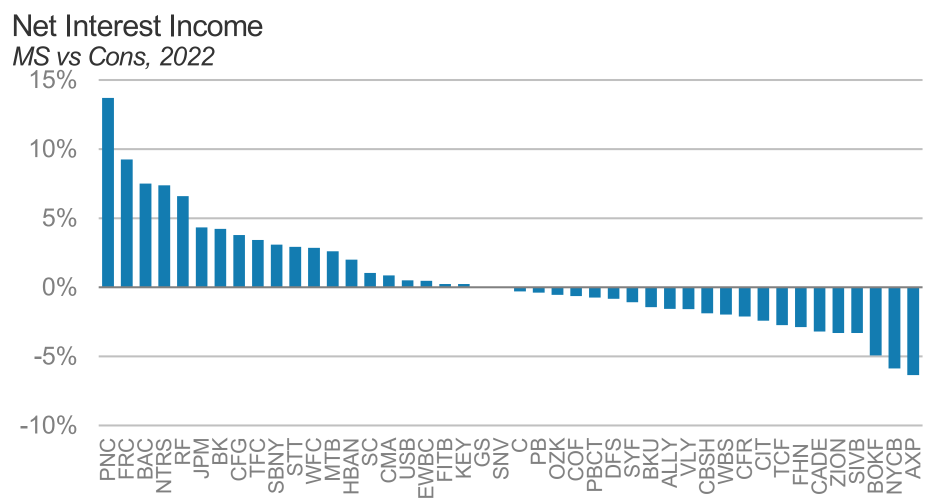
3) MS economists expect a steeper yield curve. Our economists are looking for core PCE inflation to rise to 2.2% by the end of 2022. This plus strong real GDP growth drives our rate strategist view of the 10yr yield at 1.45% by YE21. We then apply the differential to the forward curve to get to 1.65% 10-year yield in 2022 that we use in our Large-cap bank NIM estimates for 2022e EPS. For midcap banks, we are not building in the steeper curve, which means there could be EPS upside if that view plays out. *Baking in a 1.65% 10yr yield is out-of-consensus*, driving our 2022 NIM estimates above the street across ~65% of our coverage. With a 2.2% inflation rate yields could be even higher, given that in prior years with inflation at 2%+, the 10yr yield was running at about ~4%.

Exhibit 6: Our 2022 NIM estimates land above the street across ~65% of our coverage as we bake in a 1.65% 10-year yield vs. ~1.3% implied by the forward curve...



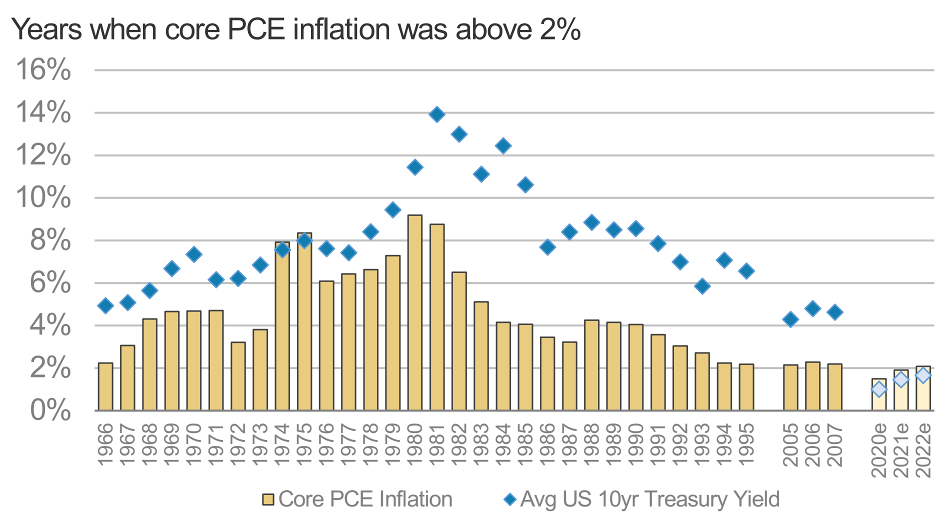
Source: Visible Alpha, Morgan Stanley Research Estimates

Exhibit 7: ...driving our 2022 NII estimates above the street across ~45% of our coverage...



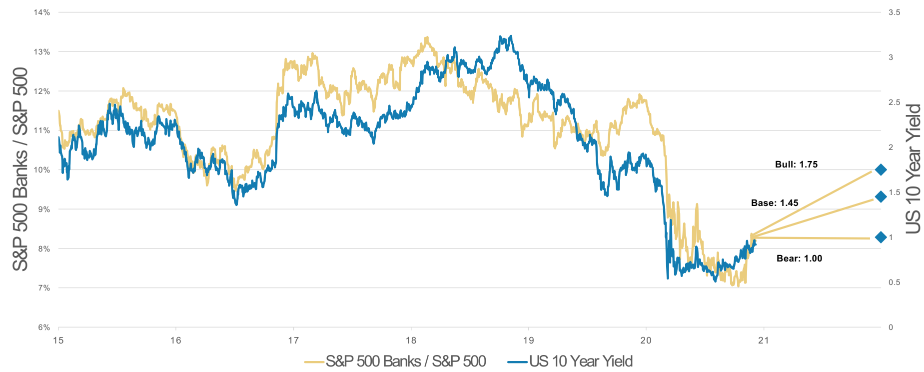
Source: Visible Alpha, Morgan Stanley Research Estimates. Note: We bake in the BBVA USA acquisition into our numbers for PNC.

Exhibit 8: ...but US long end interest rates are typically 4%+ when inflation is above 2%. Our US economist forecasts inflation above 2% by 2022.



Source: Bureau of Economic Analysis, Morgan Stanley Research estimates. Note: Core PCE defined as PCE ex Food and Energy. MS forecasts are from US Economist Ellen Zentner's note "2021 US Economic Outlook: Resilient, and Self-Sustaining."

Exhibit 9: Bank stocks outperform when the 10 year yield is rising as NIM outlook improves



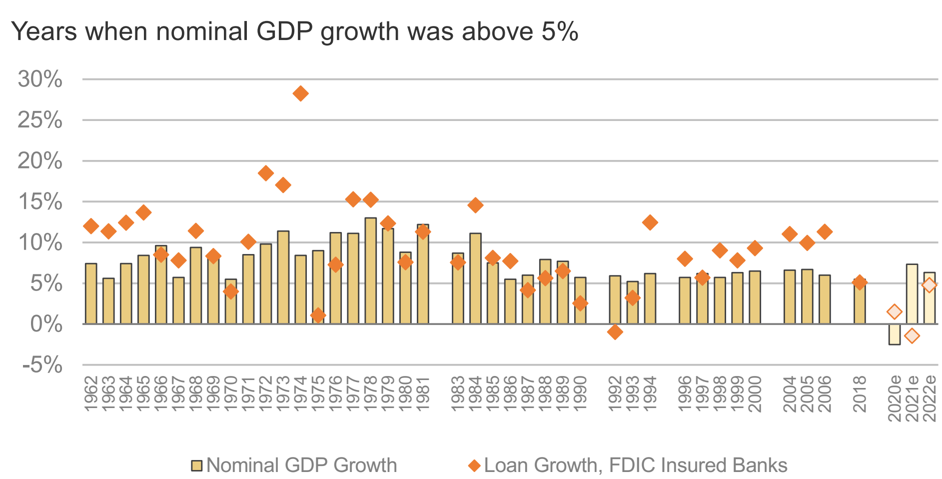
Source: Bloomberg, Morgan Stanley Research estimates. Note: 10 Year Yield Bull/Base/Bear Case are as per MS Interest Rate Strategist for Year End 2021. Bank team 10yr bull case is our interest rate strategist's bear case; bank team bear case is interest rate strategist's bull case.

What are other drivers of EPS growth?

Higher loan growth. Our economists' forecasts point to US nominal GDP growth of -2.5% in 2020, +7.3% in 2021, and +6.3% in 2022. Loan growth typically follows nominal GDP growth (see exhibit below), so our annual loan growth forecasts of -1.5% for 2021 and +4.8% for 2022 look conservative.

Higher deposit growth. Bank reserves are expected to increase ~$2.3T in 2021, up from $1.5T growth in 2020e).

Exhibit 10: Last time nominal GDP growth was above 5% in 2004-2006, loan growth was 10-11%... suggesting our loan growth forecasts are fairly conservative



Note: GDP growth shown as year over year. Morgan Stanley forecasts are from US Economist Ellen Zentner's note "2021 US Economic Outlook: Resilient, and Self-Sustaining." Weighted average loan growth forecast for Large Cap Banks and Consumer Finance stocks shown above.
Source: FDIC, Bureau of Economic Analysis, Morgan Stanley Research estimates

Consumer Finance Top Picks – Our Views:

Synchrony ($32): Robust performance in retail card, reserve releases, ramping buybacks, with growth kicker from new Verizon/Venmo relationships. $51 PT (57% upside).

Alliance Data Systems ($76): Mispriced for ongoing shift to a consumer finance pure-play and better credit, with a slingshot to the future of retail (recent entry into Buy Now Pay Later). $115 PT (51% upside). *(note: ADS covered by Jeff Adelson)*

Ally ($32): Valuation attractive for the ongoing auto recovery. One of our best NIM stories, trading at just 0.8x 2021e BVPS despite expected 11%+ ROE. $47 PT 45%, upside).

Capital One ($93): Highest expected level of excess reserves among all companies by next year should drive large ramp in share buybacks. $131 PT (41% upside).
American Express ($124): Vaccine provided a booster shot for T&E, benefiting Amex. Expect revenues up 13% in 2021. $175 PT (42% upside).

Large Cap Bank Top Picks – Our Views:

Regions ($16): Winning the battle against the curve, as hedges should add ~30bps to NIM and ~2% pts to ROE; undervalued for its earnings stability. $22 PT (38% upside).
Wells Fargo ($29): Uncertainty around impact of business exits and timing of consent order / asset cap exit more than reflected in the stock (6.7x 2022e EPS, 0.7x 3Q20 BV). Asset sensitivity and expense optimization the main drivers of the EPS outlook. $40 PT (38% upside).
Citigroup ($58): Deep value play in an improving economy. At just 0.6x NTM BVPS, C looks inexpensive even after factoring in higher expenses from the consent orders. Stock does not reflect Citi's diverse business mix and more resilient wholesale business. $79 PT (35% upside).
State Street ($76): Way to play rising rates and capital return. STT has a high EPS benefit from higher long end rates and is one of only 3 stocks we cover that we expect will be allowed to resume buybacks in January. $99 PT (31% upside).

Midcap Bank Top Picks – Our Views:

East West Bancorp ($47): Superior fundamentals – above-peers expected loan growth and ROTCE, and strong capital position (12.8% CET1 ratio in 3Q20) which gives considerable cushion to absorb credit losses and potentially return capital. $59 PT (27% upside).
Signature Bank ($121): Attractively valued (9.6x 2022e EPS vs peers at 10.6x) as the market is overly discounting potential credit losses in CRE, particularly given its strong underwriting history. Could benefit the most from return-to-work. $155 PT (28% upside).
Citizens Financial ($36): Expect improved profitability under their TOP VI program, which has been upsized to $400-425 mil of pre-tax benefits by year-end 2021; strong capital position puts CFG in a good position to eventually return capital to shareholders. $44 PT (24% upside).

Potential Catalysts

- **CCAR Round 2 (December 18).** Expect trust banks will be allowed to resume buybacks given relatively low credit exposure; others likely to be allowed to resume buybacks post-the June release of the 2021 capital stress test.
- **Consumer Credit Data (Monthly),** as well as unemployment data, potential fiscal stimulus, vaccine distribution.
- **1Q21 earnings.** Expect color on drivers of reserve release.

Biotechnology and Pharmaceuticals

Fizz or Fizzle? Are COVID-19 Vaccines a Sustainable Source of Revenue to Biopharma?

Morgan Stanley & Co. LLC **Matthew Harrison** **David Risinger**

Our View	Market View
We believe there will be some need for boosters, but the potential size and scope of that booster market has very wide ranges: Three factors support our view that a booster may be required. First, antibodies levels appear to be a direct correlate of protection. Second, we know that antibody levels fade and for other beta-coronaviruses they fade below levels of protection by one year. Finally, there have been demonstrated cases of reinfection in protected patients. **However, while we believe some boosting will be required, there is significant debate around the opportunity:** David Risinger, who covers Pfizer, believes the market is likely to be limited since very few other vaccines require long-term boosting. Matthew Harrison, who covers Moderna, believes that boosters are more likely to be required for those at high-risk or the elderly since they have greater immune senescence and may see their antibody levels fade more dramatically. Some 200M people in the US are elderly or considered at high-risk, per the CDC, suggesting a reasonably-sized market.	**The equities' valuations suggest the market believes there is a reasonable booster market.** Consensus estimates for Pfizer and Moderna suggest ~$9B in 2023E sales. Assuming flu-vaccine-like-pricing, this suggests investors expect ~550M booster doses annually. Assuming higher pricing of around $35/dose (out-year consensus models pricing of $30-40/dose), suggests around ~240M doses. The latter estimates are reflective of boosters being required in developed markets for high-risk/elderly patients while the former estimates suggest a broader booster market. **Buyside commentary, however, signifies great skepticism.** Buyside investors often compare the COVID vaccine market to that of Hepatitis C or other markets which had a large revenue bolus followed by significant declines in sales. These investors suggest that competition will lead to lower prices and that memory B cells coupled with T cell responses will limit the need for boosters.

Introduction: Many investors spent 2020 analyzing epidemiology models and neutralizing antibody responses in hopes of understanding when the world will return to "normal." As case numbers continue to accelerate going into 2021, biopharma has responded with unprecedented speed and resources to combat the pandemic. We highlight the development of antiviral and monoclonal antibody therapies, along several advanced vaccine candidates as evidence of biopharma's positive impact on fighting COVID-19. Overall, we believe the continued adherence to public health measures and ultimate rollout of effective vaccines will bring the pandemic under control by late-summer/early fall 2021. Based on these projections, we see biopharma continuing to stay in the headlines until at least mid-2021, but we recognize the lack of key catalysts in the near-term. We assume a US Emergency Use Authorization will be granted by YE20 for both Pfizer/BioNTech and Moderna's vaccines, which we expect will inevitably advance the debate from "what is the bolus of revenue from COVID-19 vaccines" to "are the revenue streams from COVID-19 vaccines sustainable on a long-term basis." There is little investor debate that the vaccines will generate $10s of billions of dollars in revenues in 2021, but there is much more debate around the durability of those revenue streams. Below we outline the market debate and our views.

Bull Argument:

- **Protection is driven by antibody levels, which fade:** SARS-CoV-2 was identified in late 2019 and our breadth of knowledge related to reinfection risk and durability of protection is limited by the lack of long term data. At this point, it is believed that people infected with SARS-CoV-2 could have immunity that lasts 6-8 months after infection. The longest follow up we have regarding the durability of the mRNA-based COVID-19 vaccines is 119 days. Given the limited data available, it is reasonable to assume that neutralizing antibodies that confer protection will last at most one year. This scenario assumes SARS-CoV-2 becomes endemic, in which case yearly boosting doses would be required.

- **Public health officials must be cautious in their approach:** We believe public health officials will be forced to take a conservative approach to potentially boosting old/vulnerable people given the devastating consequences of the pandemic to date. It is more likely that officials will advise at-risk individuals to receive booster doses for at least the first few years, while significant data is collected on durability. We note that there are over 200M people in the US that fit into this category, which drives the bull debate around the durability of these potential revenue streams.

- **Re-infection presents a real risk:** There are several reports of people being re-infected with SARS-CoV-2 and we expect more as the pandemic continues to spread. Most people who are re-infected were asymptomatic after the first infection and unfortunately got worse, not less severe, disease upon re-infection. At this point, it is estimated that ~30-40% of people infected with SARS-CoV-2 are asymptomatic. Additionally, there is no long term data around infection risk after neutralizing antibodies begin to decrease. These unknowns further support the potential need for boosting during the endemic phase.

Bear Argument:

- **Only the flu vaccine requires an annual shot, due to virus mutations:** Notable exceptions to long-term immunity are flu vaccines (every year) and tetanus/diptheria (every 10 years in the US) that would likely not apply to COVID. The flu vaccine requires annual vaccinations due to mutations (so technically not boosting) and although the perception is that immunity from the flu vaccine wanes over months, even this view is questionable (CDC). The WHO does not recommend Td boosters and recent research appears to support that.

- **Antibody levels may not be the only relevant factor:** Recent research has led some key thought leaders to believe that immunity may last years, including a recent finding that SARS survivors carry important immune cells 17 years after recovering (November 17 NYT article). Concerns about antibody titers waning may be overblown, since patients who receive vaccines against other diseases typically experience antibody declines and do not require re-vaccination.

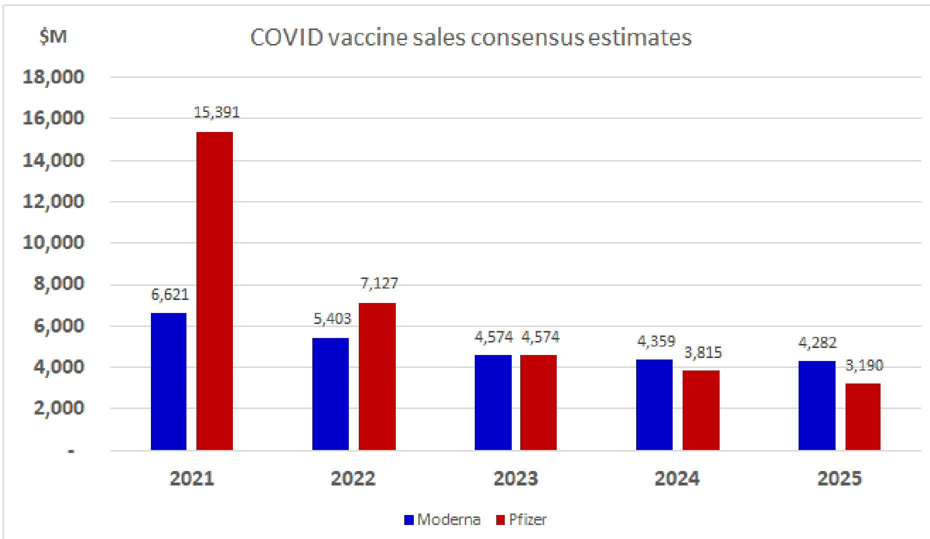
- **Long-term pricing is a major risk due to multiple late-stage vaccines:** There are at least seven vaccines in Phase 3 clinical trials in western countries and another 5+ in other markets. While the Pfizer/Moderna vaccines have set a very high efficacy bar, other vaccines may be cheaper and/or high-efficacy vaccines may be reserved for the highest risk patients. Thus, assuming that pricing can go up after the pandemic period is over represents a major risk to out-year forecasts.

Vaccine sales expectations are significant

The market does not debate initial sales, but is concerned about the durability of the revenues

2021 sales dynamics are well understood, but the years after are not. For 2021, both Pfizer and Moderna have clear output ranges and investors generally know the per-dose pricing. Further, given the great need to vaccinate the population, vaccine supply will be less than demand, limiting questions around demand. For 2021, Pfizer has said it expects to produce ~1.3B doses and we expect pricing to range from $13 (OUS) to $19.50 (US) per dose. For Moderna, management expects to produce between 500M and 1B doses at prices from $16.50-25 (US), $15-25 (OUS large contracts) and $32-37 (OUS small contracts). Together these dynamics suggest a COVID-19 vaccine market of $30B+ in 2021.

Exhibit 11: Pfizer and Moderna annual vaccine consensus sales 2021e-2025e



Source: Visible Alpha, Morgan Stanley

After 2021, the range of estimates increases substantially. As we have discussed, the level of competition, its impact on pricing and the requirement for annual booster (or not) are key factors in determining the viability of the COVID-19 vaccine revenue stream.

Exhibit 12: # of doses / year for Pfizer and Moderna 2023e-2025e assuming $35 per dose

M doses	2023	2024	2025
Moderna	131	125	122
Pfizer	131	109	91

Source: Visible Alpha, Morgan Stanley

Exhibit 13: # of doses/year for Pfizer and Moderna 2023e-2025e assuming $15 per dose

M doses	2023	2024	2025
Moderna	305	291	285
Pfizer	305	254	213

Source: Visible Alpha, Morgan Stanley

We expect to learn more in 2021. Investors are focused on durability data from the Phase 3 studies which we would expect to start to have in 2021 as well as the efficacy and uptake of non-Pfizer/Moderna COVID-19 vaccines.

Potential Catalysts

- J&J, AstraZeneca (US trial) and Novovax (OUS trial) are expected to have data in 1Q21
- Sanofi/GSK is initiating a Phase 3 of their protein-based vaccine by YE20, and topline data are expected in 2Q20
- In 1H21 we would expect to learn if the Pfizer/Moderna vaccines stop transmission (bear case for boosters) or if they have limited impact on asymptomatic protection.
- We expect to better understand the correlates of protection in 2021
- Pfizer and Moderna vaccines' immune response durability data assessed by antibody tests at six and 12 months after completion of vaccination are expected in 2Q21 and 4Q21.

Stocks Mentioned: *Pfizer ($42.56), Moderna ($169.86)*

Brokers & Asset Managers

Advisor Network Consolidation: How Much More Room to Run?

Morgan Stanley & Co. LLC **Michael Cyprys** **Manan Gosalia**

Our View	Market View
The market is underestimating the consolidation potential of advisory networks. We see Covid as an accelerant of megatrends in the highly fragmented advisor marketplace that will drive greater technology adoption by advisors. We expect advisors will increasingly join/affiliate with advisor networks that can offer access to technological capabilities that improve efficiency and productivity of advisor practices to help them scale and better serve customers. While M&A is not in our base case or consensus, we think M&A driven consolidation is likely and could drive 15-20% upside to estimates and could see higher likelihood once a vaccine is distributed that will allow for more onsite diligence and greater relationship/trust building in-person.	**An improved macro outlook with a vaccine on the way may spur a reversion to the status quo in terms of advisors and how they operate.** The market rebound has mitigated much of the short-term business pressures faced in March-April, and a return to the office may create an inertia that impedes a move to more tech-enabled platforms as old habits stay in place. Upside from M&A also not in estimates.

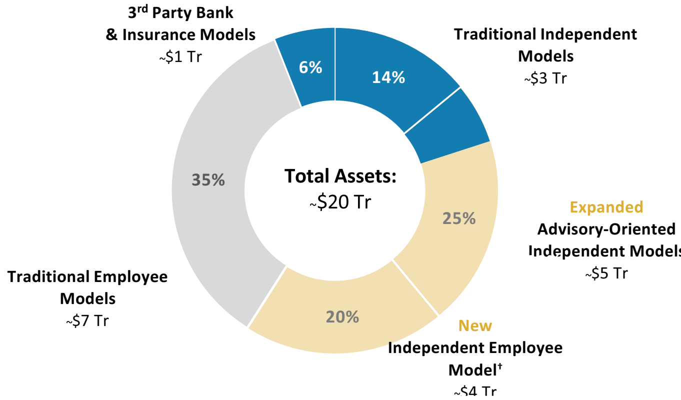
Covid-19 to accelerate consolidation of a fragmented industry. Mega-trends of technology evolution, aging advisors, fee pressure, expanding client expectations and the increasingly complex regulatory environment are all driving greater need for scale, capital and capabilities to maximize an advisor's value proposition. We expect advisors will increasingly join/affiliate with advisor networks that can offer access to capital to grow and facilitate generational transfer of practices, and to provide technological capabilities to improve efficiency/productivity of advisor practices to help them scale.

Highly fragmented industry with $49 trillion of investable wealth includes about $20 trillion of advisor managed assets under various affiliation models, including $5 trillion of independent broker-dealer and hybrid advisors, which is likely the sweet spot for consolidation given industry challenges.

We view **LPL Financial** (LPLA, $98.15) and **Raymond James** (RJF, $92.93) as attractive plays on consolidation in a fragmented independent advisor industry in the US.

LPLA's strong capital capacity and the tech investments made to enhance platform capabilities position the company as an attractive consolidator, .in our view. This comes as we think smaller firms are likely to struggle to make necessary investments in technology and capabilities to keep pace. We see sustainable organic growth momentum and look for 7% growth in 2020e to accelerate to 9% in 2021. Increased focus on recruiting is starting to pay off, and we expect net positive advisor adds to grow headcount at 4% CAGR from 2020-24e. **Management recently commented that they see more compelling and significant organic growth opportunities ahead** where they can deploy capital at 2x-3x EBITDA, as well as inorganic growth opportunities where they've typically deployed capital at 6x-8x EBITDA as compared to repurchasing shares at ~10x 2020e EBITDA. *We have no knowledge of any potential transactions.*

Exhibit 14: LPLA expanded its addressable market to ~$15Tr (from $5Tr traditional market) by adding new affiliation models such as advisor-oriented and independent employee models.

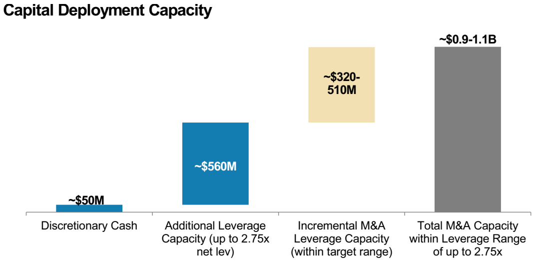


Source: Company Data, Morgan Stanley Research; Note: LPL YE2018 estimates based on employee advisor preferred affiliation channel (Cerulli data). Includes wirehouse, regional, and proprietary bank assets

M&A could drive upside to estimates; we size potential earnings accretion for LPLA of 11%-19% based on significant capital deployment capacity of $0.9-1.1b as of 3Q. Since quarter end, LPLA has deployed ~30% of its capacity with the recently announced acquisition of WDR's wealth management business, which demonstrates LPLA's desire to pursue M&A opportunities to complement organic growth. LPLA's pace of M&A activity increased this year (e.g., Lucia Securities, E.K. Riley, Blaze), and post Covid-19, the underlying drivers of consolidation are likely to accelerate, which could lead to more rational pricing/deal structures, and ultimately increased probability of LPLA's participation.

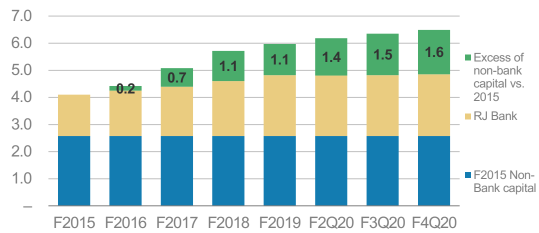
RJF's tech focus, advisor-first business model, and significant excess capital, position them well to take advantage of both organic and inorganic opportunities. Management has been ramping up tech spend, with the tech budget rising from $250M in 2017 to $400M in 2019. The company's focus has been on making its platform both customizable and secure to enable widespread tech adoption among its advisor base, helping boost advisor productivity. Indeed, some new recruits have cited technology as a key reason to join the RJF platform. On the business model, RJF's advisor-first approach gives advisors the flexibility of choosing how to affiliate depending on how much support they want, ranging from a traditional employee to an independent contractor. This flexibility is also one of the main reasons advisors are drawn to the platform. We expect these advantages should allow RJF to grow advisor count at a 5% CAGR through 2023. Additionally, management recently commented that they are entering into more discussions than ever on potential acquisition opportunities. With $1.6B in excess capital and $2B+ in liquidity, we believe RJF is well positioned to act quickly on M&A, potential upside to our Base Case.

Exhibit 15: LPLA: M&A could drive upside to estimates; we size potential accretion of 11%-19% based on significant capital deployment capacity of $0.9-1.1b



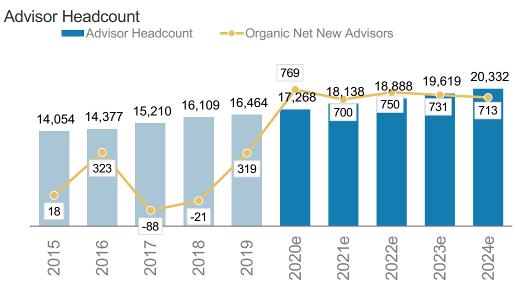
Source: Company Data 3Q20 Investor Presentation, Morgan Stanley Research

Exhibit 16: We see RJF as uniquely positioned with an estimated $1.6B in excess capital and $2B+ in liquidity to act quickly on acquisition opportunities



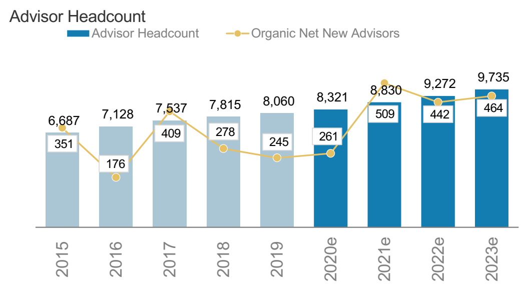
Source: Company Data, Morgan Stanley Research

Exhibit 17: LPLA: Increased focus on recruiting is starting to pay off, and we expect net positive advisor adds to grow headcount at 4% CAGR from 2020-24e



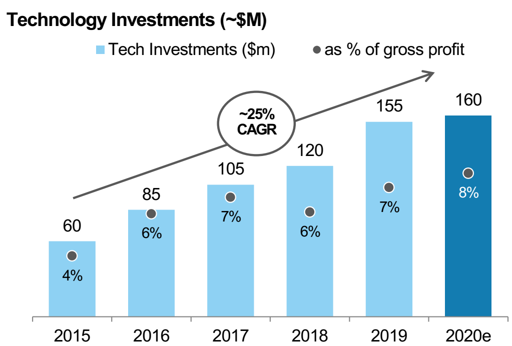
Source: Company Data, Morgan Stanley Research estimates

Exhibit 18: RJF: We expect RJF's strong technology offering and advisor-first business model allows them to grow advisor headcount at a 5% CAGR from 2020-23e



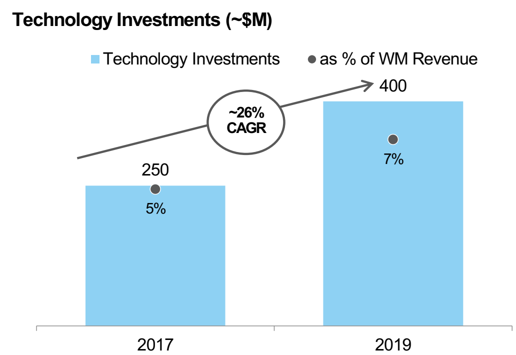
Source: Company Data, Morgan Stanley Research Estimates

Exhibit 19: LPLA has invested aggressively into technology capabilities, at a pace of ~25% CAGR over last 5 years



Source: Company Data, 2020 tech investments outlook based on company estimates as of 1Q20 investor presentation; Morgan Stanley Research estimates

Exhibit 20: RJF has been ramping up tech spend, with the tech budget rising from $250M in 2017 to $400M in 2019



Source: Company Data, Morgan Stanley Research

Potential Catalysts

- Covid-19 accelerating consolidation of a fragmented industry around tech-enabled platforms; potential M&A transactions, new advisor recruiting wins and announcements
- Monthly metrics from LPLA that show strong net new asset growth / RJF monthly metrics that show strong AuM growth

Chemicals: Sherwin-Williams

Is Sherwin a Covid Beneficiary or a Reopening Play?

Morgan Stanley & Co. LLC

Vincent Andrews

Our View	Market View
We think Sherwin is both a "Covid beneficiary" and a "Reopening play". We believe that consensus is mis-modeling Sherwin-Williams' 2021 EPS by penalizing it for being a COVID beneficiary in 2020 but failing to recognize it as a reopening play in 2021. Sherwin-Williams managed to grow EPS in 2020 despite COVID as: i) demand for "do it yourself" (DIY) paint in the company's Consumer Brands segment (~15% of 2019 sales) more than offset flattish sales in the company's paint stores (~57% of 2019 sales) which cater to professional "do it for me" (DIFM) paint demand; and ii) significant raw material cost tailwinds. Consensus is concerned that a reversal in DIY demand in 2021 will more than offset a recovery in the DIFM market, whereas we believe the opposite. We also believe that DIY demand will not decline as much as consensus expects. Further, we believe that a shift of volume from DIY to DIFM is margin accretive for the company all else equal. Net, while Sherwin indeed was a COVID beneficiary in 2020 from unprecedented DIY paint demand, the growth engine of the company (DIFM sales from its company owned stores) is set to grow SSS 12% in 2021 leading to EPS of ~$29 versus consensus of ~$26.	**Sherwin was a "Covid beneficiary" and the hard reversal of this favorability post-vaccine will limit EPS growth in 2021 and 1H22.** Sherwin was a Covid beneficiary from unprecedented "do it yourself" paint demand during the pandemic that will completely reverse in a post vaccine economy that mean reverts discretionary spending away from the home. While the company's paint stores will see a recovery in 2021 as the "do it for me" professional paint job backlog clears, it will not be enough to offset the eventual decline in DIY demand. The record margins that Sherwin achieved in 2020 will prove peak as volume resets and raw material costs reflate.

Our proprietary US paint market model and housing dynamics statistical analysis concludes that: i) pent-up paint demand from COVID-19 for "do it for me" (DIFM) paint jobs (Sherwin Williams' sweet spot) is greater than we previously thought (we now see Sherwin's 2021 SSS at ~12% versus 6.5% previously); and ii) recent housing data inflections continue to build the DIFM 2021 book of business, which we had not previously factored into our analysis. To be clear, our Base Case assumes the low end of our demand expectations, leaving meaningful upside in our Bull Case should conditions permit. Sherwin-Williams, with the most DIFM exposure in the group, remains our preferred paint & coatings play, despite the temptation to focus on an industrial/auto recovery to which it has the least exposure.

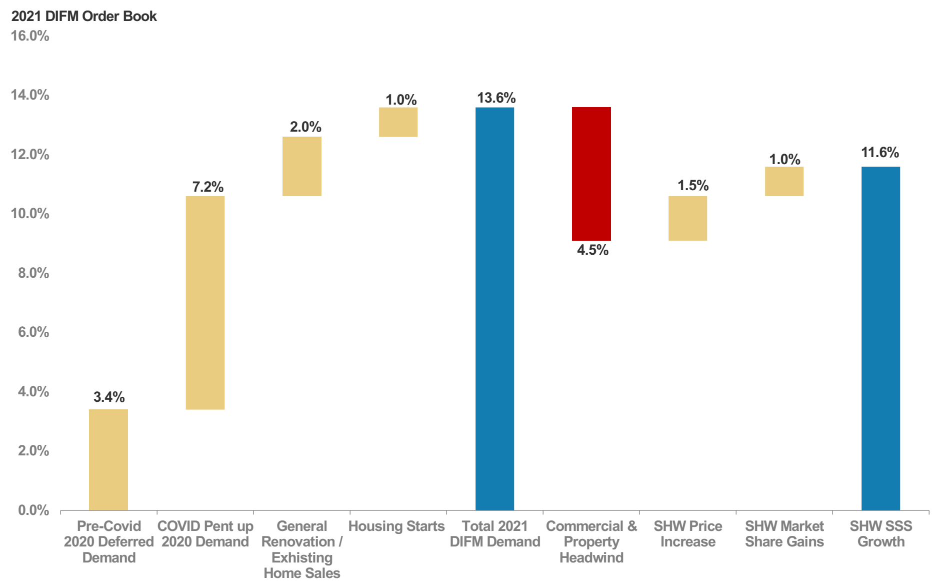
We are increasingly of the view that a new, COVID-inspired paint cycle has begun, which we expect to transcend the DIY paint frenzy of lockdown in the US/post-lockdown in the EU to a significant 2021 DIFM order book. We expect significant demand to come from consumers who simply did not want to paint themselves and therefore deferred their project needs until local protocols allowed for onsite professional work to resume and/or they were able to have / be comfortable with third parties in their homes. Macro data also increasingly suggests that paint demand is building from new home sales, existing home sales, and housing starts, the vast majority of which we expect to be completed by DIFM rather than DIY. This is not to say that the

DIY frenzy is over, nor that it was all just a pull-forward; rather, we think that the overall pie is growing and that DIFM growth in 2021 will more than offset DIY give-backs as DIFM was a bigger slice of the pie to begin with.

Put very simply, we believe consensus has yet to model in the new fact set: i) paint demand is higher post-COVID than it was pre-COVID, ii) costs of production are lower, yet iii) ASPs are higher. Coming into this year, we thought Sherwin-Williams had EPS power of $24-26 for 2020 and $27-29 for 2021. COVID disturbed 2020 such that we now forecast EPS of $24 for 2020 (having once modeled as low as ~$20). But we believe that COVID has improved prospects for 2021+ such that we now forecast a Base Case EPS range of $28 to $30.

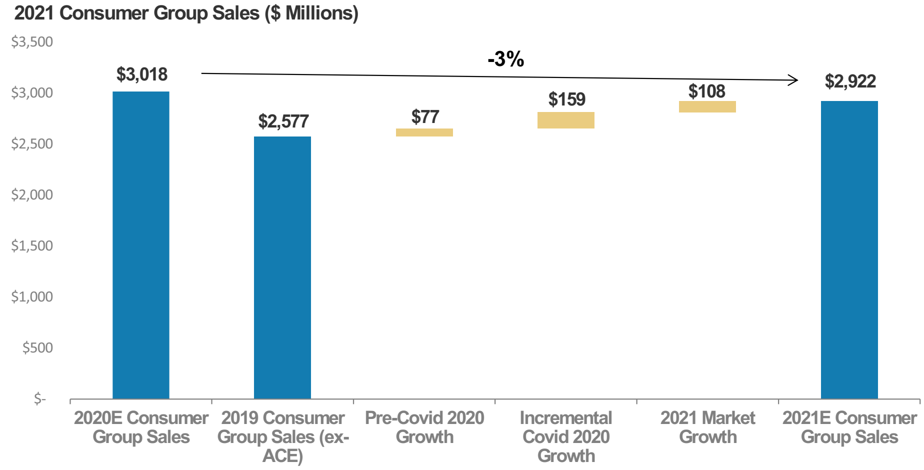
There are no doubt risks to our forecast given that it relies on consumers allowing professionals back into their homes to perform paint work. This is both a consumer psychology risk and a government protocols risk, depending on how the virus trends as we move through winter into 2021. That said, as we have argued since the beginning of COVID, any further delays will simply build the backlog of demand into future periods. While that is not the optimal outcome from a stock perspective, we remain of the view that delay is not denial and that any sell-offs associated with such an outcome should be bought. This proved an excellent strategy early in COVID.

Exhibit 21: 2021 DIFM Order Book & Sherwin SSS Build



Source: Morgan Stanley Research

Exhibit 22: Bridging DIY Trends In Sherwin-Williams' Consumer Group (note: similar assumptions made at peer companies)



Source: Morgan Stanley Research

Exhibit 23: Assuming 5.7 million existing home sales and 965,000 single-unit starts, our model suggests ~8.5% growth for P&WP in 2021

Annual Regression Summary								
	P&WP				Existing Home Sales		Single-Unit Starts	
	Actual		Predicted		Actual		Actual	
	($ billion)	% Chg	($ billion)	% Chg	(million)	% Chg	(thous)	% Chg
2012	9.134		8.896		4.66		535.3	
2013	9.451	3.5%	9.838	10.6%	5.09	9.3%	617.7	15.4%
2014	10.300	9.0%	10.019	1.8%	4.94	-3.0%	647.8	4.9%
2015	10.711	4.0%	10.767	7.5%	5.25	6.5%	714.6	10.3%
2016	11.176	4.3%	11.452	6.4%	5.45	3.8%	781.5	9.4%
2017	11.777	5.4%	12.068	5.4%	5.51	1.1%	848.9	8.6%
2018	12.505	6.2%	12.213	1.2%	5.34	-3.0%	875.7	3.2%
2019	12.515	0.1%	12.317	0.9%	5.34	0.0%	887.7	1.4%
2020	12.133	-3.1%	12.131	-1.5%	5.20	-2.7%	875.0	-1.4%
2021	13.176	8.6%	13.176	8.6%	5.70	9.6%	965.0	10.3%

Source: NAR, US Census Bureau, Morgan Stanley Research estimates

Stock Mentioned: *Sherwin-Williams'($719.26)*

Clean Tech

Is There More Room for Clean Tech Stocks to Run?

Morgan Stanley & Co. LLC **Stephen Byrd**

Our View	Market View
We see pockets of attractive opportunities in hydrogen, fuel cells, wind, and rooftop solar where addressable markets could be very large over time. These markets have low penetration levels, high barriers to entry, and large long-term value potential, and there could be further upside in these stocks. **However, several clean tech businesses have challenged long-term outlooks, and we think aggressive US renewables policy is unlikely with a divided Congress.** We are concerned about medium-term margin degradation in the solar panel manufacturing business for First Solar, and see electrolyzers as a market that could be commoditized over time.	**Clean tech stocks have surged with seemingly little regard to the strength of some stocks' underlying business models.** A clean energy halo has caused the rising tide to lift all boats and expand multiples significantly across rooftop solar, solar components, hydrogen, and wind. Some stocks with outlooks that are much less favorable than peers have risen in value despite near-term and long-term concerns. Several stocks are also now pricing in an aggressive US renewables policy outlook.

Clean tech stocks have surged in 2020, with our coverage up between 60% and >600%. In our view, a mix of factors has driven this performance: Growing levels of ESG capital inflows throughout the year, a faster market rebound from the Covid-19 troughs in 2Q, emergence of hydrogen as a potentially large market with a significant pool of value, and low cost capital available in the space (including financing partnerships, joint business investments, and solar ABS capital). In this environment all of our clean tech stocks under coverage are up significantly despite what we regard as very different market opportunities and business model prospects. Several stocks also appear to price in aggressive US renewables policies under a Biden administration.

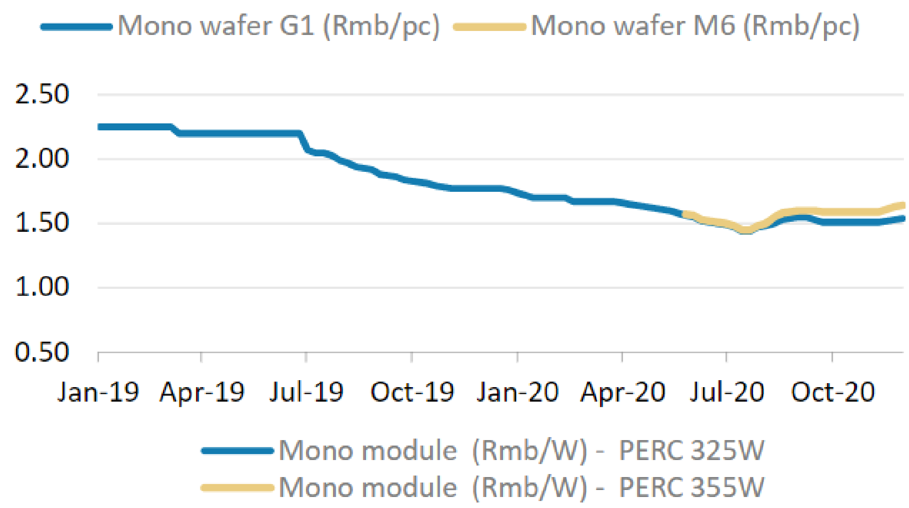
We see many exciting long-term opportunities but there are several areas where the industry appears set to miss the market's high expectations: solar panel manufacturing margins, electrolyzer profitability, and US renewables policy. We are bearish on the long-term market outlook for solar panel manufacturing given the significant manufacturing capacity being added in 2021 along with continued cost declines and stiff competition among major players which over time will likely put pressure on FSLR's margins. The electrolyzer market in our view has limited competitive differentiation and many new entrants, making us cautious on long-term market potential.

Could new clean tech policies under a Biden administration serve as powerful market support across clean tech, and a source of upside for these stocks? We are less optimistic than the market as we think a potentially divided Congress would serve as a major barrier to enacting meaningful clean energy policy. We believe FSLR has the most downside risk in a Biden administration among our clean tech coverage given the risk of tariffs either being removed from competitors or applied to FSLR's panels.

We share the market's enthusiasm for a number of clean tech market opportunities but there are several areas with less promising prospects that are poised to miss the market's lofty expectations. We see a challenging outlook for solar panel manufacturing (FSLR) due to worsening oversupply and prospects for price declines and margin pressure. We also think electrolyzers (being pursued by Bloom Energy, Plug Power) face a challenging path to profitability and market share given many new entrants and limited competitive differentiation. Finally, some stocks price in aggressive US renewables policies, which we see as less likely with a divided Congress.

FSLR ($89.89, UW, 34% downside to our $59 PT): Risk looks skewed to the downside around US tariffs with margin pressure in multiple scenarios. We think FSLR faces significant 700-800bp margin declines if a key US import tariff is removed or applied to the company's imports under a Biden administration - prospects we think have a high chance of occurring. We also continue to have concerns with longer-term margin erosion as FSLR's primary competitors, large module manufacturers based in China, will continue to aggressively cut manufacturing costs, and offer lower prices for its modules vs. First Solar, such that the company's module margins will come under pressure.

Exhibit 24: Solar panel pricing has declined significantly since 2019 and oversupply will likely drive further declines in 2H21



Source: PVInfoLink, Morgan Stanley Research

Electrolyzer business is likely to be highly competitive and challenging to drive long-term profitability. We are concerned that the electrolyzer business (essentially "fuel cells in reverse" — turning water into hydrogen via the use of electricity to split the water molecule) could be one with multiple aggressive competitors that offer low-cost products. We have been especially concerned with the established, predominantly Chinese alkaline electrolyzer products. This is a risk for products under development by BE and PLUG, though we see other products with strong prospects for both companies.

We think the potential divided Congress would be a barrier to aggressive renewables policies in the near-term. Several stocks price in incremental US policy support and accelerating market growth as a result. The more supportive policies that have been discussed, such as carbon taxes, renewable portfolio standards, and hydrogen support, are likely to require support across the aisle that appears challenging with a divided Congress.

Communications & Networking Equipment, Cable / Satellite, and Telecom Services

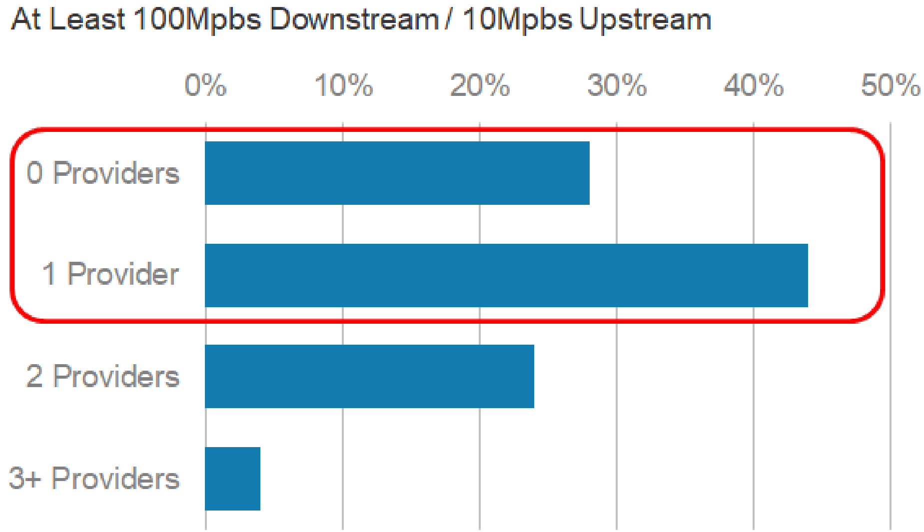
Where Does Fixed Wireless Access Best Fit in Today's Landscape?

Morgan Stanley & Co. LLC **Meta Marshall** **Benjamin Swinburne** **Simon Flannery**

Our View	Market View
Fixed Wireless Access (FWA) has the potential to be attractive with mid-band spectrum and subsidization. There remains a need for alternative connectivity given increasing broadband prices in some markets and lack of availability in others. FWA is one of those potential solutions, but economic feasibility of FWA remains key given need for dense fiber, power, and spectrum. In our view, FWA makes the most sense in suburbs (given the need for competitive solutions) followed by dense urban environments (where technology is more feasible). With significant subsidization, it could also make sense in rural environments. In our view, given the large portion of US homes have access to broadband, competitive pricing will be key to capturing share, as feasibility of investment largely related to take rates. **Timing of mid-band spectrum deployments.** The mid-band spectrum and 5G business case remains co-mingled, as one of the primary revenue opportunities for carriers in 5G is fixed wireless given better propagation. The first auction, CBRS, occurred on June 25th and spend from AT&T and T-Mobile came in well below our Telecom team's estimates, potentially signaling prioritization of C-Band spectrum auction on December 8. Further, the FCC RDOF auction just ended, awarding over $9bn of funding over 10 years for rural broadband, with wireless ISPs among the biggest winners. In our view, the release of this spectrum remains a critical catalyst to 5G investments as it enables the primary business case (and others) that could fund investment.	**Skepticism on economic feasibility of fixed wireless.** While we believe fixed wireless should make the most sense for suburban and dense urban environments, the key debate stems around the economics of fixed wireless implementation and potential TAM. Specifically, the market remains more bearish on feasibility of FWA given fiber needs for backhaul as well as continued investments in HFC / FTTH by cable providers. As a result, some investors are more bearish on the opportunity are skeptical that telcos will invest and build out networks to accommodate FWA. **Telco investors bullish on 5G prospects.** Telco investors remain excited on investment opportunities within 5G and combined wireless plans that could consolidate internet use share to telco wireless vendors. Given relatively muted CBRS results from the likes of AT&T and T-Mobile, investors look to the C-Band auction that kicked off December 8 for a catalyst to 5G investments. **Cable investments likely to increase to maintain leadership.** With cable providers currently holding majority share in residential broadband networks, investors expect increasing investment from these players to maintain position. Key debate revolves around whether fixed wireless can potentially disrupt advantages cable MSOs currently hold, a dynamic cable investors remain more cautious on.

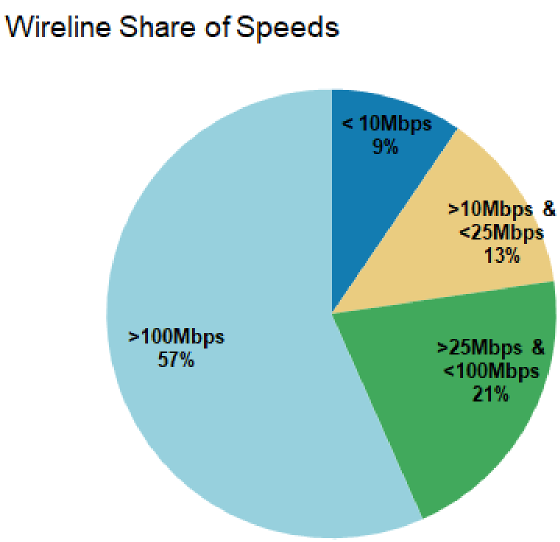
Why is FWA of importance today? In our view, there are three primary hurdles in the residential broadband internet market today, the first being ~40% of current connections are below 100Mbps, inadequate for modern connectivity needs. Next, ~16% of customers do not currently have access to connectivity, either due to pricing or location. Lastly, given that competition in many markets today remains relatively low, increasing broadband prices over time remains a gating factor. Ultimately, we believe fixed wireless has the potential in 5G to change the competitive landscape of this market by removing the most expensive piece of the broadband connectivity formula, digging the ground up and laying cabling (upwards of 2/3rds of the cost of providing high speed connectivity). This can help bring higher speed connections to a broader population at much more efficient prices.

Exhibit 25: Over 70% of the Residential Internet Subscribers Have No Alternative as of December '18, with Nearly 30% Having No Accessibility to High Speed Internet



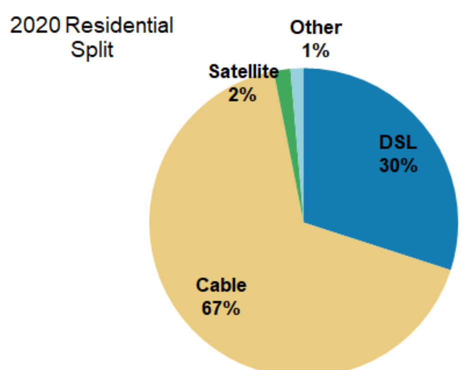
Source: FCC (Published Sep 2020, Data as of 12/31/18).

Exhibit 26: 43% of Residential Wireline Subscribers Do Not Have 100Mbps Internet as of December '18



Source: FCC (Published Sep 2020, Data as of 12/31/18).

Exhibit 27: Cable the Overwhelming Leader in Providing Residential Connectivity



Source: Morgan Stanley Internet Access Model as of 2020.

Potential Catalysts

- **Mid-Band Spectrum**: Wide availability of mid-band spectrum should catalyze investments in 5G and FWA. We look to the C-Band Spectrum auction (December 8), which we expect to close late January or early February.
- **New Network Buildouts**: TMUS is set to build out their fixed wireless solution in 2021, promising 10mm homes by 2024. Given TMUS already has mid-band spectrum, offering could be particularly attractive.

Investment likely doesn't step up until 2022 when mid-band spectrum should become more generally available. We think greater availability of mid-band spectrum and wider rollouts of 5G will trigger more competitive investment starting in late 2021 and early 2022. We think this favors CommScope, Casa, and Cisco more meaningfully, with Corning, Juniper, Viavi and Ciena also likely seeing some investment.

Stocks Mentioned: *CommScope ($12.92), Casa Systems ($7.50), Cisco Systems ($44.37), Corning ($37.93), Juniper Networks ($21.74), Ciena ($48.29), Viavi ($13.75)*

Defense

Will a Biden Administration Actually Be Good for Defense?

Morgan Stanley & Co. LLC

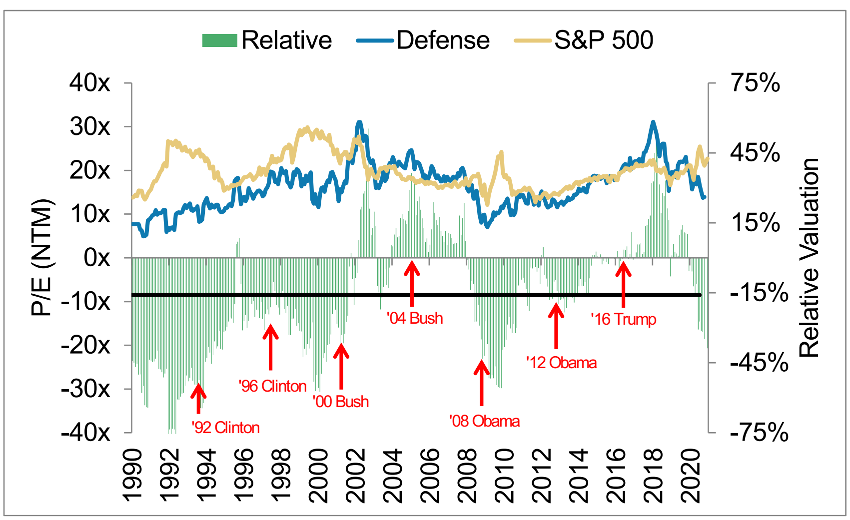
Kristine Liwag

Our View	Market View
We expect Defense Investment Accounts to grow regardless of political control. US military superiority is no longer guaranteed according to the Department of Defense. Adjusting for purchasing power parity and US involvement in the Middle East, China spends more money on Defense than the US This dynamic is largely underappreciated by the market and can provide downside protection for Defense primes' top line in the next few years as the US must keep pace to remain competitive. We view valuation for Defense as attractive and our top stock pick is Northrop Grumman.	**A Democrat in the White House is perceived as negative for Department of Defense spending.** Defense is trading at a discount to the market due to concerns regarding cuts to the Department of Defense spending. Defense stocks over the last ~30 years, a period that covers multiple cycles, have traded as high as a ~55% premium and as low as a ~75% discount to the S&P 500 with median levels being in the 15-20% discount range. Currently shares are trading at ~13.9x on an NTM basis which represents a ~39% discount to the S&P 500 at ~22.7x.

Increased Visibility for Defense in 1H21 from President's Budget Request

President-elect Biden's FY22 Budget Request and the associated five-year outlook for the Department of Defense is expected to be released in February 2021 and April 2021, respectively, and should improve visibility on US Defense spending and programs. We expect to see continuity in priorities for Defense as geopolitical tensions have not changed in recent months. We believe a pivot to the Great Power Competition is still underway with US adversaries having gained parity in critical technologies, including space systems and hypersonic weapons. We expect to see invigorated interest in the militarization of Space and the modernization of the nuclear triad, both of which would be positive for Northrop Grumman, in our view.

Exhibit 28: Historical P/E valuation of Defense industry across Presidencies



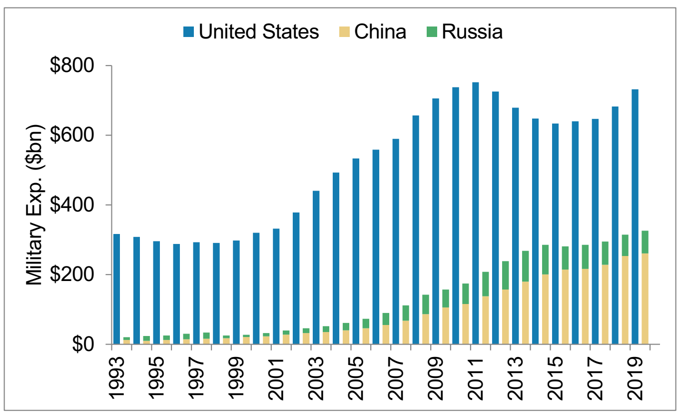
Source: FactSet, Thomson Reuters, Morgan Stanley Research

The Continuation of the Great Power Competition

Over the past two decades, while the US conducted operations in the Middle East, Russia and China ramped up and focused their military spending efforts on matching and exceeding US technologies. Without a costly ground troop commitment like that of the US, they were able to make relative gains (vs. the US) in key technologies and domains, such as hypersonics and space. Acknowledging this, the DoD has stated that Russia and China have now surpassed US capabilities in some of these areas.

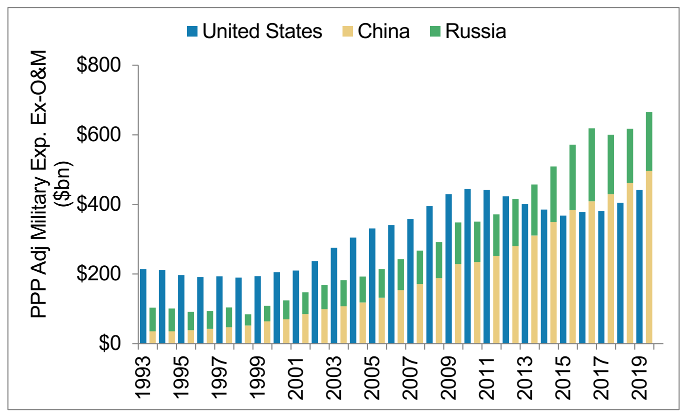
Instead of supporting active troops and bases abroad, China and Russia would presumably have more flexibility to focus on the development and fielding of advanced weapons systems. If we take operations and maintenance spending out of the US budget in order to better gauge US spending on personnel and modernization, we estimate that Russia and China combined spend ~50% more than the US

Exhibit 29: In Absolute Dollar Terms the US Spends Far More than Russia and China



Source: Stockholm International Peace Research Institute (SIPRI), Morgan Stanley Research.

Exhibit 30: Adjusting for Purchasing Power and Troop Deployments Implies the US Actually Spends Less than China and Russia



Source: Stockholm International Peace Research Institute (SIPRI), Morgan Stanley Research.

Prioritization of the Air Force and new capabilities are positive for NOC

We see prioritization of the Air Force and de-prioritization of the Army continuing, with the Navy and Defense-wide organizations falling somewhat in between. Looking at the alignment to services-level priorities, our analysis appears to favor Lockheed Martin and Northrop given their strong positions in the Air Force and Space Force (within the Air Force). General Dynamics and L3 Harris have somewhat less favorable exposure, with strong exposure to the Army. Our top stock Defense pick is NOC.

Exhibit 31: Relative Positioning by Service Favors LMT and NOC

	Air Force	Army	Marine Corp	Navy	Space Force	Joint / Other
LMT	★★★	★★☆	★★☆	★☆☆	★★★	★★★
NOC	★★★	★☆☆	★☆☆	★★☆	★★★	★☆☆
RTX	★★☆	★★☆	★☆☆	★★☆	★★☆	★★☆
LHX	★★☆	★★★	★☆☆	★☆☆	★★☆	☆☆☆
GD	★☆☆	★★★	★☆☆	★★★	☆☆☆	☆☆☆
TXT	★☆☆	★★☆	★★☆	★☆☆	☆☆☆	☆☆☆
BA	★★☆	★☆☆	★☆☆	★☆☆	★★☆	☆☆☆

Source: DoD, Company Data, Morgan Stanley

Exhibit 32: NDS and Investment Theme Priorities

	Advanced Computing	Big Data Analytics	Artificial Intelligence	Autonomy	Robotics	Directed Energy	Hypersonics	Biotechnology	Space	Nuclear	Multi-Domain Operations
LMT	★☆☆	★☆☆	★☆☆	★★☆	☆☆☆	★★☆	★★★	☆☆☆	★★★	★☆☆	★★☆
NOC	★☆☆	★☆☆	★☆☆	★★★	★☆☆	★★☆	★☆☆	☆☆☆	★★★	★★★	★★☆
RTX	★★☆	★★☆	★★☆	★★☆	☆☆☆	★★☆	★★☆	☆☆☆	★★☆	☆☆☆	★★☆
LHX	★☆☆	★☆☆	★☆☆	★☆☆	★★☆	★☆☆	☆☆☆	☆☆☆	★★☆	☆☆☆	★★★
GD	★☆☆	★☆☆	★☆☆	★☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	★☆☆	★★★	★☆☆
TXT	☆☆☆	☆☆☆	☆☆☆	★★☆	★★☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	★☆☆
BA	☆☆☆	☆☆☆	☆☆☆	★★☆	☆☆☆	★☆☆	★☆☆	☆☆☆	★★☆	★☆☆	☆☆☆

Source: DoD, Company Data, Morgan Stanley

Stocks Mentioned: *Northrop Grumman ($301.96), Lockheed Martin ($359.23), General Dynamics ($153.57), L3Harris Technologies ($189.25)*

Gaming

Should Investors Take the Over or the Under on US Sports Betting / Online Gambling in 2021?

Morgan Stanley & Co. LLC **Thomas Allen**

Morgan Stanley & Co. International plc+ **Ed Young**

Our View	Market View
Revenues will continue to grow but could disappoint high expectations. We'll gain visibility into profitability and potential legislative upside. 2021 sports betting / online gambling revenues will reach \$4B, slowing to ~33% growth from ~100% in 2020. 2020 surprised to the upside, reaching \$3B vs. \$2B we forecasted in April. However, aggressive promotional spending and stay-at-home tailwinds flattered results. We continue to expect a \$12B TAM in 2025 but see a \$22B bull case. While there are concerns around long-term margins, we expect companies to show profitability in NJ (Fanduel already highlighted) and long-term industry margins of ~25%.	**Bulls argue for a \$20-50B TAM, while bears suggest the industry will never be profitable.** Investors generally believe that the US can achieve a sports betting / online gambling TAM of over \$20B, driven by US spend per capita in line with to above UK / Australia given digitally native development and sports affinity. Bears argue the industry will never be profitable given market access costs, regulations, and the amount of current spending on promotions.

Boom or bust? We're mixed – we think the market will be smaller than consensus, but will have higher margins. Since May 2018 when it became possible for states to legalize sports betting, we have seen significant volatility in the stocks that are exposed to the theme. On the one hand, we agree that this will be a large market, driven by consumer demand and states looking for new tax dollars following COVID's impact on state budgets. However, there is significant debate about how large the market will be, and more so, will it ever be profitable?

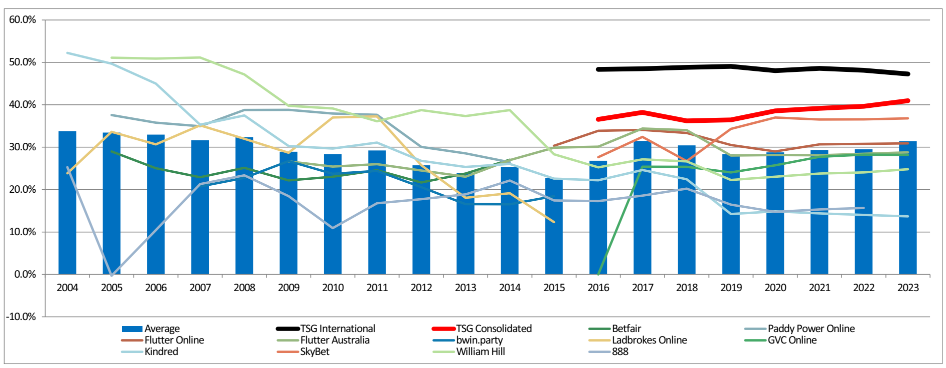
Revenues could start to disappoint, with, notably, NJ's metrics not transferable / sustainable, in our view. Many investors expect strong market growth in 2021, supported by impressive app downloads/volumes (see here), and 2020 ultimately beating early expectations (actual \$3B vs. prior MSe \$2B) despite fewer sporting events. However, with Morgan Stanley's Economists forecasting broad vaccine availability by 2Q21, we are concerned that growth might slow as other entertainment options (theaters, casinos, malls, etc.) become more attractive and promotional spending, which boosts gross revenues, dissipates. For example, NJ iGaming revenue is likely to more than double y/y in 2020e to ~\$1B despite launching back in 2013, and while we think many of these new customers will be retained, we forecast its growth to slow to just 5% in 2021.

NJ revenue per capita not a good comp for rest of the country. NJ sports betting / iGaming revenue per adult was \$268 annualizing October (\$103 sports / \$165 iGaming), which based on our legalized population forecast would imply a 2025 market of \$30B. However, we don't think investors can extrapolate NJ's Oct revenues as it benefitted from **1)** including (likely heavy) promotions and future bets within its accounting for GGR, **2)** a favorable sporting calendar (NBA and MLB playoffs, NFL), **3)** NYers unable to bet online and coming to NJ (hearing 15-25% of the market), **4)** lack of alternatives (outlined above), and **5)** NJ in general being a higher annual gambling spend / capita than the broad US (~$600 vs. ~$440). We estimate broad US 2020 sports betting revenue / adult reached just $16, forecast $19 for 2021 and ~$40 for 2025 (vs. UK/Australia ~$60). iGaming revenue / adult reached $54 this year and we expect $63 in 2021 / $81 in 2025.

Investors are concerned about margins but seem to be extrapolating short-term trends. Over the past year, online sports betting / gambling companies have generally realized greater losses. We now forecast DraftKings' 2020 EBITDA to be $(436)m vs. $(139)m when we initiated on 4/30/20, while Flutter is now guiding to £(180)m-(160)m of losses vs. their Feb guide of ~£(40)m. PA data shows that in Aug/Sept/Oct, 34/66/23% of revenues were promotional dollars. However, we see this as the natural evolution of the new market. International markets have generally taken ~3 years to reach profitability, something that DKNG has guided to replicating for each US state. Fanduel disclosed it expects an over$40m profit contribution in 2020 in NJ (where it launched mid-2018). PENN/Barstool is only in 1 state today yet expects to achieve profitability by YE21/22. We expect DKNG to discuss NJ profitability at its early 2021 Analyst Day.

Scaled international comps achieve 15-40% margins; we see no structural reasons for US to be lower. Looking abroad, online operators' EBITDA margins have been ~30% on average, with legacy TSG achieving ~40%. We assume US margins are slightly lower due to market access fees but we see these as scalable and think US operators have customer acquisition advantages from their legacy businesses that int'l operators didn't have. In addition, proposed Gaming tax rates have been lower than expected / int'l markets, and scale (MSe $12B for sports betting and iGaming in 2025) should leverage marketing spend. We assume most US online operators' margins are 25% in 2025, with DKNG/FLTR achieving 29% benefitting from its 12/8m user Daily Fantasy Sports database, which it can cross-sell to other products at minimal cost.

Exhibit 33: Int'l online gambling operators have achieved ~30% EBITDA margins on average, so we feel confident US margins will be 25%+



Source: Company Filings, Morgan Stanley Research

Potential Catalysts

- Growth of state-reported online volumes begins to slow
- Company reports reveal strong same-state margins

Internet

How Durable Will Online Advertising Growth Be Into '21 as E-Commerce Slows Down?

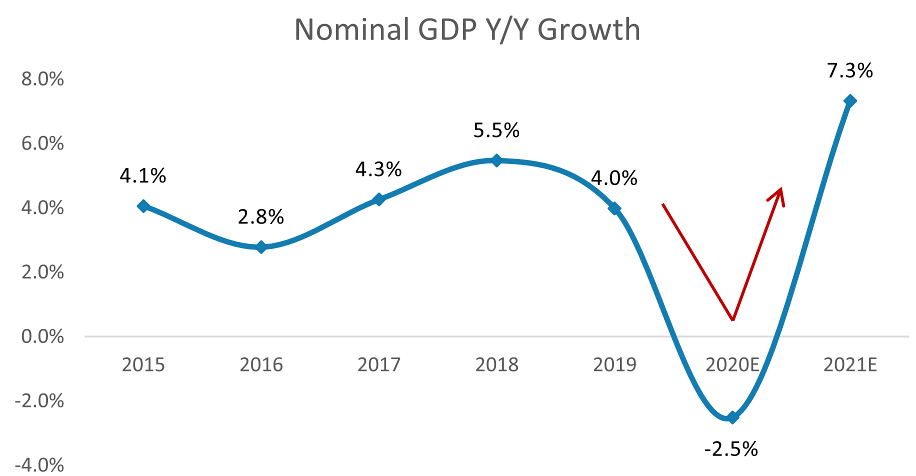
Morgan Stanley & Co. LLC

Brian Nowak

Our View	Market View
We believe the market is potentially underappreciating the growth in online advertising from macro recovery coupled with the rising importance of performance-driven and e-commerce related ad spend. Our analysis shows that there is some consistency between online advertising and e-commerce growth, as online advertising made up 17-20% of total US e-commerce from '14 to '19. Our forecast implies that digital ad spend will snap back to 18% of e-commerce in '21 (vs. 16% in '20), which represents ~20% Y/Y growth.	**Macro debates have emerged around the growth of online advertising in '21 given the expectation for e-commerce to slow.** A material portion of the online ad market's durability in '20 has been driven by consumers' acceleration toward e-commerce and advertisers' willingness to move non-traditional ad budgets toward digital channels. As such, the difficult growth comps, expected re-opening and reversal in spend back toward experiences could result in slower than expected e-commerce growth.

1) We think the Online Ad Recovery Could Likely Be More Check-Marked than V Shaped... The V-shaped macro recovery is in effect (Morgan Stanley's US Economics team is modeling ~7% nominal GDP growth in '21) and 3Q digital ad results/forward commentary came in stronger than expected across the board... as e-commerce ad spend continued to surge and the branded ad market returned. Big picture, we continue to view advertising as cyclical and see faster GDP growth leading to more ad spend across more industries. Further, industry conversations across brands / CPG companies / retailers indicate that shelter-in has caused an acceleration in companies' willingness/urgency to experiment and shift ad spend toward digital. As such, we forecast 20% Y/Y online ad growth in '21.

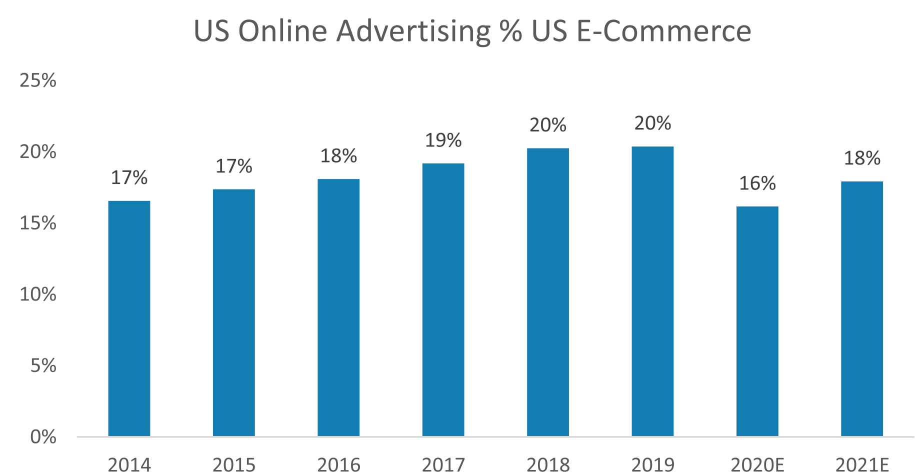
Exhibit 34: The V-shaped macro recovery is in effect as the MS economic team is modeling ~7% nominal GDP growth in '21



Source: Morgan Stanley Research

2) …And the 3-Year E-commerce Pull Forward in '20 and Expected Growth Into '21 Give Us Higher Conviction about '21 Digital Ad Strength: We have written about our expectations for US e-commerce to grow ~40% Y/Y in '20 (from shelter-in) and confidence that e-commerce can grow high single digits in '21 (from behavioral change). Given the high and rising importance of performance-driven and e-commerce related ad spend, we think it is also insightful to analyze/sanity check online advertising as a percent of e-commerce. Indeed, a material portion of the online ad market's durability and snap back this year has been driven by consumers' acceleration toward e-commerce and advertisers' increasing willingness to move non-traditional ad budgets (like trade spend) toward digital channels. As shown below, there is some consistency with this relationship too… as online advertising made up 17-20% of total US e-commerce from '14-'19. Our forecast implies that digital ad spend will snap back to 18% of e-commerce in '21 (vs. 16% in '20).

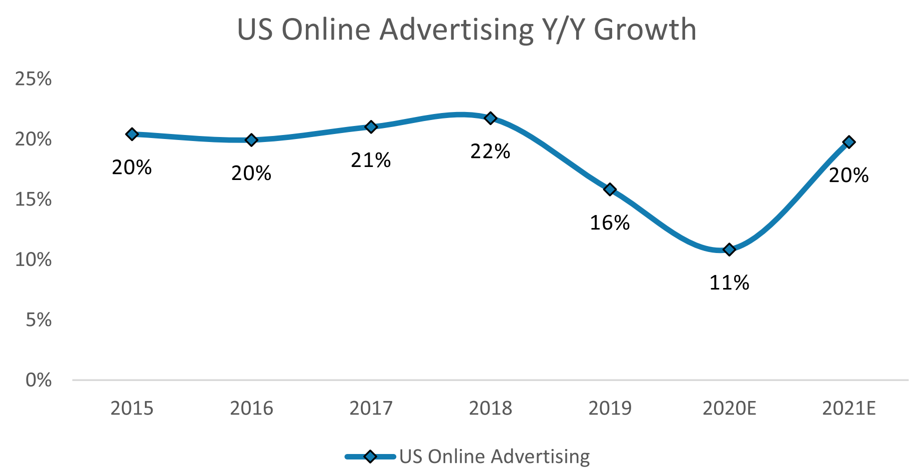
Exhibit 35: Given the high and rising importance of performance-driven and e-commerce related ad spend, we think it is also insightful to analyze/sanity check online advertising as a percent of e-commerce



Source: Company data, Morgan Stanley Research

3) Two Reasons Online Advertising Could Rise Back to 18% of E-Commerce in '21: We acknowledge some limitations to this sanity check (for starters, travel and app install ad spend are in the numerator but not the denominator). But in some ways these differences also help explain why we see online advertising as a percent of e-commerce returning to more "normal" historical levels in '21. First, we estimate travel-related online spend was 8% of the digital ad market, or ~2% of total e-commerce in '19. We model travel online ad spend to fall by ~50% in '20, which essentially explains ~100bps of the reduction in ad spend as a percentage of e-commerce. Our expectation that travel will recover in '21/'22 gives us more conviction in this ratio's ability to return closer to historical averages. Second, we think ad unit pricing (from advertiser spending and bidding liquidity in ad auction markets) is one of the other main factors that caused ad spend as a percent of e-commerce to drop. Macro recovery (more advertisers spending across branded and performance channels) will likely drive pricing higher...and thereby drive this ratio back to closer to historic norms.

Exhibit 36: We see online advertising growing ~20% in '21



Source: Company data, Morgan Stanley Research

4) Facebook, Alphabet, and Pinterest are Our Top Online Ad Picks: For **FB**, we see material upside to Street estimates, as we see ~27% ad growth in '21 and our forecasts don't incorporate any specific contribution from Instagram Shops or Reels, both of which could add hundreds of millions of dollars of ad revenue in '21. For **GOOGL**, we see the travel recovery (12-15% of paid search) as a cyclical play and are bullish on YouTube given a stronger direct response offering combined with a more stable branded macro ad market. For **PINS**, we see the combination of new products/tools (i.e. automated bidding, creative onboard, SKU bidding) and consumer behavior shifting toward social shopping driving revenue upside. In addition, a stronger branded macro market (at least 1/3 of PINS' ad revenue at the start of '20) will likely lead to higher bid liquidity and pricing growth in '21.

Potential Catalysts

- Faster than expected e-commerce growth.
- Faster advertising digital shift from offline channels and non-traditional budgets.

Stocks Mentioned: *Facebook ($283.40), Alphabet ($1,811.33), Pinterest ($69.62).*

IT Hardware

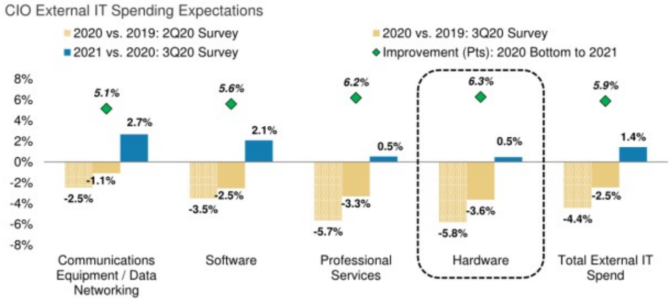
Can IT Hardware Outperform the Technology Sector as Enterprise Spending Recovers?

Morgan Stanley & Co. LLC **Katy Huberty**

Our View	Market View
We believe Hardware will continue to outperform the market as IT spending recovers. We think that we are in the middle of an enterprise IT demand recovery with improving capex budgets and easy compares driving the largest recovery in hardware spending. Historically, IT Hardware stocks outperform other Technology groups as IT budgets are revised higher, and we have seen this play out since spending intentions bottomed in July 2020. Heading into 2021, we believe there is still room for further outperformance as Hardware stocks trade at historically low valuations and EPS is likely to be revised higher on the back of a return to revenue growth and operating leverage.	**The market is skeptical due to secular pressures and uncertainty around the shape of the IT spending recovery.** Investors continue to be concerned about cloud cannibalization risk, and as a result, our coverage currently trades more than two standard deviations below its historical discount to the Tech Sector and near a record discount to the S&P 500. In addition, investors are unsure about the shape and pace of the IT demand recovery due to COVID uncertainty and are skeptical of Hardware's ability to outperform the market.

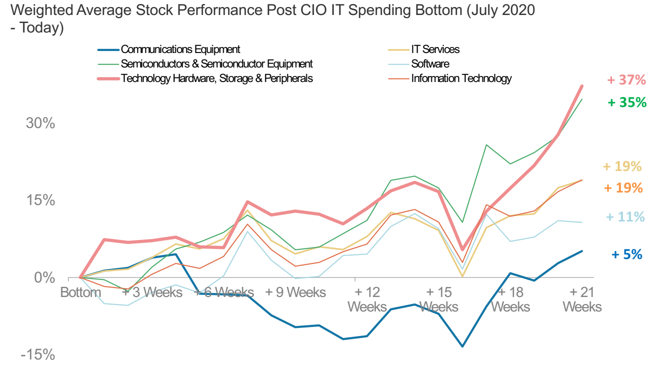
Hardware outperforming Tech as enterprise IT demand recovers. We recently upgraded IT Hardware to Attractive on improving IT demand being overlooked by investors (IT Hardware: Time to Buy IT Hardware for the Recovery, 13 Oct 2020). We believe 2Q20 was the IT spending bottom, and our 3Q20 AlphaWise CIO Survey results showed evidence of IT budgets inflecting from trough levels, with the greatest improvement in Hardware. We believe there is pent-up demand for enterprise hardware heading into 2021, as the majority of CIOs surveyed indicated that data center refreshes were paused due to COVID and that 60% of those projects are expected to unfreeze by the end of 2021. This spending rebound is being led by storage, PCs, and the mid-market, which was hit hard by COVID but is now recovering. Hardware historically outperforms the Technology sector when IT budgets are revised higher, and we are seeing this play out as it has in past cycles. Since spending intentions bottomed in July 2020, Hardware has been the best performing Tech group, and stocks are up ~37%.

Exhibit 37: Our October CIO survey shows broad based improvement in IT spend, with the largest rate of change improvement in Hardware.



Source: AlphaWise, Morgan Stanley Research

Exhibit 38: Hardware stocks are outperforming other Tech groups since spending intentions bottomed in July 2020.

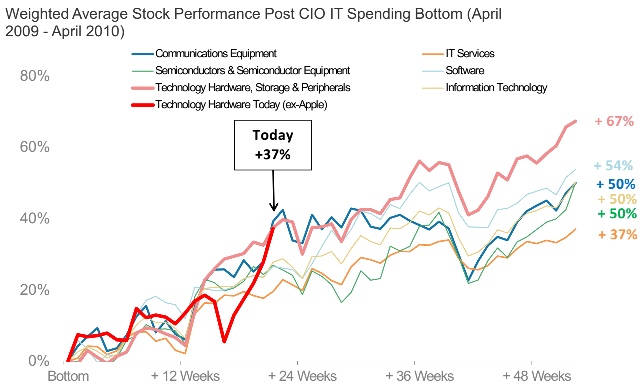


Source: FactSet, Morgan Stanley Research

There are 3 reasons why we believe this will continue into 2021:1) Stocks have room to move higher. In the year after the 2009 IT spending trough, Hardware stocks rallied 67% but are up only 37% from the 2020 trough, indicating a long runway for future performance. Relative outperformance also suggests additional upside with IT Hardware outperforming S&P 500 by ~20% relative to 30-35% outperformance in past economic recoveries. **2) Estimates remain below pre-COVID levels**. Consensus has only revised up net income by ~8% from trough levels, far below the 51% upward revision we saw in 2009. Hardware stocks historically experience substantial operating leverage during a recovery, which combined with a re-acceleration of revenue growth, can lead to substantial EPS upside. **3) Cloud cannibalization risk is priced in, we believe, which should allow cyclical tailwinds to offset secular pressures near-term.** While the shift to cloud is a long-term, fundamental risk to our coverage, we believe it is largely priced, as our coverage currently trades near a record discount to the S&P and over two standard deviations below its historical discount to the Tech Sector.

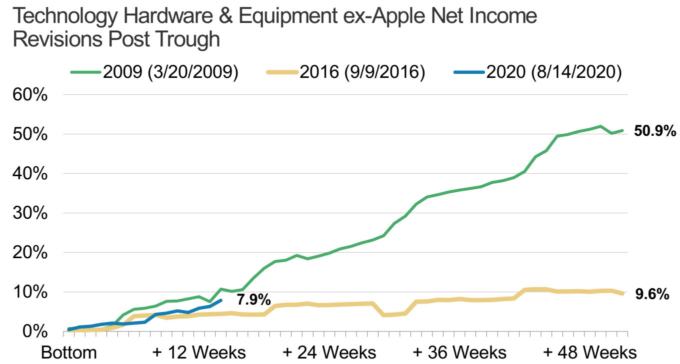
While we believe Hardware outperformance will be broad-based in 2021, we prefer stocks with both cyclical exposure and stock-specific catalysts. Performance breadth during the 2009 and 2016 recoveries was strong, with 80-90% of our IT Hardware stocks outperforming the S&P 500 during each recovery. We expect the same dynamic to play out in 2021. However, we favor stocks with a combination of cyclical exposure and company-specific catalysts including Apple (AAPL) with exposure to the 5G cycle, Dell (DELL) with the potential spin of VMW, Logitech (LOGI, covered by Erik Woodring) with higher accessories attach exiting COVID, NCR (NCR) with exposure to digital transformation investments in cyclical end markets, Seagate Technology (STX) with secular exposure to cloud data centers, and Sonos (SONO) with improving margins from direct to consumer mix. We believe that greater vaccine certainty, continued economic re-openings, and increased visibility into 2021 capex budgets are catalysts for these stocks, as this will lead to a release in pent-up IT demand and give investors greater confidence in the recovery.

Exhibit 39: Hardware stocks rose 67% 1 year after CIO IT budget growth expectations bottomed in April 2009 and outperformed all other tech groups. Stocks are only up 37% today, indicating a long runway for future performance.



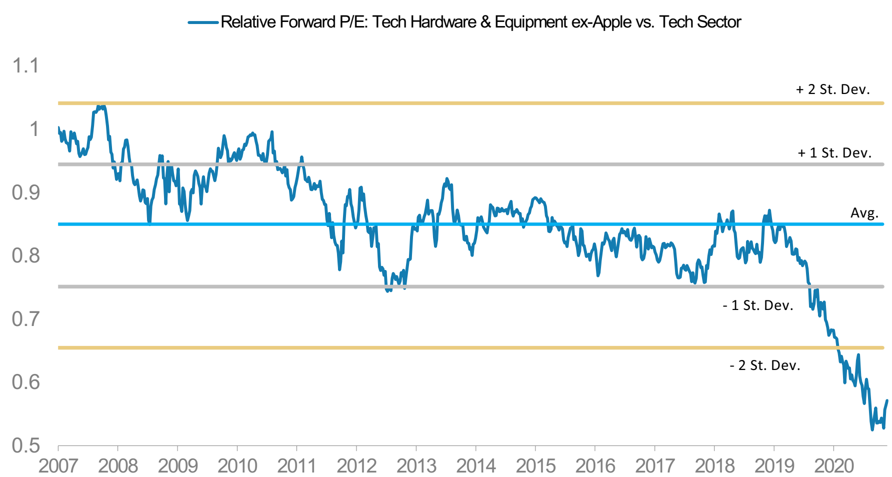
Source: FactSet, Morgan Stanley Research

Exhibit 40: Hardware net income estimates have only been revised up 8%, which is far below the 51% upward revision we saw in 2009.



Source: FactSet, Morgan Stanley Research

Exhibit 41: Hardware's relative valuation to the Tech Sector remains near all-time lows, creating a positive set-up heading into 2021.



Source: FactSet, Morgan Stanley Research

Stocks Mentioned: *Apple ($124.38), Dell Technologies ($71.87), Logitech ($89.66), NCR ($32.82), Seagate ($63.86), Sonos ($21.82)*

Machinery

Can Precision Ag Supercharge the 2021 Ag Equipment Recovery?

Morgan Stanley & Co. LLC

Courtney Yakavonis

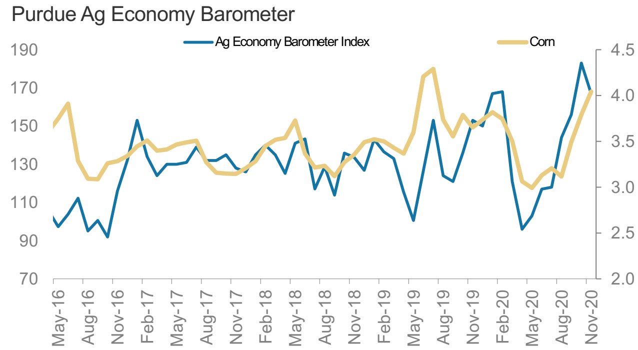
Our View	Market View
We see Precision Ag sales up ~50% in 2021 - complementing double-digit growth in underlying equipment demand. We see Precision Ag accounting for ~5% of sales at both Deere and AGCO in 2021, with Precision Ag accounting for ~10-15% of Y/Y increases in Ag revenues at both companies. This is expected to complement an expected ~15% recovery in the underlying Ag Equipment market in 2021 - with adoption set to accelerate further based on both fundamental drivers (e.g. poor weather condensing planting windows in '19) & commodity-related factors (e.g. corn above $4.0/bu). We estimate Precision Ag can drive ~1ppt of annual margin expansion in the DE's A&T division, representing a meaningful driver of DE's ~15% mid-cycle operating margin target.	**The market is underappreciating both the sustainability of the North America large ag replacement cycle and the potential for Precision Ag to 'supercharge' the next several years of growth.** Bears were vocal around the 'short ag' thesis in the early days of COVID, but have since remained on the sidelines despite a rapid improvement in US grains prices and incremental evidence of a sharp 2021 Ag Equipment recovery. Whereas Precision Ag was previously viewed as an insulator against potential choppiness in equipment sales, we think the market is not appreciating the potential for pricing and mix (vis a vis Precision Ag offerings) to complement a multi-year recovery in equipment demand.

Ag Equipment remains our favorite Machinery end market for 2021, with a reliable growth outlook complemented by multi-year replacement tailwinds and the secular narrative of Precision Ag penetration. Despite early year concerns around global grains demand and COVID-related impacts to the US farm complex, farmer sentiment has drastically improved through the course of 2020 - with North American Ag Equipment sales estimated to finish 2020 up ~2-3%. Compared to our other Machinery end markets, Ag Equipment remains one of the few verticals (particularly vs. Construction Equipment) where replacement demand is expected to remain a tailwind over the next ~1-4 years - underscoring the multi-year support for sales growth through 2024. Recent improvement in commodity prices (e.g. corn above $4.0/bu & soybeans above $11.50/bu) should remove another leg of concern that had weighed on Ag Equipment demand in recent years - partially contributing to normalization in sentiment and equipment purchasing intentions.

Exhibit 42: We see a strong Ag Equipment replacement cycle materializing in 2021, with growth continuing through 2024.

Source: AEM, Morgan Stanley Research

Exhibit 43: While not entirely dependent on commodity movements, US farmer sentiment (as measured by the Purdue Ag Economy Barometer) has benefitted from the recent US grains rally.

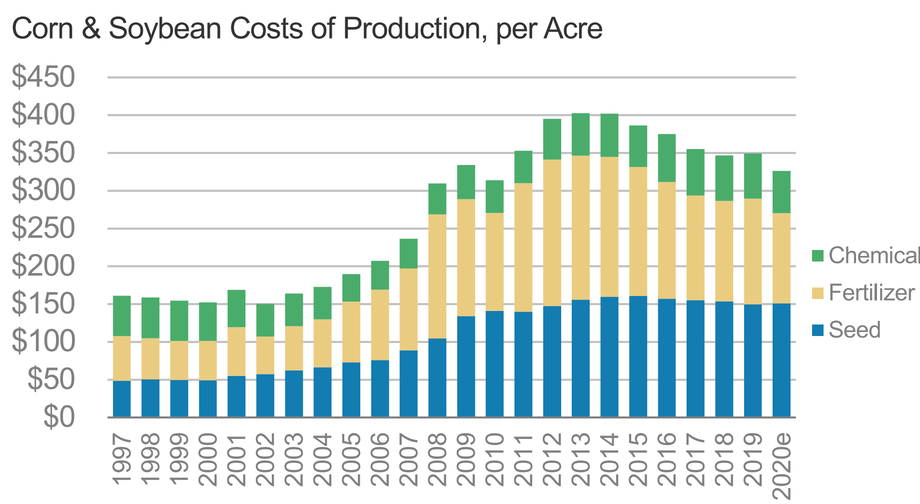


Source: Purdue, CME Group, Refinitiv, Morgan Stanley Research

Precision Ag sales should increase ~50% in '21, providing meaningful margin accretion

Precision Ag has helped drive input costs per acre down ~20% - providing tangible evidence of savings that should continue to drive adoption. OEMs and Precision Ag players have continued to emphasize firmer evidence of savings to potential customers in recent years - with a renewed focus on driving payback windows to less than 1 year. In this context, continued adoption of Precision Ag technologies have already helped to reduce average input costs across the US farm complex - with key costs of production (per acre) for corn and soybeans falling ~20% vs. the 2013/2014 peak. This decline has coincided with rapid increases in take rates across major Precision Ag technologies from OEMs like DE - which has continued to cite increases in take rates in recent years.

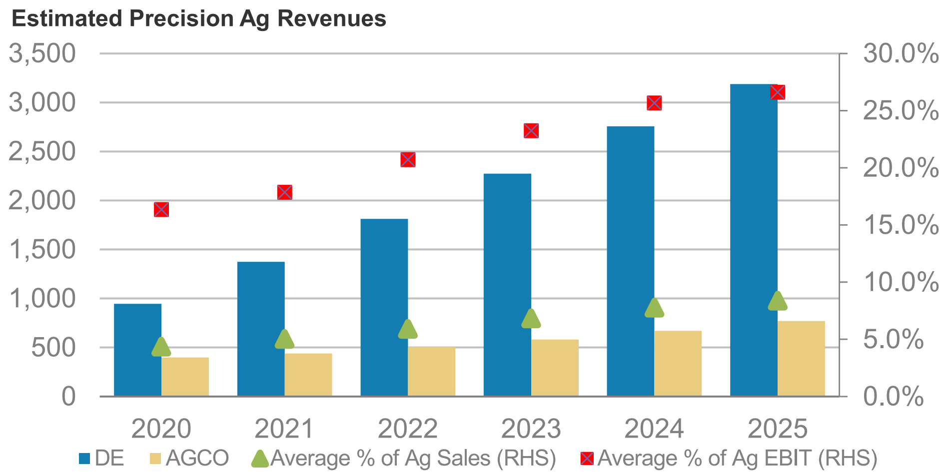
Exhibit 44: Precision Ag technologies have helped to reduce cost of production (per acre) by ~20% since the 2013/2014 peak.



Source: USDA, Morgan Stanley

We see Precision Ag revenues at DE increasing ~50% in 2021 for DE - accounting for ~10-15% of the expected Y/Y increase in Ag revenues driven by new products as well as increasing penetration of existing products both in the US and globally. As a reminder, DE attributed ~100bps of its 2019 to 2022 operating margin walk to Precision Ag-related accretion - and with consensus continuing to embed margins below DE's ~15% target (~14.3%), we think consensus has yet to fully embed Precision Ag-related benefits to DE's margin profile. To this point, we estimate that a majority of DE's margin improvement to date (MSe ~13.0% in FY21) has been driven by DE's headcount and footprint reduction efforts - with more limited accretion to date from DE's Precision Ag and aftermarket initiatives. With our estimates contemplating ~1ppt of Precision Ag-related margin expansion in DE's A&T segment in both FY21 and FY22, we expect Precision Ag adoption to 'supercharge' the ongoing recovery in Ag Equipment demand - a theme we think is underappreciated by the market.

Exhibit 45: We expect Precision Ag revenues to account for ~5% of total Ag revenues by 2021, doubling to ~10% by 2025.



Source: Company data, Morgan Stanley Research

2021 offers incremental potential catalysts for adoption vis a vis the recent commodity recovery and a potential commercialization of DE's See & Spray technology. The recent improvement in US corn and soybean prices should drive profitability higher across the US farm complex - potentially catalyzing replacement demand and placing certain higher-dollar Precision technologies within fiscal reach for potential customers. DE's commercialization of See & Spray - a new technology that could potentially drive input costs down ~50-90% - could catalyze new demand for farmers looking to improve their profitability profile as well. DE plans to provide an initial offering of its See & Spray product in 2021.

Potential Catalysts

- See & Spray commercialization and proliferation
- Further improvement in US grains prices
- Weather headwinds catalyze incremental replacement

Stocks Mentioned: *Deere ($252.60), AGCO ($89.13)*

Media

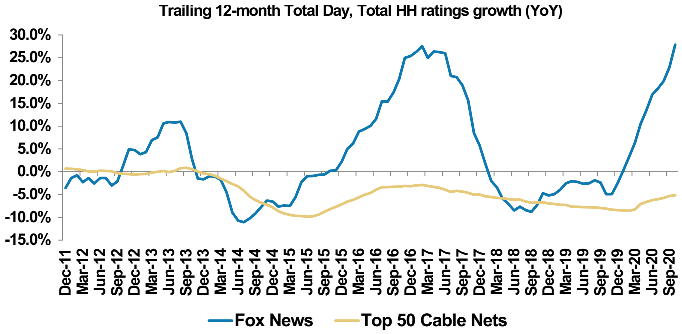
Will Anyone Follow the News in 2021?

Morgan Stanley & Co. LLC **Benjamin Swinburne** **Thomas Yeh**

Our View	Market View
Four key points underpin our continued positive investment outlook for news leaders FOXA and NYT: (1) It is quite possible that the elevated news cycle of the past 5 years is not elevated, per se, but a structural change. (2) Leading and rising share of audience and significant levels of engagement over the years has created two uniquely well positioned brands and businesses in Fox News and The New York Times. (3) In contrast to other parts of media (scripted TV & Film in particular), the cost of news production in both TV and publishing is much more modest, creating the potential for outsized returns. (4) Much of the concern over a post election/post COVID news downturn appears priced into shares and expectations.	**Elevated news cycle in 2020 will prove to be a tough comp next year.** Record TV news ratings and digital news subscription growth in 2020 reflect the benefit of an elevated news cycle driven by COVID-19 and the U.S. presidential election. With a slower news cycle, both NYT and FOXA shares are likely to underperform in 2021.

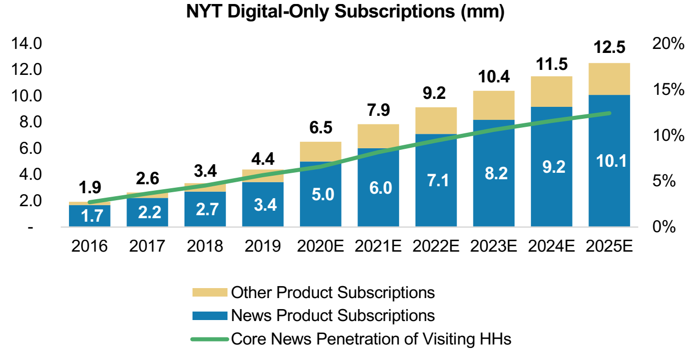
We believe Fox News and The New York Times have underappreciated brand equity with large and growing audiences. Key to our bullish view, despite the obvious news comp risk, is an appreciation of the long-term strength of both companies relationships to their audiences. Fox News was founded in the mid 90's and has for most of its history been the #1 cable news network. More recently, it has consistently been the #1 cable network overall in total day audience, and even this past summer was the #1 TV network in some weeks surpassing even broadcast networks. The New York Times is on pace to end 2020 with roughly 5mm digital-only news subscriptions, roughly 4x its prior print peak in the late 90's. Recent price increases appear to be sticking with no material increase in churn, supporting strong digital revenue growth in '21E.

Exhibit 46: Fox News ratings have significantly outperformed broader cable TV



Source: Nielsen, Morgan Stanley Research

Exhibit 47: NYT sees scale benefits from growing digital subscriptions



Source: Company data, Morgan Stanley Research

News is less capital-intensive media than scripted TV & Film, or audio. Fox News represents over 70% of Fox's segment EBITDA, benefiting from over 60% margins. Fox News may be the most profitable scaled media asset in the US. Key to this profitability is unique pricing power, driving up its affiliate fees as MVPDs need Fox News to compete for subscribers, and a low cost per hour of content. News content can be produced at a fraction of a scripted series or film, and is more akin to unscripted or reality TV. At The New York Times, newsroom costs are similarly growing at a fairly nominal clip and we are already seeing gross margins expand nicely, as the digital business benefits from 80%+ incremental margins on a direct digital contribution profit basis.

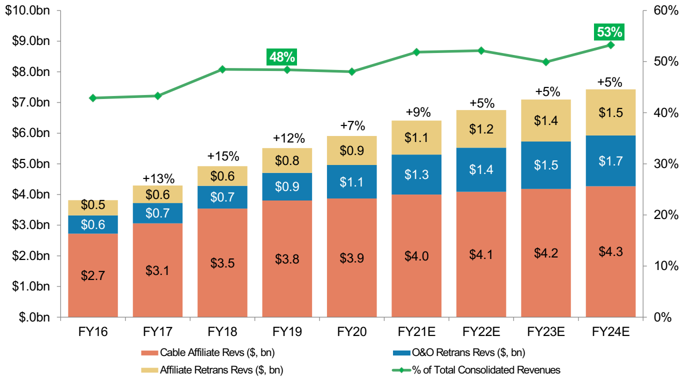
What's priced in? We are modestly ahead of consensus for F21 EBITDA for Fox, as we expect overall advertising market strength to help offset ratings pressures. In addition, we do not believe FOXA shares are getting credit for investments in sports betting, notably its ~4mm shares in Flutter (covered by Ed Young). At New York Times, we see +900K digital-only news net adds for 2021 as reasonable even with the news comps, with potential upside to revenues from price increases.

What makes Fox News and New York Times unique assets?

Varying stages of the transition from legacy to digital distribution. Fox News and New York Times both come from legacy media – TV and print. Both are earning attractive returns in their legacy distribution models. We believe Fox News, along with Fox Broadcast, give Fox TV networks unique pricing power and stable-to-rising audiences despite industry challenges from cord-cutting. New York Times legacy print business has been under greater pressure and for more years than Fox, but has already repositioned itself for digital distribution. With Fox still largely a linear TV business anchored to the shrinking US pay-TV market, shares trade with an attractive ~10% FCF yield. NYT, as of last quarter generating more revenue from digital than print, trades at ~25x '21E EBITDA and ~8x '21E gross profits.

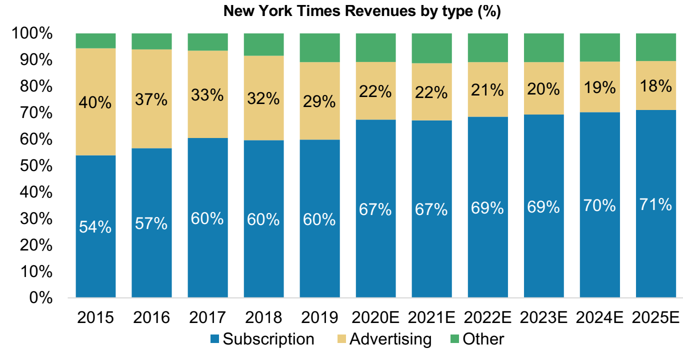
Why fears over a softer news cycle should not impair the investment outlook. Predicting the news cycle is impossible, and we would note that even prior to COVID and the 2020 election, news has been a growing area of consumer engagement. It is quiet possible that the elevated news cycle of the past 5 years is not elevated, per se, but a structural change. Finally, we would note that while ratings softness could weigh on Fox News advertising revenues, roughly 70% of its revenues come from subscription fees which will not be nearly as impacted. For NYT, roughly two-thirds of its revenues come from subscriptions.

Exhibit 48: Pricing power at Fox News (cable) and Fox broadcast (retrans) supports overall distribution revenue growth



Source: Company data, Morgan Stanley Research

Exhibit 49: NYT is a primarily subscription-based business, price increases are accelerating this shift



Source: Company data, Morgan Stanley Research

Thinking through the bull cases. Fox generates material cash flows, which create capacity to buyback stock and make strategic investments. From FY21-FY25, we expect Fox to generate $10-11bn in FCF or roughly 60% of its market cap. Putting this capital to work either in buybacks or accretive investments can create significant upside in shares. At New York Times, we believe that as a market leader in digital subscriptions it can continue to see multiple expansion as its revenue mix shifts. We think it has over 2x the #2 competitor Dow Jones. We have a $44 and $70 bull case view on FOXA and NYT shares respectively.

What are the risks? For Fox, the primary risk ties to cord-cutting which is pressuring revenues at both Fox News and Fox Broadcast. In addition, Fox must absorb a yet to be announced NFL rights extension that will begin in FY24. For NYT, net additions are the key metric for shares and if there is a shortfall to expectations, shares are likely to lag at least temporarily. We have an $21 and $30 bear case view on FOXA and NYT respectively.

Stocks Mentioned: *Fox ($29.26), New York Times ($46.72)*

Medical Technology / Diagnostics and Life Science Tools

What's the Durable COVID-19 Opportunity?

Morgan Stanley & Co. LLC David Lewis Tejas Savant

Our View	Market View
We see an under-appreciated opportunity for COVID-19 beneficiaries beyond a vaccine. This opportunity is two-fold: **For Medtech & Life Sciences Tools:** Beyond a COVID-19 testing contribution that lasts well into 2021, we see the potential for a "durable tail" of diagnostic revenue that should persist long after a vaccine is available (into 2022 and beyond), with the potential to mirror annual flu testing volumes in perpetuity. **For Life Science Tools:** More importantly, we see clear room for upside to 2021 numbers from bioprocessing / contract and development manufacturing organizations (CDMO) sales related to COVID-19 vaccine / therapeutic commercialization efforts that are only just beginning to scale. **Companies positively exposed include Abbott, Avantor, Becton Dickinson, Hologic, and Thermo Fisher.**	**For Medtech & Life Science Diagnostics:** Consensus models assume that COVID-19 diagnostic testing demand declines sharply into 2H21 and beyond, presumably following an assumption of widespread vaccine availability. **For Life Science Tools:** Consensus models assume that COVID-19 diagnostic testing demand declines sharply in 2H21, following successful vaccine commercialization. Moreover, uncertainty around key assumptions (including pricing, number of doses required per patient, durability of immune response, share for each vaccine modality) is driving an unwarranted degree of conservatism in bioprocessing and contract manufacturing upside related to COVID-19 vaccines/therapeutics.

MedTech & Life Sciences Diagnostics: We see several reasons to model a durable COVID-19 Dx testing opportunity, with 2H21+ revenues driven by:

- Global, mass vaccination is not likely to occur within the next 3-6 months; and time to reach endemic immunity is likely longer.
- Testing will likely play an important role in understanding real-world vaccine efficacy (in varying populations and given the potential for further COVID-19 mutations), durability of protection, and community impact into 2022.
- Testing is becoming increasingly integrated into schools, travel / tourism protocols, and healthcare screening & pre-surgical practice (among other use-cases). We see little reason for institutions to abandon these practices quickly given their influence toward the perception of consumer / patient and employee safety, and as testing has become less expensive and more widely available.
- Improved testing technology (e.g. Abbott's Navica smartphone app for results & negative "badge") and decentralized testing infrastructure offer an opportunity for a shift toward a higher-frequency, consumer-facing testing paradigm that may be here to stay. Large-scale expansion of diagnostic platforms driven by COVID-19

could also lead to increased non-COVID-19 Molecular Dx testing long after COVID testing subsides.

- Ultimately (2023+), we expect COVID-19 testing volumes to mirror annual Flu testing, with tens of millions of tests performed annually as COVID-19 case waves may return seasonally over the long-term.

Within Medtech Diagnostics, we see Abbott (ABT) and Hologic (HOLX) as most exposed. Abbott platforms may be well positioned for decentralized and EM market testing, while Hologic could gain share in TMA and PCR high-volume testing from semi-automated players. We also see an opportunity for these companies to materially reinvest Dx-driven cash flow (given ~60%+ COVID-19 Dx EBIT margins) in their core Medical Device franchises to drive an accelerating 2023-2025 growth profile. See our recent notes for discussion and quantification:

- Medical Technology: Abbott's BinaxNOW May Change the Game (27 Aug 2020)
- Abbott Laboratories: If I Had a $1,000,000,000... (19 Nov 2020)
- Hologic, Inc.: Testing Higher; Duration a Little Longer? (8 Nov 2020)

Life Science Tools: Lack of clarity around key assumptions is driving a mismodeling of COVID-19 vaccine upside for Avantor and Thermo Fisher in 2021 and beyond. AVTR stands to benefit from two waves of COVID-19 related tailwinds. The initial wave was driven by sales of consumables and equipment needed for diagnostic testing and is largely factored into Street expectations. We believe the second (and potentially much larger) wave will be driven by revenue associated with the discovery, development, and eventual commercialization of COVID-19 related vaccines and therapeutics that should contribute to the top-line in 2021/2022. While Street numbers for 2021 sales have increased by ~$250M since June, we think there is still significant room for upward revisions, with current conservatism driven by lack of clarity around key vaccine commercialization assumptions including pricing, number of doses required per patient, durability of immune response, share for each vaccine modality, and other factors. The positive data for Pfizer/BioNTech and Moderna vaccines further underpins our confidence in upside to 2021/2022 estimates, as a traditional vaccine is expected to add incrementally to AVTR's bioproduction TAM (~20%), whereas an RNA vaccine could potentially double the addressable market driven by a higher bill of materials.

While several unknowns remain, if we – conservatively, in our opinion – assume ~2B doses in 2021 for PFE/Moderna with 50-75c per dose in equipment/raw material costs, we estimate an ~$1.0-1.5B opportunity that AVTR could participate in (with other vendors such as TMO also seeing upside). Of course, simultaneous commercialization of traditional recombinant vaccines (even at modestly lower efficacy relative to RNA vaccines, an easier cold chain requirement could make these a viable offering for emerging markets), would represent another source of (smaller but incremental) upside to AVTR's 2021/2022 numbers as well, as would an ongoing requirement for periodic booster shots, further supporting our bullish view heading into 2021 and beyond.

TMO should also see sustainable COVID-19 tailwinds beyond testing, with high demand for products ranging from VTM, PPE, lab plastics, and cold storage equipment, to bioprocessing equipment and materials and contract manufacturing related to the commercialization of COVID-19 vaccines and therapeutics. On the COVID-19 testing front, TMO is a leading provider of PCR kits (with a capacity of 20M tests per week) with an industry leading PCR instrument installed base. With this modality expected to remain the gold standard for accuracy, we see sustained demand well into 2021 (with a potentially "long tail" mirroring annual flu testing volumes). The recently launched ultra-high throughput Amplitude PCR platform (capable of analyzing >6k samples per day) has also seen strong demand from governments, hospitals and reference labs who wish to scale up COVID testing capacity, (with additional potential upside from the recently launched serology tests as well as syndromic panels).

Beyond testing, TMO is currently supporting customers in >250 COVID-related vaccine/therapeutic programs, and has invested significantly in expanding their manufacturing capacity of enzymes and nucleotides, launched a new mRNA purification resin, and expanded fill/finish capacity, including most recently via a new site in Singapore. While traditional vaccine modalities will drive greater upside in bioprocessing equipment and material sales and CDMO contribution, RNA vaccines could provide greater raw material and reagent upside, with multiple vaccine candidates across modalities expected to eventually gain regulatory approval. Despite broad exposure, management guided to only ~$1B in COVID-related vaccine and therapeutics projects over the next couple years at its September analyst day (conservatively choosing to include only contracted work in its forecast). While consensus sales estimates have increased ~$3.0B since TMO's September Analyst Day, we still see meaningful room for upside in 2021 and beyond. Finally, recent COVID-19 related capacity expansions across biosciences, bioproduction and pharma services are expected to be repurposed for non-COVID work once the pandemic abates, positioning TMO well to gain market share relative to peers.

Stocks Mentioned: *Abbott ($106.80), Avantor ($27.11), Becton Dickinson ($240.24), Hologic ($72.77), Thermo Fisher Scientific ($473.98)*

Multi-Industry

Will ESG Imperatives – Indoor Air Quality and Energy Efficiency Requirements – Drive a Building Modernization Super Cycle?

Morgan Stanley & Co. LLC

Josh Pokrzywinski

Our View	Market View
We believe we are in the early innings of a significant recapitalization of the building stock in the US, driven by the convergence of sustainability, technology, and post-COVID initiatives. What's misunderstood is the analog to industrial Internet of Things (IoT) in manufacturing. Unlike manufacturing, we see less "democratization" of software that opens up competition. Domain expertise should limit new players. Sensors and software can drive material savings that don't always need new equipment. We still like Trane based on these dynamics, even though shares have worked.	**We believe investors only expect slightly faster replacement growth vs. history as older, less efficient units are retired early.** There is a particular emphasis on the binary effects of climate legislation and indoor air quality as drivers. Generalist investors appear more interested in ESG themes while sector specialists tend to be more skeptical, either as a result of significantly rerated valuation or reliance on regulatory/COVID upgrades vs. regular market forces. There is a bias to focus on equipment and equipment OEMs as the primary ways to play.

We think the ESG, technology, and efficiency imperatives driving building modernization are some of the most powerful in our coverage universe. Although this has become very topical, particularly with generalist and ESG investors, we believe the size and age of the installed base as well as the energy savings enabled by technology advances are still misunderstood. Highlighting the biggest beneficiaries and new TAM is one our biggest priorities for 2021, but we believe a few key points can help frame the debate and what the market may be missing. Given the strong rerating in 2020 and investor attraction to more cyclical assets, we wouldn't be surprised to see a slower initial start, with opportunities to add to preferred names in the coming months. We expect the balance of 2021 to demonstrate the upside that comes with secular tailwinds.

Who benefits? Trane, Johnson Controls, Carrier, and Honeywell are the most notable, in our view. We believe the key players in our coverage won't surprise investors. The magnitude and sensitivity among the various players is still unclear, but we believe the TAM is far larger than most appreciate.

This is the same Data Age, Automation, and IoT discussion in a different, and maybe superior, application than many investors are accustomed to. We believe the role of capturing more data, and using that to control environments and devices at a more local level than making broad system-wide decisions, is the core of the Data Age in the industrial world. In the building environment, we think many investors, even sector specialists, may fail to realize that the most compelling upgrades in building modernization are in controls and IoT, not necessarily equipment. What we believe is different is the size of the installed base, the consolidated nature of suppliers, the established service infrastructure, and domain expertise could make this market more attractive as an IoT play than industrial automation / manufacturing.

This is about redefining the TAM from a failure / replacement-based model to an upgrade model. This just doesn't typically happen in the industrial world. In our opinion, two hallmarks of quality industrial business are recurring revenue and a large installed base, where equipment breaks and is repaired or replaced on a fairly "like for like" basis. The HVAC and building efficiency industry certainly has had this. We believe the upgrade potential expands the TAM from largely a replacement model of the 30-year old vintage of building stock (~15% of the installed base/decade) to essentially everything older than 10 years needing *something*, driven by shorter paybacks and higher incentives. Specific equipment vs. software and control upgrades will vary by site, but at a high level this is a TAM that could now be 4-5x larger.

The installed base is both sizeable and old. We estimate there is over 100B square ft. of cooled space in the US and Europe using traditional commercial HVAC technology. The HVAC alone consumes $80B in annual energy costs and is responsible for more than 320M metric tons of carbon before taking into account secondary considerations like refrigerant emissions. The building stock put in place from 1980-2000 accounts for ⅓ of total square footage with many of those buildings not having significant retrofits.

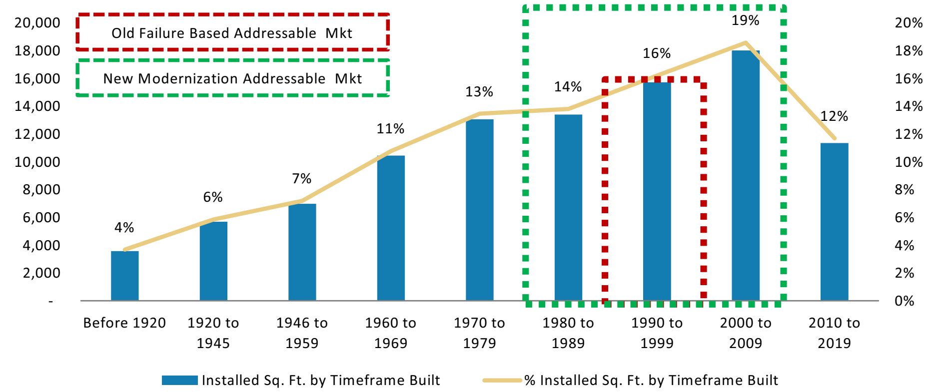
We see indoor air quality (IAQ) priorities bridging to legislative support, but there are many factors to drive modernization. Investors appear to have a binary view of some outcomes in the space pertaining to COVID and legislation. While understandable given a vaccine reduces the immediate emphasis on IAQ and a divided government is presumably less likely to pass comprehensive climate legislation than a Democrat-controlled one, there are many other factors at work. In major cities, which are also home to the large, inefficient buildings, there are growing lists of local laws to combat building emissions. We believe some IAQ concerns will diminish with a vaccine but a percentage of "sick" buildings in key office and education verticals will be upgraded and trigger efficiency discussions. IAQ and energy efficiency are the same discussion.

We believe there are two key points in the significant changes underway in the building efficiency markets in the US and, somewhat similarly, Europe. The end result is a significant TAM expansion driven by upgrades across wide age ranges of equipment and with richer content in those upgrades.

1. We expect significant expansion in planned replacement and modernization vs. historical patterns. The market has historically been defined by failure-based replacement and while mid-life upgrades do occur, we believe the key addressable market is the 20-30 year old system/building. With technology driving lower implementation costs and a host of regulatory, societal, and economic pressures, we believe the addressable market has widened considerably. We believe the 20-30 year old band now looks more like 10-40, with upgrades including increasingly rich content vs. a like-for-like replacement. **We estimate this shift increases the addressable market by ~3x, from ~15% to over 45% (see exhibit).**

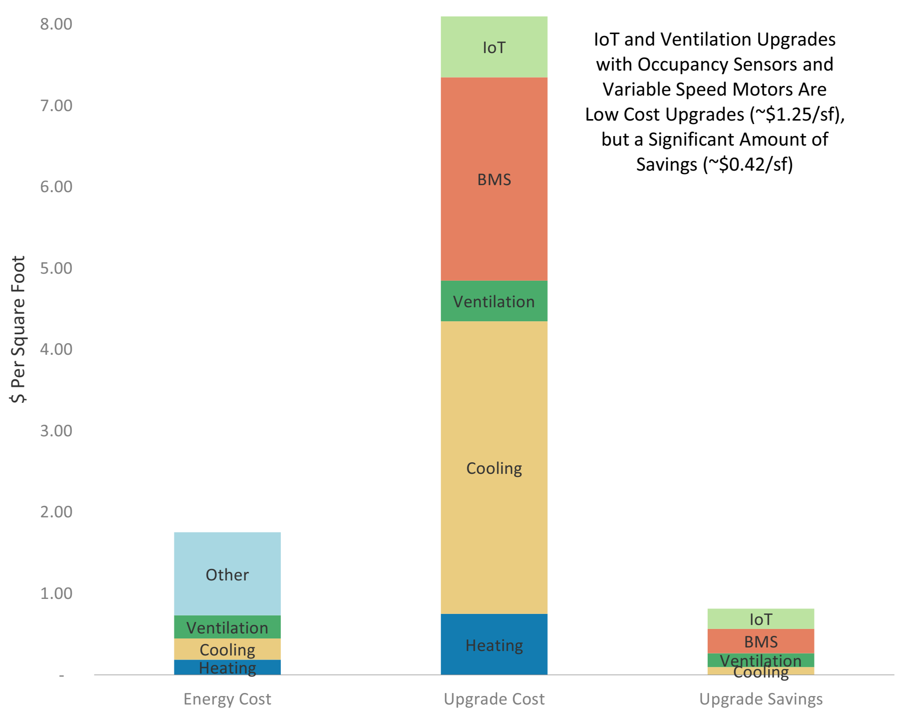
2. The other driver of a step-function change in modernization activity is the role that technology plays. It should not be surprising that the concept of "software eats the world" applies to this market as well, but we don't believe most investors view that as the reality today. Even as OEMs report commercial exposure and performance along the lines of equipment type (i.e., applied vs. unitary), we believe software, controls, and subsystem upgrades are more potent than primary equipment (see right exhibit below).

Exhibit 50: Tectonic Shift in Replacement "Vintages"



Source: US EIA, Morgan Stanley Research

Exhibit 51: Three Pillars of Building Modernization: Energy Cost, Upgrade Cost, Upgrade Savings



Source: US EIA, AAON Company Reports, Johnson Controls Company Reports, Intel Company Reports, Morgan Stanley Research

***Stocks Mentioned:** Trane ($139.96), Johnson Controls ($45.26), Carrier ($37.30), Honeywell ($212.07)*

Oil & Gas and Oil Services

Macro Beta? Capital Discipline Alpha? Both? Neither?

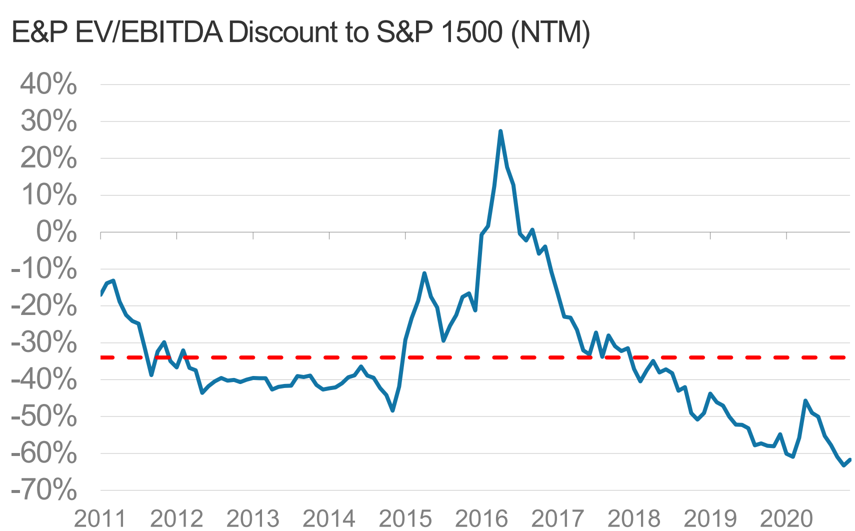
Morgan Stanley & Co. LLC **Devin McDermott** **Connor Lynagh**

Our View	Market View
Oil & Gas – Structurally lower costs and commitments to capital discipline now support E&P cash flow generation through the cycle. Over the past two quarters, E&Ps have begun to offer capital allocation frameworks that constrain mid-cycle reinvestment to 70-80% of cash flow, and in most cases, limit production growth to 5%. Moreover, due to improved capital efficiency, with well costs now 20% below 4Q19 levels, along with lower operating costs, most producers can now organically fund sustaining capital (spending to hold volumes flat) while beginning to generate FCF at oil prices in the $35-40/bbl range, a 20-25% reduction versus the average "breakeven" price over the last 5 years. Together, these structural changes should result in more resilient free cash flow *and* returns to investors through the cycle. **Oil Services – Headwinds from improving upstream capital efficiency to persist, but select oilfield services (OFS) suppliers have the ability to "control their own destiny."** We see upstream capex recovering, but most oil companies will be slow in ramping capex to preserve capital efficiency. While undeniably a headwind, the market underestimates the extent to which certain players can "control their own destiny" by rationalizing supply, increasing bidding discipline, and focusing on capital-light business models. This is particularly the case for higher-technology service lines in international (non-North America) markets, in our view. Capex restraint at OFS suppliers is the key variable to watch.	**Oil & Gas – Investors focused on a painful past are not ready to believe in disciplined E&P spending.** Against a backdrop of suboptimal capital allocation, E&Ps have underperformed the S&P 500 in 9 of the past 10 years. Over this period, the industry has meaningfully outspent cash flow while failing to generate corporate returns above the cost of capital. With a lackluster track record for capital allocation and executive compensation that tends to favor production volumes over returns, investors are skeptical that producers can maintain capital discipline as commodity prices rise - pushing out or even eliminating the FCF inflection. **Oil Services – Structural demand headwinds facing the OFS industry will drive continued margin contraction cycle-over-cycle, with limited ability for OFS players to respond.** Though the trajectory of upstream capex moving forward remains a key debate, most investors generally seem to agree with our view that OFS demand will be lower in the next cycle vs. the last. Yet, investors seem less convinced that constructive supply-side trends can help improve industry fundamentals, arguing that service companies instead will remain beholden to the deflationary trends at the market level.

Oil & Gas: Are E&Ps undergoing a structural improvement in free cash flow and returns?

We believe E&Ps are positioned to disproportionately benefit from the "reopening" trade. . . Election clarity, coupled with incremental vaccine updates, has begun to skew investor sentiment more positive. As we wrote in ***Chase or Fade the Rally?***, a potential recovery in oil demand and underinvestment in supply from capex cuts positions upstream Energy companies (most notably E&Ps) to disproportionately benefit from a macro recovery and post-Covid "return to normal." Moreover, our macro strategists forecast strong global economic growth in 2021 and anticipate the Fed will remain on a very accommodative policy path, with inflationary pressures a tailwind for cyclicals (see 2021 Global Strategy Outlook) - including Energy. While E&Ps have rallied ~44% since the start of November, they still trail the broader market by ~50% year-to-date. Attractive valuations, macro tailwinds, and a sharp FCF inflection support an attractive set-up for the sector entering 2021, in our opinion.

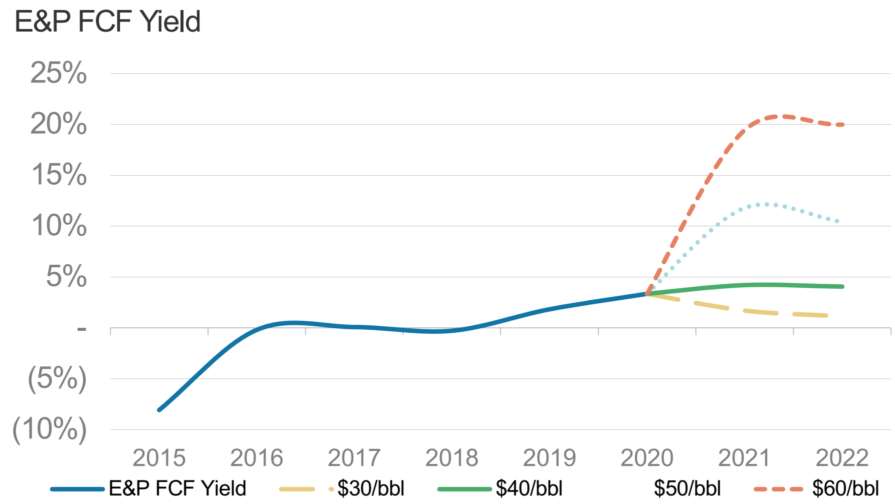
Exhibit 52: E&P relative valuations remain compelling versus history



Source: Bloomberg

...while structurally lower costs and commitments to capital discipline now support E&P cash flow generation through the cycle. E&Ps have recently begun to offer capital allocation frameworks that constrain mid-cycle reinvestment rates to 70-80% of cash flow and limit production growth to ~5%. Well costs, now 20% below 4Q19 levels, allow for producers to sustain volumes within organic cash flow at lower oil prices (~$35-40/bbl vs an average of $50 over the past 5 years). The combination of improved capital efficiency and more disciplined spending frameworks should support resilient free cash flow and improved corporate returns across a range of oil prices. Looking into 2021, the E&P sector, which has not generated material FCF in any of the last 10 years, will offer a FCF yield that is competitive with broader market: ~12% FCF yield at ~$50/bbl WTI, >2x the S&P500, on our estimates.

Exhibit 53: Disciplined spending offers potential upside to ~12% FCF yields at $50/bbl WTI, more than double the broader market.



Source: Morgan Stanley Research

Shift towards cash flow based valuation. As sustainable free cash flow and capital return increasingly underpin the value proposition for E&Ps, we expect investors will more discernibly assess stocks on cash flow based metrics. As a result, discounted cash flow (DCF) and FCF yield valuations should grow in importance relative to traditional approaches — including net asset values (which while similar to DCFs, have a sum-of-the parts component that is less relevant as shale development slows) and EV/EBITDA multiples. Moreover, we also anticipate investors will rely less on the blanket application of 10% discount rates (in-line with the PV-10s companies disclose in financials), in favor of "true" costs of capital — which vary meaningfully across the sector.

Oil Services: Select Opportunities Despite Structural Challenges

We expect capital efficiency to continue to hamper the OFS market opportunity vs. last cycle. On a cycle-over-cycle basis, we think we are broadly in line with consensus in expecting that global upstream capex will be lower. Specifically, our base case calls for a ~20-25% decline in global well capex, though we do see scope for a fairly wide range of outcomes (+/- ~20% vs. our base case). Underpinning this is our view that "Western" oil companies, namely US-focused E&Ps and Western Majors, will take a more measured approach in ramping up drilling activity – maximizing FCF conversion over growth. We see these companies therefore holding onto capital efficiency gains realized in the last cycle, and investing in only the best-returning prospects. On the whole, this is deflationary and negative for OFS.

OFS implications – a smaller addressable market, but we believe the market is underestimating the impact of supplier discipline. As oil & gas markets begin to stabilize and approach what we view as a more normalized environment in the coming cycle, we think that many investors expect that cycle-over-cycle demand destruction will continue to weigh on OFS margins regardless of the level of OFS capacity attrition that takes place. We think this paints with too broad of a brush – while most asset-intensive services will likely see cycle-over-cycle deflation and pricing headwinds, there are select markets (both in terms of geography and product offering) where OFS capacity and bidding discipline can tighten the market. Said differently, capital discipline is likely to drive higher returns in consolidated service lines. We illustrate this view at a high-level (left exhibit below), where, for example, NAm onshore asset utilization softens cycle-over-cycle as demand destruction outpaces supply attrition, while international onshore utilization remains relatively flat, and offshore markets tighten marginally. Meanwhile, for additional support of our outlook that OFS companies will exhibit capital discipline moving forward, we point to our analysis of executive compensation (right exhibit below), where the incentive mix has evolved to reward returns and margins over gross earnings measures in recent years, a constructive development, in our view. For more detailed analysis of our views on the drivers of OFS supply and demand, see our recent deep-dive analysis – Tug-of-War: Aggressive Supply Attrition vs. Structural Demand Headwinds.

Exhibit 54: Below we highlight our drilling rig utilization scenarios which we see as a decent proxy for broader OFS industry fundamentals. From a global perspective, we see supply and demand declining at roughly the same level cycle-over-cycle, leaving utilization roughly flat, though we see utilization in select markets softening (e.g. NAm onshore), while int'l onshore utilization is broadly flat, and offshore shallow water and deepwater rig utilization improves.

Rig Utilization				
	2015-19	2020-25		
Rig Market	Actual	Bear	Base	Bull
NAm Onshore	40%	20%	33%	60%
Int'l Onshore	77%	65%	76%	90%
Shallow Water	61%	47%	63%	83%
Deepwater	58%	43%	62%	82%
Global	**59%**	**44%**	**58%**	**78%**

Source: Rystad Energy, IHS, Morgan Stanley Research estimates. Note: NAm = North America.

Exhibit 55: Management incentives for major service companies are increasingly rewarding returns and margins over growth – we see this as a constructive development that will support OFS capital discipline and increase the probability that returns and margins in select OFS markets can improve cycle-over-cycle.

	CEO % Total Comp		
Avg. Compensation Mix	**2010**	**2015**	**2020**
Returns, Margins & Efficiency	21%	36%	52%
Gross Earnings Measures	19%	9%	10%
Total Performance-Based	**40%**	**45%**	**62%**
Stock Options	29%	25%	8%
Restricted Stock	14%	15%	16%
Total Options & Restricted Stock	**43%**	**41%**	**24%**
Total Salary & Other	17%	15%	13%

Source: Company Data, Morgan Stanley Research. Note: Averages of SLB, BKR, HAL, NOV, FTI.

REITs / Industrial and Freight Transportation

What Does An Evolving Supply Chain Offering Both Speed and Certainty Mean for Logistics Players?

Morgan Stanley & Co. LLC
Vikram Malhotra
Ravi Shanker

Morgan Stanley Mexico, Casa de Bolsa, S.A. C.V.+
Lippmann, Nikolaj

Our View	Market View
In 2021 and beyond we see three themes with uneven implications for logistics players and REITs. For US Industrial REITs, we see fundamentals accelerating towards new highs relative to 2019 levels, driving higher-than-expected SS-NOI growth and market rent growth towards mid-single digits. This in turn should drive absolute and relative multiples to new highs. We think Prologis (OW) will be a key beneficiary given its coastal exposure and portfolio mix. **For Logistics companies, we see a push toward supply chain reliability and visibility without giving up cost efficiency.** This should result in asset-owners moving away from brokers, more internal control, and increasing technology deployment in the movement of goods. We like Trucking companies (TL/LTLs) over Brokers and Parcel companies. **For Mexican Industrial REITs we see the trifecta: accelerating eCommerce, limited new supply, and low vacancies in Mexico City,** the key market. PLD Mexican REIT should benefit most, driving +5% USD rent growth and closer convergence with PLD US REIT.	**The acceleration of e-commerce is already priced into Industrial REIT valuations.** Logistics REITs are trading at implied cap rates below pre-COVID levels: 3.7% vs 4.0% pre-COVID. The e-commerce story is largely priced in and industrial REIT fundamentals have peaked. If the market continues its rotation into value/re-opening names, industrial REITs will continue to be a source of funds. **From a Transportation/Logistics perspective,** the market believes that little will change in the existing relationship between carriers, shippers, and brokers and that the last decade's trend of outsourcing as much as possible will continue**.** **Latam industrial REITs:** Similar to the US, industrial REITs focused on logistics (Fibra Prologis) are richly valued with limited valuation upside. Mexico is too distinct from the US for the latter to be used as a comp.

1. Higher eCommerce penetration and supply chains closer to the consumer: Post-COVID we expect consumer behavior to continue to favor online shopping. eCommerce penetration increased from 18% pre-COVID to ~24.4% expected FY20 (see Exhibit 1). As a result large e-commerce tenants continue to shift inventory and add warehouses closer to major metro/population centers.

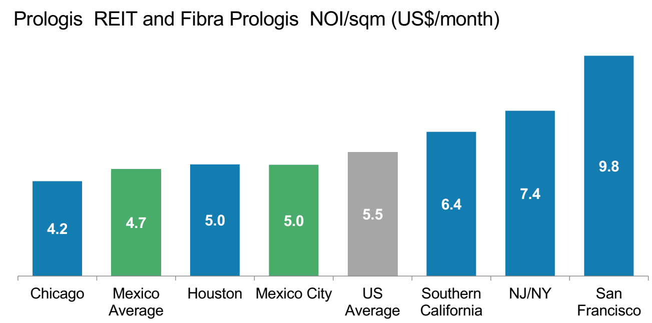
2. The diversification of supply chains away from China to Mexico and or parts of the US (also known as re-shoring / near-shoring). COVID drove companies to diversify or add manufacturing / supply chain operations out of China and into other Asia markets / Mexico to the US in order to guarantee certainty of delivery. Markets close to Mexico such as El Paso have seen market rent growth in the 30-40% range as a result of companies adding or moving their manufacturing to Mexico. In Mexico, we are seeing a significant increase in demand too. The demand from re-shoring mirrors the image in the US. We see strong positive momentum in Tijuana & Ciudad Juarez (connecting with Sa Diego and El Paso respectively). However, we have not yet seen an increase in demand for industrial real estate in the manufacturing hubs in Central Mexico.

3. Overall higher inventory levels for more sustainable supply chains. Post COVID we expect many retailers and businesses to grow/hold higher inventory levels in order to avoid missing out on sales and ensure certainty of delivery. Prologis expects their customers to grow inventory anywhere from 5-10% given that moving the inventory / sales ratio from 1.45 back to the long-term average of 1.65 would require a 15% increase in inventory holding sales constant.

Exhibit 56: The MS internet team estimates e-commerce penetration will reach ~26% in 2021

Source: BEA, Morgan Stanley Research

Exhibit 57: We see Mexico and Mexico City NOI/sqm at a discount to US peers even within the Prologis portfolio, despite strong tailwinds



Source: Company data, CBRE & Morgan Stanley Research

What does this mean for logistics players, and where are we different?

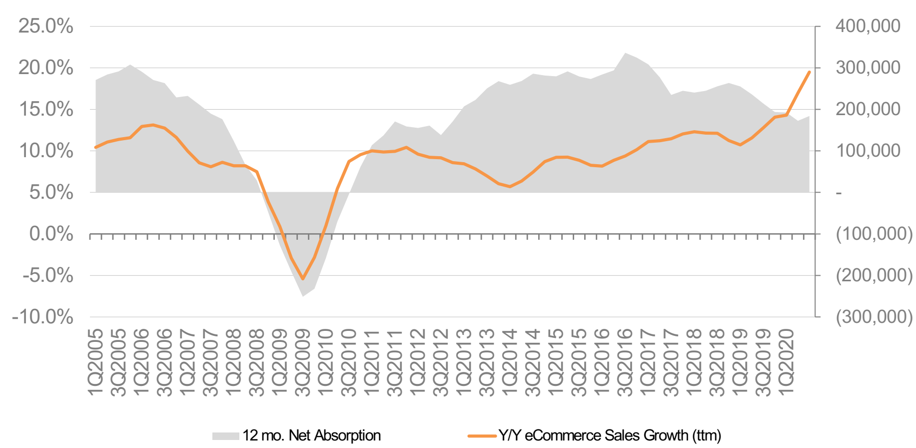
US Industrial REITs and OW PLD: We expect these factors to take fundamentals to new highs (greater demand for logistics real estate and market rent growth), but more importantly driving multiples higher. The Street is estimating FFO growth of 6.3% and 7.4% in FY21 and FY22 compared to post-GFC levels of 8.9% and 5-year average of 9.8%. In turn we think the Street is too conservative on growth in the coming years. While valuations may appear expensive on an absolute basis, we believe that industrial REITs still remain attractive given they are trading at a 300bps lower premium to REITs based on FFO multiples and offer higher growth relative to other REIT Sectors. We view Prologis as the best name to play in the space given its scale, coastal exposure, and portfolio mix that favors LastTouch warehouses closer to the consumer.

Transportation/Logistics: We see a clear separation between companies that should be winners and those that will likely be challenged as a result of these structural supply chain shifts starting in 2021. Higher penetration of eCommerce with supply chains closer to the customer as well as higher levels of inventory are good for warehouses and warehouse operators (like XPO), but not so good for incumbent parcel companies like UPS and FDX that do not have existing sorting footprints close to end customers, do not have the ability to profitably deliver last mile only or one-day mass deliveries, and do not store inventory. We see linehaul TL and LTL carriers (Knight-Swift, Werner, Schneider National), US Xpress, Old Dominion, Saia, ArcBest, J.B. Hunt) as beneficiaries of longer linehaul moves and increasing penetration of ship-from-store. Despite higher eCommerce volumes, we believe UPS and FDX are still on the wrong side of the “negative flywheel” effect of eCommerce (not getting paid for the service they provide, the cost of which goes up constantly). Near-shoring is likely to be particularly beneficial to Mexico-exposed transportation companies like Kansas City Southern and Union Pacific, though we note (see Investing For a Multipolar World) that near-shoring could end up being a zero-sum game for transportation companies especially if the higher cost of near-shored products results in demand destruction.

Latam Industrial REITs. The growth of e-Commerce during the 2020 pandemic has accelerated the demand for logistics infrastructure by several years and pricing in urban centers like Mexico City is increasing by ~20-25%. We see upside risk to those levels in the next years as there is very limited space in Mexico City and a higher level of rents is required to incentivize new development. Mexico City represents ~50% of the business for Fibra Prologis, our favorite real estate name in LatAm, but the market size is only equivalent to a city about the size of Charlotte in the US. We are bullish on the industrial space in Mexico and see Fibra Prologis as benefitting far beyond peers (see Exhibit 2).

Exhibit 58: US Industrial net absorption quickly rebounded in 3Q driven by strong e-commerce growth.

US Industrial Real Estate Demand (Right) vs Retail & eCommerce Sales (Left)



Source: CBRE EA, BLS, Morgan Stanley Research

Key Potential Catalysts in 2021

US Industrial REITs: 1) Expansion/leasing announcements from major e-commerce players including Amazon, Walmart, and Target to name a few, 2) re-acceleration of market rent growth, and 3) further announcements on the re-shuffling of supply chains.

Logistics: 1) Tracking the pace of warehousing/last-mile capacity additions in the space, 2) AMZN potentially launching their own 3P delivery service, 3) large companies announcing plans to supply chains to NA from Asia, 4) customers returning to prioritize speed for eCommerce transactions, and 5) stickines of eCommmerce volumes when stores re-open again.

Mexican Industrial REITs: For logistics focused companies eCommerce acceleration amid limited vacancies for AAA industrial should drive material upside with lease renewals. Our retail team believes Mexican eCommerce sales grew 30% in 2020 in USD terms and will double in the next 5, implying +20 mm sf of incremental demand. Among our coverage, we see Fibra PLD as best positioned given that 70% of rent is focused on logistics, and 45% of NOI comes from Mexico City, the key logistics market. In place PLD

Exhibit 59: We see material potential upside for Prologis Mexican REIT when compared to Prologis US REIT

Metrics (2020e)	Fibra Prologis (MSe)	Prologis REIT (MSe)
Revenue US$ (mm)	216	4,668
EBITDA US$ (mm)	157	3,573
EBITDA margin	72.8%	76.5%
NOI US$ (mm)	188	3,487
NOI Margin	87.2%	74.7%
GLA (mm Sqm)	4	48
Implied Cap Rate	8.6%	3.4%
Market Cap (US$ bn)	2	73
Ent. Value (US$ bn)	3	92
P / FFO	13	26
EV / SQM US$	695	1,905
EV / EBITDA	14	20

Source: Company Documents, Morgan Stanley Research

Mexico City rents are currently US$6/sf vs US$6.8 at market. Thus we expect scarcity plus demand should drive rents higher, at a +5% US CAGR over the next two years, driving the Fibra, which today has an US$5.6 NOI/sf closer to convergence with the REIT which today at US$6.1/sf.

Stocks Mentioned: *XPO ($120.33), UPS ($166.39), FedEx ($301.45), Knight-Swift ($41.57), Werner ($39.87), Schneider National ($20.92), US Xpress ($7.20), Old Dominion ($210.14), Saia ($188.79), ArcBest ($44.75), J.B. Hunt ($139.62), Kansas City Southern ($195.49), Union Pacific ($205.21)*

Retail, Hardlines

Can Home Depot and Lowe's "Comp the Comp" in 2021?

Morgan Stanley & Co. LLC

Simeon Gutman, CFA

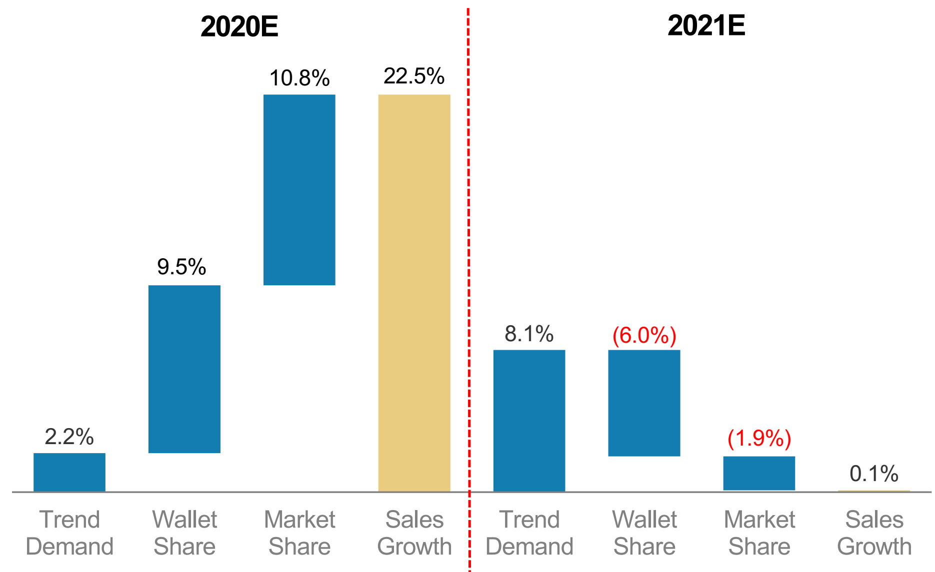
James Egan

Our View	Market View
We now see a clear path for HD and LOW to "comp the comp" in 2021 against 2020's robust growth. We raise our comp estimates for HD & LOW to 1% and flat, respectively, in 2021. We do not believe these stocks are seen as “vaccine recovery plays” given their strong 2020 performances. **Most of the 5 demand scenarios in our new Home Improvement Spend model point to flat to positive comps in 2021.** This compares to current consensus comp estimates of (1)% for HD and (2)% for LOW. Our demand scenarios are driven by a differentiated deconstruction of home improvement demand that shows strong, 8% "trend" demand in 2021 that's hard to see if the drivers are not separated. **The reversal of wallet and market share gains may be less than expected in 2021.** Boosting our confidence in our 5 scenarios is they all assume reversals in 2021 of both wallet and market share, significant growth contributors in 2020. If the current wallet share trends persist beyond Q1 '21, they could add 4-5 points of incremental comp growth to our new HD/LOW forecasts.	**Consensus estimates put 2021 comps at -0.6%/-2.2% for HD/LOW and EPS at $12.34/$8.79.** Investors are trying to assess the potential for HD and LOW to grow next year on top of a strong 2020. Part of the challenge is understanding the extent to which 2020's outsized growth was driven by a strong housing backdrop, which should continue, vs temporary wallet share shifts into Home Improvement from services during the COVID stay-at-home period. **We believe the market is underestimating the level of underlying demand we could see in 2021** on the back of a macroeconomic recovery and continued housing strength. Wallet share was a significant contributor to growth in 2020, on top of underwhelming trend demand. We believe the market is anticipating wallet share reversion, without factoring in stronger underlying demand growth from housing.

Investors are trying to determine how 2020 COVID beneficiaries will "comp the comp" in 2021 and how a likely shift back to services from goods will play out. To answer this question for the Home Improvement segment, we built a model that breaks down 2020 comp growth into 3 distinct pieces: "trend" demand, wallet share and market share gains. We were confident that "trend" demand for 2021 could be reasonably forecast with well-informed assumptions (using the insights of Morgan Stanley's Economists and Fixed Income Strategists).

We built a framework to assess each variable using scenario analysis to gauge different outcomes. In mixing and matching different cases for each variable (trend demand, wallet share, and market share), we were surprised to find in the majority of scenarios, our model produced flat or better sales growth for HD and LOW in 2021. This conclusion could not have been reached without separating the growth drivers and understanding their interplay. Further, the outcomes seem reasonable in our view, as our wallet and market share assumptions are predicated on share "loss" in 2021 with negative impacts to sales (relative to 2020) from both drivers next year.

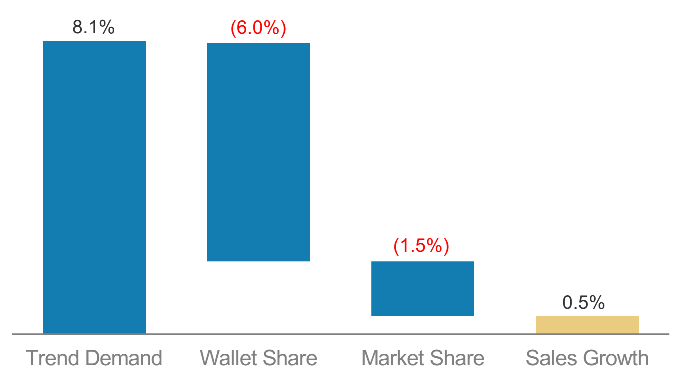
Exhibit 60: Average 2020 versus 2021 Home Improvement demand drivers



Source: Morgan Stanley Research

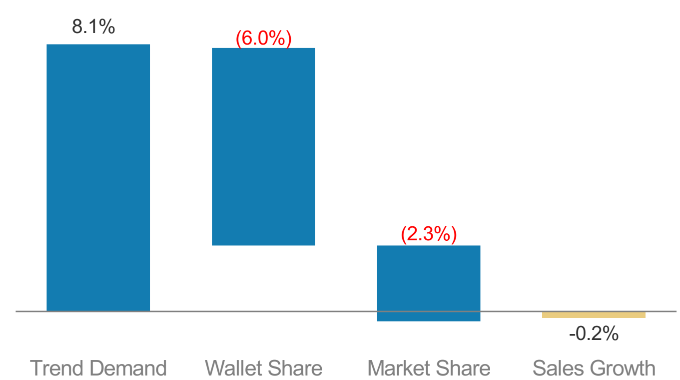
As a result of this analysis, we think HD and LOW can comp the comp in 2021. Three of our 5 scenarios indicate flat comps or better. Ultimately, this gives us confidence strong trend demand could help drive growth on growth and lead to positive comps for HD and LOW in 2021, even as wallet and market share revert.

Exhibit 61: HD 2021 Base Case Sales Growth Composition



Source: Morgan Stanley Research

Exhibit 62: LOW 2021 Base Case Sales Growth Composition



Source: Morgan Stanley Research

2021 demand could approach "housing recovery" levels. Our trend demand forecast is based on a new multi variable regression which uses key economic and housing market forecasts from Morgan Stanley's Chief US Economist, Ellen Zentner, and Fixed Income Strategist, James Egan. 8% "trend" demand is driven by strong expected GDP (+6%) and Existing Home Sales (+5%) growth in 2021 along with healthy Home Price Appreciation (+3%). Based on these core drivers, 2021 is set up to be a pretty powerful demand year for home improvement, similar to levels last seen in 2013, which was a housing recovery period.

The reversal of wallet and share gains may be less than expected in 2021. Boosting our confidence in our 5 scenarios is that they all assume reversals in 2021 of wallet share, a significant growth contributor in 2020. For example, our base case 3 assumes 50% of 2020's wallet share gains are completely non-recurring (and therefore not included in the trend demand base going forward), and the other 50% were pulled directly out of 2021 spending. If the current wallet share trends persist beyond Q1 '21, trend demand should grow off a larger base than we model and fewer dollars should be taken out of 2021, which could add 4-5 points of incremental comp growth to our current HD/LOW forecasts.

We expect HD and LOW to cede back some of their 2020 share gain. For the purposes of our analysis, we assume market share is equal to HD's and Lowe's domestic sales dollars as a proportion of retail sales dollars in the Building Materials, Garden Equipment & Supply Dealers category (so our market share values differ from company reported share). HD/LOW have gained an average of 40 bps/50 bps of market share each year for the past 20 years. In 2020, their incremental annual gain jumped to 140 bps/160 bps. Some of the outsized gain is likely due to store closures among smaller competitor and independents during the year. In our base case, we assume HD and LOW each cede 50% of their incremental gains back as competitors reopen and regain traction.

Potential Catalysts

- Continued retail sales growth in the Building Materials category, indicating sustained favorable wallet share shifts
- Extended stay-at-home orders

Stocks Mentioned: *Home Depot ($261.72), Lowe's ($151.27)*

Retail, Softlines / Department Stores and REITs

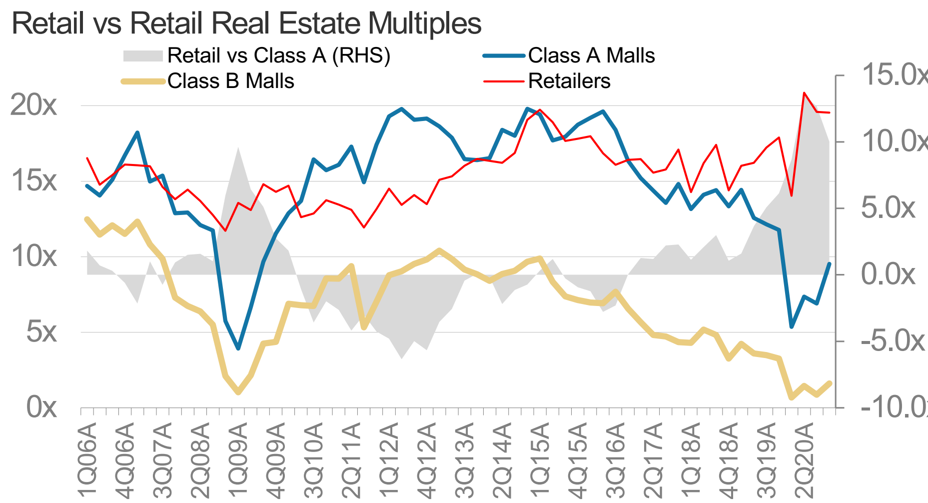
The Great Reopening: Retailers vs Retail Real Estate

Morgan Stanley & Co. LLC **Richard Hill** **Kimberly Greenberger**

Our View	Market View
We think both retailers and malls can work over the near term, given: (1) better than originally feared fundamentals, (2) reopening hopes on positive vaccine headlines, and (3) easy 1H21 y/y compares. Malls have the potential to outperform retailers initially as they stage a catch-up rally given they are down -30% YTD vs. +9% for specialty retailers (excluding LULU and LB). This is especially true as history suggests FFO multiples should rise as SS-NOI becomes less bad, driven by a lower risk premia. **However, we think fundamentals matter over the medium- to long- term.** Since labor costs are largely fixed, store closures and rent reduction are retailers' primary defenses against margin erosion. Current retailer valuations may be unsustainable until retailers prove they have achieved durable reductions to their cost base, and this could be bearish for mall REITs if total NOI impairments are greater than implied by stock prices. And, if rents are not rationalized, it may lead to even more store closures and bankruptcies, which is negative for both retailers and mall REITs.	**Retail and Retail Real Estate valuations have been pressured over the past several years.** The accelerating shift to eCommerce has pushed retail margin pressure to unsustainable levels leading to bankruptcies, store closures, and rent reductions. **Mall REITs are cheap.** While they have rallied +30% post positive vaccine headlines, they are still trading at FFO multiples that are near their lowest relative levels to the REIT group. Valuations can therefore continue to rise as the risk premia continues to come out, even if the fundamental recovery does not accelerate. **Retailer cost reduction durability is the key medium- to long-term unknown; weak holiday sales and global Covid-19 resurgences could pressure near-term results.** 2Q0 and 3Q20 results suggest less-bad-than-feared Covid-19-induced margin erosion. But post-Covid-19 cost normalization, tough y/y holiday compares, and global Covid-19 resurgences could mean ongoing near-term pressure.

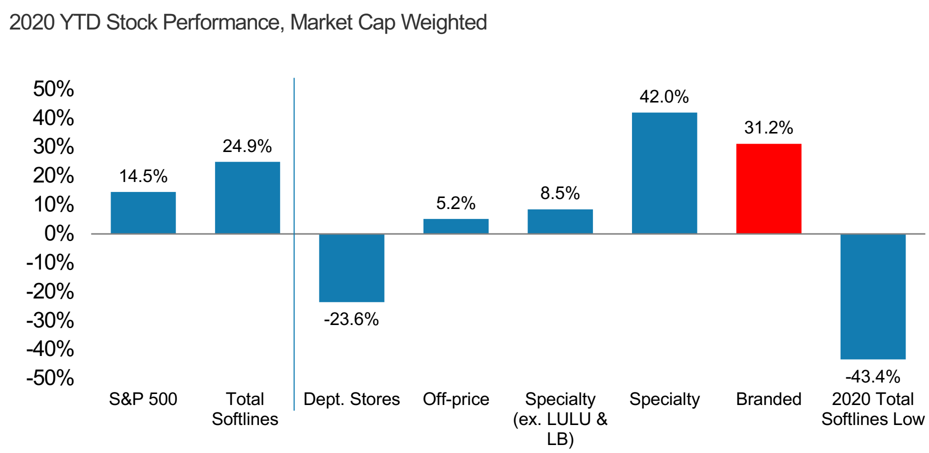
Both retailers and retail real estate stocks have underperformed over the past several years, but they have rallied back hard more recently on positive vaccine headlines and reopening hopes. For instance, Malls are the worst-performing REIT subsector YTD with total returns of -31.7% (as of December 3, 2020), but they are +38% over the past two weeks. Similarly, while specialty retail stocks have impressively rallied 180% on average since their March/April lows, YTD stock price performance still lags the S&P 500 by 600 bps (excluding LULU and LB, which have rallied 60% & 120%+ YTD; Exhibit 2).

Exhibit 63: Class A and B Forward FFO Multiples vs. Average Retailers NTM PE



Source: Thomson Reuters, Morgan Stanley Research

Exhibit 64: Specialty retail stocks have lagged the S&P 500 YTD by 600 bps on a market-cap weighted basis (ex-LULU and LB)



Source: Company Data, Thomson Reuters, Morgan Stanley Research; data as of December 4, 2020

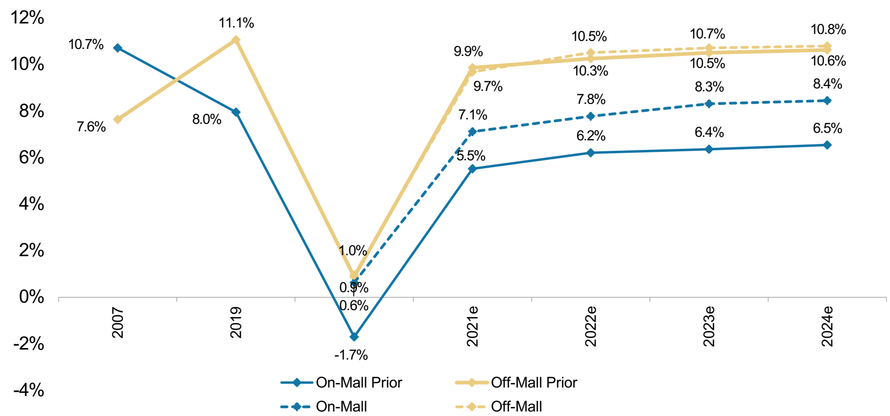
Specialty Retail & Department Stores

We are constructive on retailers in the short-term. We expected Covid-19 would immediately and permanently impair retailers' already-eroding operating margins (Mall JENGA 4: Remapping a Rationalized Landscape, October 14, 2020). However, a quicker-than-anticipated topline recovery and aggressive management of both inventory (-9% y/y on average exiting 3Q20 on top of 2Q20's -8% y/y result) and SG&A (-1% y/y on average in 3Q20 / -7% y/y on average ex-Off-Price on top of 2Q20's -15% y/y) enabled only slight 3Q20 EBIT margin contraction across the Softlines space (-24 bps y/y average) (Earnings Wrap: Top 10 Takeaways from 3Q20, December 4, 2020).

As such, we've adopted a more constructive operating margin outlook for 2H20e and onward compared to our pre-3Q20 earnings expectations (Exhibit 3). While we caution that retailers will likely deliver a step-back from 3Q20's GM expansion and SG&A declines in 4Q20 as a result of eCommerce surcharges and further business/operating environment normalization, we see room for further share price appreciation in the group through at least 1H20 on easy y/y compares and a broader economic re-opening following widespread availability of a Covid-19 vaccine, which our Biotechnology team anticipates as early as April in select geographies (Covid-19 Vaccines: Next Key Dates, Regulatory Process and Timeline of Available Doses, November 23, 2020). All in, we are constructive on retail stocks near-term.

Exhibit 65: We now forecast on-mall retailers' EBIT margins will recover more robustly than we previously anticipated

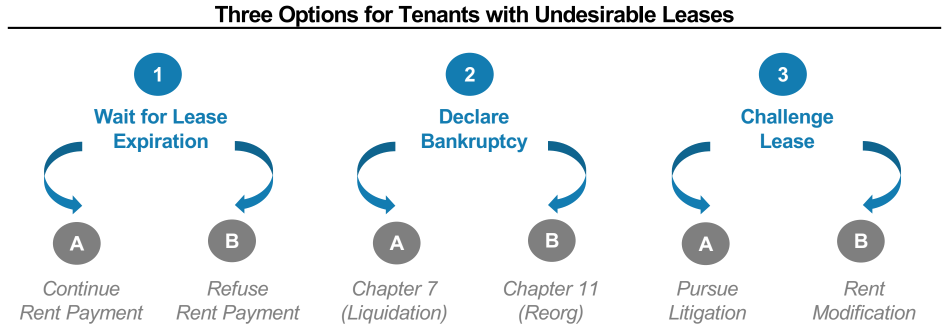
On-Mall vs. Off-Mall Retailer Average EBIT Margin (Sales-Weighted)



Source: Company data, Morgan Stanley Research

But structural EBIT-margin-dilutive pressures likely remain unless retailers meaningfully reduce store operating expenses, leaving us cautious on the medium- to long-term outlook. We have argued that rising store operating costs and eCommerce sales growth against declining 4-wall store sales have significantly pressured retailer operating margins over the past decade, and Covid-19 only accelerated this dynamic (REITs/Retail: Mall JENGA 4: Remapping a Rationalized Landscape, Oct 14, 2020). As such, retailers have been left with little choice but to right-size their cost structures via two primary measures: **(1)** store closures, and **(2)** rent reductions (Exhibit 4). While many retailers have **(1)** announced or accelerated store closure programs, **(2)** committed to restructuring plans or permanent SG&A reductions, as well as **(3)** emphasized ongoing discussions with landlords on rent rates (applies to nearly all businesses we cover), all of which could generate permanent cost savings beyond 2020, we caution that cost reduction durability will not be clear until at least 2H21. As such, despite temporary tailwinds leaving us very positive on the short-term retail outlook (i.e. through 1H21), we are more cautious on the medium to long-term (i.e. 2H21 onwards) until evidence confirms retailers have permanently reduced their pre-Covid-19 cost bases.

Exhibit 66: The need for retailer real estate rationalization has created a complex range of outcomes for both mall REITs and retailers



Source: Morgan Stanley Research

Mall REITs: Cheap, or Cheap for a Reason?

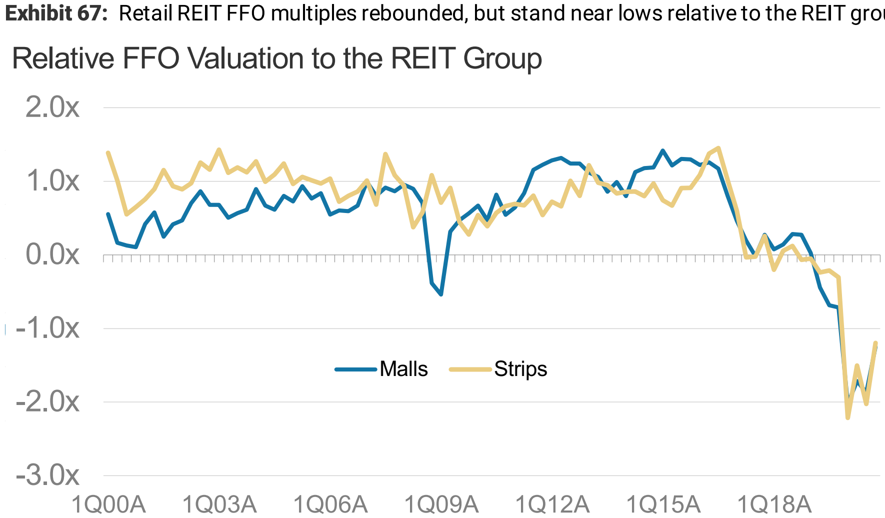
The fundamental path to recovery matters

FFO multiples remain near their cheapest levels to the REIT group, leading investors to debate whether the rally has more room to run, but we think the focus should be on the reasonable path to recovery. We model a 10% impairment in total NOI for Simon Property in '25e vs a 20% impairment for MAC, with 1% terminal growth thereafter. **Our DCF analysis of FCF derives intrinsic value of $83 for SPG and $10.50 for MAC, below where the equities are currently trading (see The Great Valuation Debate).**

- We see a more optimistic recovery path for **SPG** given: (1) malls contributed only ~55% of total NOI, (2) after a 35% rationalization in the mall landscape, we estimate a ~5% hit to total NOI and (3) greater tenant negotiating leverage post the acquisition of Taubman's higher quality malls.

- We acknowledge that the risk premia has come down for **MAC** given market view that an equity raise and a LOC extension are more likely, but we see a challenging recovery path due to: (1) negative FCF in 20e, (2) 13.5x leverage, and 2) rising capex necessary to adapt to an evolving retail landscape.

Exhibit 67: Retail REIT FFO multiples rebounded, but stand near lows relative to the REIT group

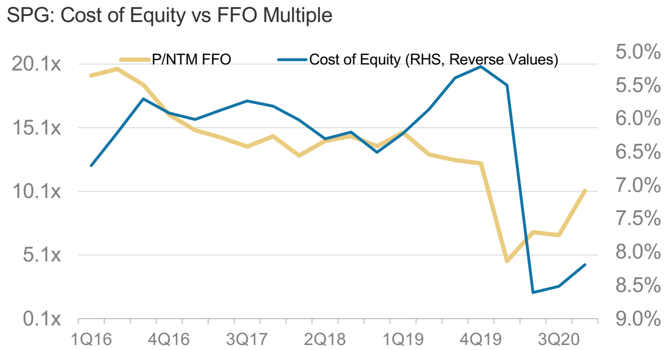


Source: Thomson Reuters, Morgan Stanley Research

But valuations can overshoot fundamentals as risk premia declines

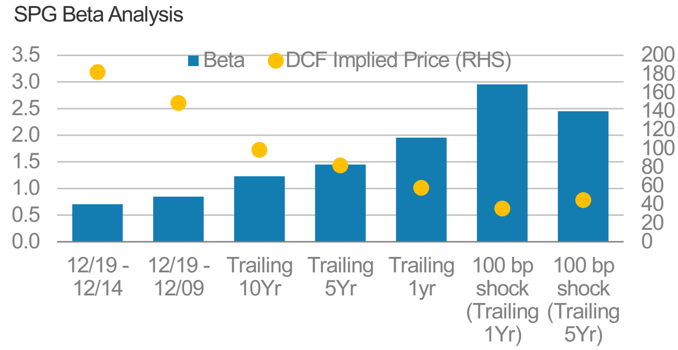
Our regression for SPG indicates that an FFO multiple of ~10x is fair relative to a cost of equity of 8.2% (Exhibit 7). It's therefore possible that valuations can continue to rise as the cost of equity declines and vice versa for that matter. For instance, the DCF implied stock price for SPG in our base case ranges from a maximum of ~$182 assuming a 5-year pre-Covid beta (12/31/19 - 12/31/14) to a minimum of ~$36 assuming a +100 bp shock to the trailing 1-year beta (Exhibit 6).

Exhibit 68: FFO multiples are correlated to the cost of equity



Source: Bloomberg, Morgan Stanley Research

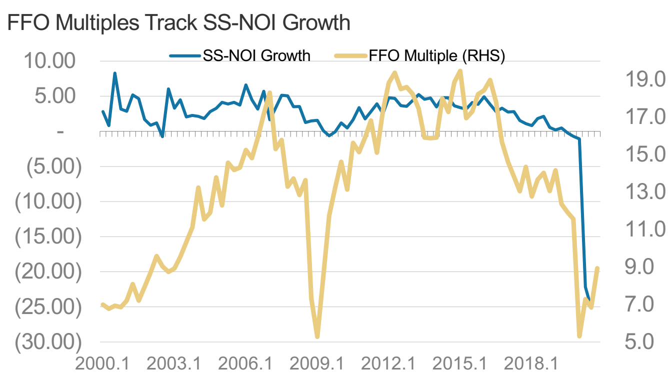
Exhibit 69: SPG implied price analysis based on 7 beta scenarios



Source: Bloomberg, Morgan Stanley Research

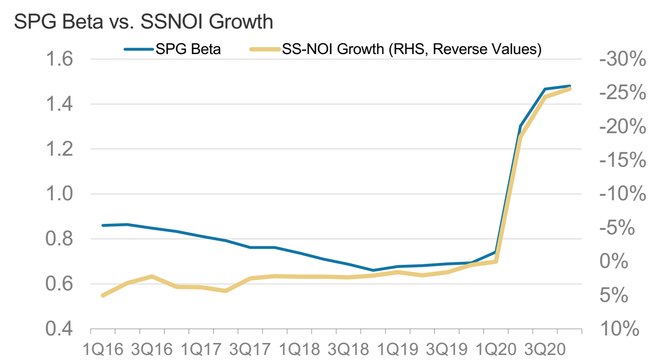
The key may be near-term SS-NOI growth. Our analysis suggests valuations have been pressured as SS-NOI growth declines (Exhibit 8) not only because of earnings headwinds, but also because the beta rose (Exhibit 9). As a result, cost of equity could decline as the second derivative of SS-NOI turns less bad. We don't think that necessarily means fundamentals are stabilizing faster than we anticipated and the market may underestimate the rise in interest rates, but it may be viewed bullishly near term.

Exhibit 70: Mall REIT valuations have fallen to historical lows...



Source: Bloomberg, Morgan Stanley Research

Exhibit 71: ...Earnings were impacted, but betas increased



Source: Bloomberg, Morgan Stanley Research

Bottom line, there may be a reasonable near term bull case scenario of $108 for SPG and $18 for MAC. This is driven by a reduction in the risk premia, but we think valuation over the medium to long term will be dictated on the reasonable path to cash flow normalization where we remain cautious.

Stocks Mentioned: *Simon Property Group ($90.11), Macerich ($11.96)*

Software

SaaS 2.0: Is There a New Competitive Wave on the Horizon?

Morgan Stanley & Co. LLC

Keith Weiss **Stan Zlotsky** **Sanjit Singh** **Meta Marshall**

Our View	Market View
A new class of SaaS vendors is coming of age. 'SaaS 2.0' vendors are built natively on top of the global scale Public Cloud vendors (AWS, Azure, Google Public Cloud), utilizing the unique capabilities Public Cloud more fully than prior generation SaaS vendors, innovating faster, with a more data- and developer-driven perspective, and more efficient product-driven distribution models. **Do they pose a real threat to the current SaaS leaders? Yes, but it will take time to see the impact.** We identify four dimensions where SaaS 2.0 vendors differentiate versus the current large SaaS 1.0 companies: 1) Architecture – building natively on top of global scale Public Cloud utilities allows new solutions for traditional software trade-offs; 2) Pricing models – matching to the dynamics of the Clouds where they are built, many SaaS 2.0 models utilize consumption and/or usage-based pricing model to low barriers to entry and better match value to price; 3) Distribution – Product-led distribution models enable the vendor to scale sales intensity as the opportunity evolves, enabling a more efficient go-to-market strategy; and 4) Customer Focus – SaaS 2.0 vendors often expand their purview to better include developers into their user base, making for a more extensible solution. A strong value proposition across these four areas likely drives the rise of SaaS 2.0; however we expect the impact to take time to play out as a recovery in macro spending near-term is likely a rising tide that lifts all boats.	**The market does not fully appreciate the advantages SaaS 2.0 vendors bring to the marketplace.** While there is a lot of excitement around new SaaS 2.0 vendors like Datadog, Snowflake, Twilio, and the raft of new private vendors emerging in the market, investors generally do not view this as a threat to the positioning of the current SaaS 1.0 stalwarts like Salesforce, ServiceNow, and Workday.

What Are The Competitive Advantages of SaaS 2.0 versus SaaS 1.0?

Below we outline our framework for identifying SaaS 2.0 vendors and the benefits of their defining characteristics. In the year ahead, we look to the advantages outlined below to enable the rise of SaaS 2.0 and increase competition with SaaS 1.0.

Exhibit 72: Competitive Advantages of SaaS 2.0 versus SaaS 1.0

Characteristics of SaaS 2.0 versus SaaS 1.0				
	Architecture	Pricing	GTM	End Customer
SaaS 1.0	Multi-tenant	Seat-based	Direct Sales	Business User
SaaS 2.0	Built to Leverage Scaling	Usage -based	Product-Driven Sales Model	BU Plus Developer

Benefits of SaaS 2.0 versus SaaS 1.0				
	Architecture	Pricing	GTM	End Customer
SaaS 1.0	Lower Costs	Higher-barrier to entry	High-Touch	One-size-fits-all
SaaS 2.0	...Plus Broader Functionality & TAM	Lower-barrier; faster ramp	Low-touch, greater efficency	Customization; faster time to market

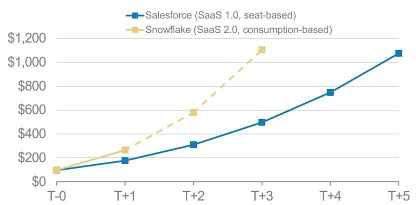
Source: Morgan Stanley Research

1) Architecture: Built *For* the Cloud (Not Just *In* the Cloud) First-generation SaaS vendors were pioneers in moving software application into the Cloud with multi-tenant architectures in which a single software instance served multiple customers. This architecture proved effective in lowering costs, as the expense to support the application, and provide compute and storage was carried across multiple customers, and perhaps even more importantly increased the pace of innovation for these applications, as the vendor no longer had to support complex compatibility matrixes of operating systems, databases, and storage systems that the on-premise applications would run on. However, these SaaS 1.0 applications were largely built in the co-locations facilities, and were too early to capitalize on the capabilities of Global Scale Public Cloud infrastructures like AWS, Azure or Google Cloud Platform.

Second-generation SaaS vendors build their applications natively on the Global Scale Public Cloud, incorporating the broader set of capabilities (horizontal scaling, compute on demand, etc..) of the infrastructure in their core architectures. The first generation of SaaS companies still had to optimize for a given capacity of compute and storage (since they owned the servers and storage), whereas second-generation SaaS applications simply rent compute and storage capacity as needed, reducing these capacity restraints significantly. This allows SaaS 2.0 to solve core software problems more effectively and enables solutions not possible with on-premise or SaaS 1.0 architectures. Additionally, these vendors can make use of the native functionalities offered by the Public Cloud Vendors themselves to quickly build out new capabilities. **As a result, SaaS 2.0 architectures can more easily target greater functionality, building a broader solution and addressing a bigger market opportunity.**

2) Pricing: Usage-based Pricing Matches Price to Value. First-generation SaaS vendors largely utilized seat-based pricing, while second-generation SaaS vendors leverage usage-based pricing models (i.e. pricing based on how much compute or storage is consumed, or a take rate on gross merchandise value/GMV). In our view, **SaaS 2.0 usage-based pricing lowers the barrier to entry for end users, but also provides an opportunity to scale faster**. For example, Salesforce's seat-based pricing model took roughly 5 years to scale to $1 billion revenue, but Snowflake's usage-based pricing model is expect to take only 3 years to scale to $1 billion in revenue (in FY22).

Exhibit 73: SaaS 2.0 consumption-based models as having lower barriers to entry but faster revenue ramp, relative to SaaS 1.0 seat-based models.



Source: Company Data, Morgan Stanley Research. SNOW T+2 = FY21 estimate, T+3 = FY22 estimate. CRM T-0 = FY04.

3) Go-To-Market: Product Driven Sales Models Drive Higher Efficiency The go-to-market strategy of SaaS 1.0 vendors centered around a direct sales model, leveraging high-touch field sales reps and inside sales teams to reach customers and sell in their solutions. Alternatively, SaaS 2.0 vendors use a more product-driven distribution, often starting with a free version or self-service models to enable low barriers to entry and fast time to value for the customer. As the product usage builds, 2.0 vendors layer in more proactive selling as needed. This bottom-up sales motion, enables a more effective sales investment as the resources utilized are matched to how extensively the customer is using the product (a more targeted motion), often resulting in a tiered sales strategy – self-service leading to inside sales leading to field sales only as needed. **Greater utilization of product driven sales models by SaaS 2.0 vendors should ultimately drive a more efficient selling motion relative to the direct sales model of SaaS 1.0**.

4) Target End Customer: Beyond One-Size Fits All Solutions. First-generation SaaS vendors migrated from selling to the IT department to selling to the business user, a big improvement in being able to better target the value proposition. However, the business user still had to fit their business processes to the capabilities of the SaaS 1.0 solution, which limited the potential for differentiation from their peers. Second-generation SaaS vendors often sell to both the business user *and* the developer, as the solutions typically are more programmable and customizable by the end customer. For example, Twilio's acquisition of Segment furthers the company's two-pronged approach to target both enterprises and developers to drive growth. Tapping into the developer community enables solutions that can be tuned to better fit the needs of the end customer, compared to the one-size-fits-all solutions from SaaS 1.0 vendors. **Net, SaaS 2.0 vendors selling into developers, as well as business users, enables built-to-suit, more customized solutions with a more differentiated value proposition compared to SaaS 1.0.**

Bottom line: We look to our framework outlined above to identify SaaS 2.0 vendors in 2021 and beyond. Next-gen vendors that are built natively on AWS, Azure, GCP and capitalize on the flexibility and scaling technologies of the public cloud can ultimately drive faster innovation, solve problems in new ways, and bring a broader set of solutions to new customers. We are starting to see the receptiveness of these capabilities - including faster revenue ramps, better efficiencies and addressing a broader customer base. However, we expect it will take time for the market to fully appreciate the differentiation between SaaS 2.0 and 1.0 vendors, especially as a recovery in macro spending near-term is likely a rising tide that lifts all (first-gen and next-gen) boats.

Telecom Services

Are Wireless Wars Returning?

Morgan Stanley & Co. LLC **Simon Flannery** **Benjamin Swinburne**

Our View	Market View
The market remains rational for now, but risks are building. While recent trends have been encouraging, we are concerned that the industry is vulnerable to an increase in competitive intensity as subscriber growth slows amid market saturation and new players like cable and Dish gain scale. Increased promotional activity around the new iPhone bears watching, while T-Mobile is targeting share gains leveraging its 5G spectrum advantage. It has been about 4 years since the last major increase in competitive intensity with the move to unlimited data plans (late 2016 / early 2017.	**Steady as she goes –** Consensus expectations are for a continuation of recent underlying trends, with broadly stable ARPUs and positive subscriber growth across all major carriers driving, low single digit Big 3 wireless service revenue growth for 2021 and 2022.

ARPUs are high in a global context – US postpaid phone ARPUs average around $50/month, and while there has been some Covid-19 related pressure, particularly on roaming revenues, ARPUs are moving higher again, helped by migration to premium tiers of unlimited plans. Notably, 5G adoption is also driving ARPUs higher in early 5G markets like South Korea (5G update - Initial signs point to optimism, 22 Oct 2020). Having said that, US pricing is high in a global context, with most European markets having ARPUs of less than 20 Euros per month. Recently, new entrants have triggered price competition in markets like Japan (Docomo's New Rates More Aggressive than Expected (20GB ¥2,980): All Mobile Carriers Will Need to Rethink Rate Plans, 3 Dec 2020) and India.

Potential Catalysts

5G iPhone Super Cycle – Subscriber upgrade and switching activity has been subdued in recent quarters, but our recent Alphawise survey shows record levels of interest Exhibit 1in buying the new iPhone: see AlphaWise Survey: 5G Consumer Demand Bigger than You Think (29 Nov 2020). We have already seen AT&T offer relatively generous $700 subsidies to both new and existing customers, and we could see more promotional activity as supply conditions improve.

Dish's 5G network moves closer to deployment – Dish (covered by Ben Swinburne) is now active in mobile with Boost, and has committed to deploy its initial 5G markets in 2H21. Questions remain over their go to market plans and financing; we expect them to target the wholesale market with low cost bandwidth. If Dish were to announce a strategic partnership, that could impact investor sentiment in the space.

Cable companies are scaling in mobility – Cable companies are on track to add more than 2M wireless subscribers in 2020, representing ~40% of industry adds. They cable companies are expanding retail footprints, and have plans to deploy CBRS spectrum to improve performance and overall wireless economics.

T-Mobile's 5G ramp could trigger more aggressive pricing by competitors – T-Mobile is in a strong position to take share as they roll out their mid-band 5G network. It is set to cover 100M pops by 12/20 and 200M pops by 12/21, and will offer speeds of 300-400 Mbps, 7-8x the speeds of competitors. If T-Mobile succeeded in driving material share shifts, we could see an aggressive response, not unlike the unlimited plan battles in late 2016 and early 2017.

Macro pressures could drive prepaid adoption – While we expect a robust recovery in 2021, unemployment remains elevated, and could drive more value-seeking behavior by customers. We have recently seen an uptick in interest in the prepaid space by consumers, with Verizon also targeting the segment with their Tracfone deal.

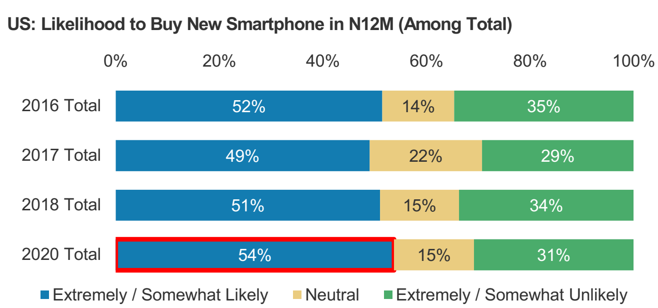
Potential Offsets

Industry Consolidation – The 4:3 Sprint/T-Mobile merger has the potential to create a more benign competitive environment. Sprint had been more aggressive carriers in terms of pricing and promotions. Dish and the Cable are bringing additional competition.

High customer satisfaction – Our survey results show historically high levels of customer satisfaction Exhibit 2 with their wireless carriers which could extend low levels of churn. The increased bundling of content and multiple devices also helps churn.

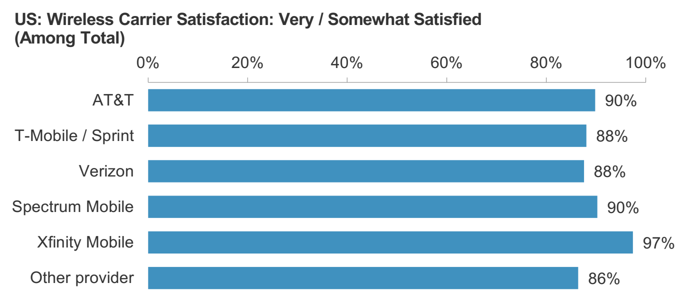
ARPU growth – While industry subscriber growth is in the 1-2% range, supported in part by more second phones, ARPUs have been rising modestly ex-COVID-19 as more customers embrace premium tiers of unlimited data. Verizon is seeing 88% of new accounts taking unlimited plans, with 58% of these accounts electing for premium tiers.

Exhibit 74: Likelihood of new smartphone purchase up



Source: AlphaWise, Morgan Stanley Research

Exhibit 75: Customer satisfaction with US wireless carriers generally high



Source: AlphaWise, Morgan Stanley Research

Stock Implications – We see T-Mobile as best positioned for a more competitive environment as a larger switching pool should create more share gain opportunities. But the industry has low marginal costs, so ARPU reduction has a very high pass-through impact to EBITDA and FCF. Our sensitivity analysis indicates a $5 reduction in postpaid phone ARPU could reduce consolidated EBITDA (assuming 70% pass-through) by ~5% at AT&T, 8% at Verizon, and 10% for T-Mobile. The Tower companies should do well, benefitting from competitive network upgrades; CCI is our top Tower pick.

Stocks Mentioned: *T-Mobile US ($133.15), Crown Castle ($161.33)*

Utilities

How Will Utility Stocks Perform in a Recovering Economic Backdrop?

Morgan Stanley & Co. LLC **Stephen Byrd** **David Arcaro**

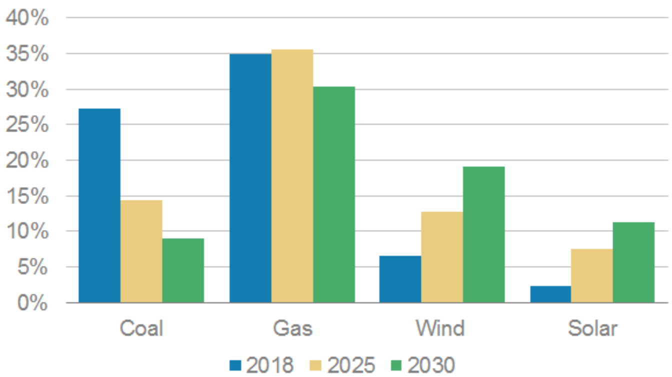
Our View	Market View
We are more bullish on utilities than the market, as we see a number of factors that support utility performance into 2021. Utilities have a strong renewables growth outlook, significant levels of ESG capital continue to flow into the space, Utilities would benefit from potential tax reform, valuations price in higher risk than the stable earnings profile of the industry justifies, and the space screens favorably compared to other defensive sectors.	**Bearish on the outlook for utility equity performance vs. the broader market, seeing the current environment as the wrong point in the economic cycle to invest in the sector.** Utilities are seen as having a tendency to underperform coming out of recessions, unlikely to participate in accelerating earnings growth, and negatively correlated to interest rates and inflation which might rise from here. Cyclical sectors gain investor preference to capitalize on a rebound in economic growth, causing Utilities to underperform.

After several years of strong returns Utilities have underperformed the S&P by 23% since the beginning of February. The broader market narrative has rapidly shifted to a focus on an economic recovery, with bearish performance from Utilities and growing support for cyclicals along with stocks that have benefitted from the unique 2020 circumstances. We see several factors that are unique to the current environment that could support stronger utility performance from here.

What could make Utilities work from here? We think the decline in Utilities has been undeserved given the stability in earnings through the pandemic, and the temporarily high volatility will subside bringing investors back to the group. We see several dynamics that could lead to outperformance: 1) ESG strategies are deploying higher levels of capital with utility decarbonization an attractive theme, 2) Utilities should benefit from potential renewables and tax policies post the election, 3) valuations screen attractive vs. bonds, 4) the space could outperform other defensives, and 5) the risk level implied in utility stocks looks excessive relative to the broader market. If interest rates stay low and inflation remains limited, we see a particularly bullish outlook for the space.

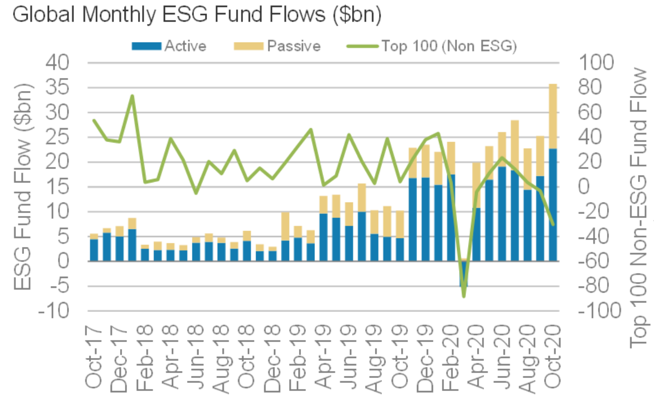
Utilities are attracting ESG interest through decarbonization strategies. Utilities offer direct financial exposure to the Environmental factor within ESG frameworks, with many stocks in our coverage pursuing earnings growth through decarbonization of their power generating fleets. Many Utilities in the US own coal-fired power plants that are now old and costly while solar and wind continue to get cheaper. We now see a large actionable opportunity for Utilities to shut down uneconomic coal plants and replace them with solar and wind. As a result we expect the share of power generation provided by coal plants to decline from ~25% in 2018 to <10% by 2030, while solar and wind combined rise from <10% in 2018 to >30%.

Exhibit 76: Coal declining significantly as % of US generation in favor of solar and wind



Source: Morgan Stanley Research estimates

Exhibit 77: ESG fund flows have been rising throughout much of 2020

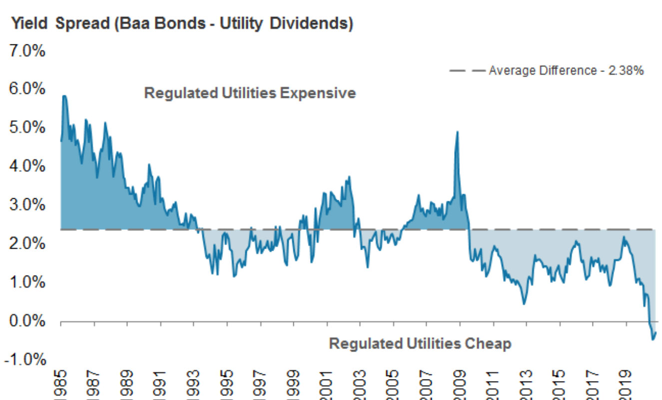


Source: Morningstar. Morningstar updates as of 6 October 2020

Election leverage: Potential policy upside for the utility space in a Democrat administration. If tax reform is pursued and leads to higher corporate tax rates, we would expect an underappreciated benefit to utility cash flow and earnings. Within climate policy, there is potential for a green infrastructure program or extensions of renewables tax credits, which we believe would offer many Utilities a greater growth and earnings opportunity.

Utilities screen favorably compared to bonds and based on the implied equity beta. *Utilities have never screened as cheap as they currently are relative to BBB bonds, which could drive some rotation into utility equities.* Utility dividend yields have tended to trade at a level that is 2.4% below prevailing BBB bond yields, while after this year's underperformance utility dividend yields are now above BBB bond yields - a dynamic that we haven't seen occur at any point back to 1985. *In addition, the implied beta of Utilities embeds a higher level of risk than the underlying business models justify*. The group is implying approximately 0.85 beta to arrive at current valuations, a level that we think is too close to the market average considering the low-risk nature of the utility business model.

Exhibit 78: Utility dividend yield screens the cheapest ever since 1985 vs. corporate bonds



Source: Morgan Stanley Research, Bloomberg

Exhibit 79: Implied beta overstates underlying risk in our view, with meaningful upside for small changes in beta

Beta	0.65	0.75	0.85	0.95	1.05
2021 P/E Multiple	24.3x	21.3x	19.0x	17.0x	15.5x
Upside/Downside	28%	12%	0%	-11%	-18%

Source: Morgan Stanley Research

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(as of November 30, 2020)

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	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)			OTHER MATERIAL INVESTMENT SERVICES CLIENTS (MISC)	
STOCK RATING CATEGORY	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY	COUNT	% OF TOTAL OTHER MISC
Overweight/Buy	**1404**	**41%**	**372**	**46%**	**26%**	**620**	**41%**
Equal-weight/Hold	**1448**	**43%**	**346**	**43%**	**24%**	**666**	**44%**
Not-Rated/Hold	**5**	**0%**	**1**	**0%**	**20%**	**4**	**0%**
Underweight/Sell	**536**	**16%**	**85**	**11%**	**16%**	**219**	**15%**
TOTAL	**3,393**		**804**			**1509**	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

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Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

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