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Strategy
North America

North America Road Ahead 2021

Driving Through Twists and Turns

- **Vaccines illuminate the path to normalization but one needs to get through a harsh winter first.** An economic soft patch is plausible as the result of renewed lockdowns in the near term, but it can be offset by reasonable visibility for meaningful mid-year inoculation trends. Moreover, the Georgia Senate races represent a risk given the potential for higher taxes if the Democrats pick up the two seats.
- A solid earnings rebound is expected unless vaccine availability gets more challenged given potential manufacturing and distribution hiccups. We envision EPS growth of better than 20% in 2021 and a further 9%-10% in 2022. However, the equity market appears to be pricing in around $180 already.

Equity Strategy

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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Strategy

Equity Strategy

Driving Through Twists and Turns

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- **Vaccines illuminate the path to normalization but one needs to get through a harsh winter first.** An economic soft patch is plausible as the result of renewed lockdowns in the near term, but it can be offset by reasonable visibility for meaningful mid-year inoculation trends. Moreover, the Georgia Senate races represent a risk given the potential for higher taxes if the Democrats pick up the two seats.

- **A solid earnings rebound is expected unless vaccine availability gets more challenged given potential manufacturing and distribution hiccups.** We envision EPS growth of better than 20% in 2021 and a further 9%-10% in 2022. However, the equity market appears to be pricing in around $180 already.

- **Our Panic/Euphoria sentiment metric is at all-time highs, exceeding levels witnessed in 2000, generating a powerful signal of extreme Street enthusiasm.** Investors have been asking us to alter the model's construction to reflect a very accommodative Fed and continued fiscal support, but the guidepost was designed to be a reality check, and not something we could manipulate to change the narrative.

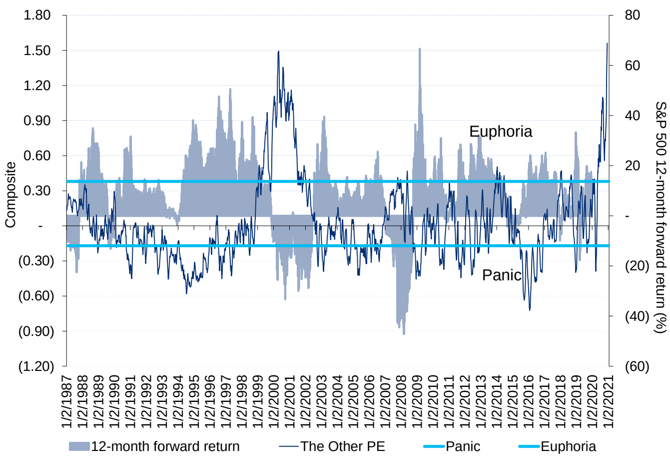
- **Valuation and earnings revisions appear stretched with a possible peaking, which do not bode well for share prices.** We believe that the Street has pulled forward S&P 500 returns into 2H20, leaving 2021 in a 3,700-4,000 trading range, with a year-end target of 3,800 using 10 different approaches (Setting Our Year-End 2021 S&P 500 Target).

- **The rotation to value over growth still has legs in our opinion.** Higher bond yields, easier revenue comparisons, increased government regulation of tech, a capital spending rebound and considerable consumer pent-up demand for services all suggest a continued rotation towards smaller cap, cyclical and value names. Yet, a shift away from megacap tech could restrain the S&P 500 as well.

Looking for Yield Signs

The S&P 500's sharp rally from March 2020 lows has surprised us, particularly in light of euphoric readings now being above the 2000 tech bubble peak (see Figure 1). In addition, most valuation metrics look unattractive with price/sales being especially discomforting (shown in Figure 2). Plus, upside earnings revisions do not seem sustainable and could be cresting (found in Figure 3). But, investors have been focused almost solely on Fed liquidity (highlighted in Figure 4), yet we do not perceive the central bank as upping its bond purchases given recent comments from Chairman Powell.

Figure 1. Panic/Euphoria Model

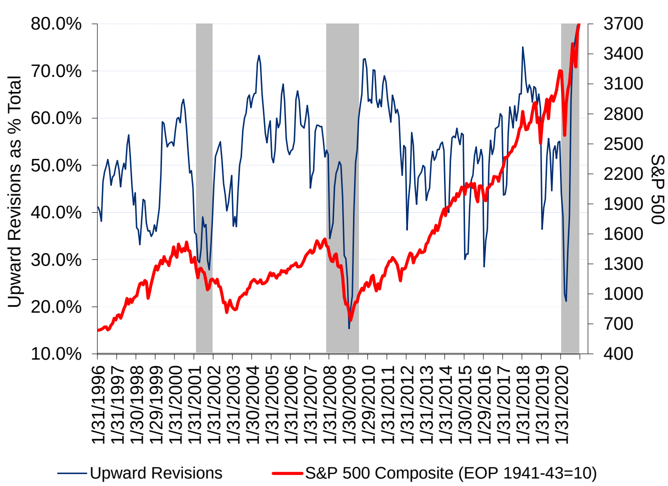


Source: Haver Analytics, Pinnacle Data, and Citi Research – US Equity Strategy

Figure 2. S&P 500 Price/Sales

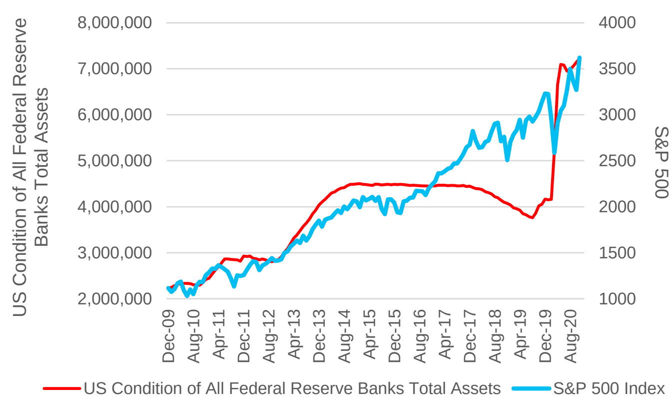
Source: FactSet and Citi Research – US Equity Strategy

Figure 3. S&P 500: Upward Revisions as a % of Total vs S&P 500



Source: FactSet and Citi Research – US Equity Strategy

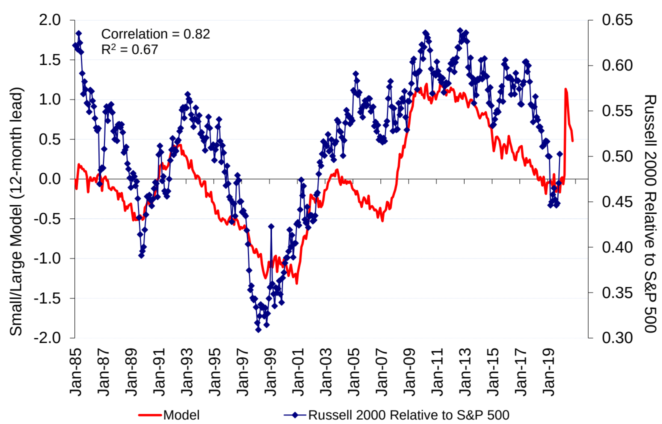
Figure 4. US Condition of All Federal Reserve Banks Total Assets vs S&P 500



Source: Haver Analytics and Citi Research – US Equity Strategy

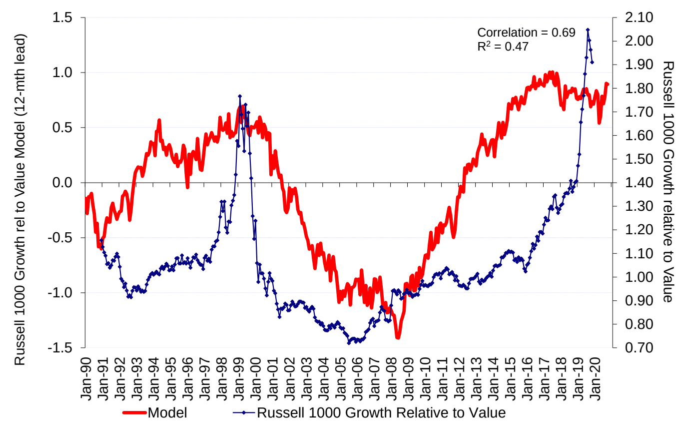
While we cannot necessarily identify the catalyst for a market pullback (in the 5%-10% range) which would represent a buying opportunity, we think that vulnerabilities are in place even as few clients are willing to miss out on the upside with FOMU (Fear Of Meaningfully Underperforming) winning out. Our lead indicator models for small caps and value (provided in Figures 5 and 6) are being overlooked as portfolio managers are sticking with their decade-long winners. As one trader suggested to us, while there may have been 20 IPOs that have doubled on day one out of the box this year, there were more than 100 such moves in both 1999 and 2000 so no need to worry. The cash on the sidelines argument is trumping the 50-year high on household sector equity allocation as a percent of financial assets view (given Figure 7) as the concept of TINA (There Is No Alternative) rules for the time being with a desire to keep buying the secular growth winners that also benefitted from work-from-home and shelter-in-place reactions to the pandemic. Investors are ignoring Figure 8 while Citi's rate strategist forecasts bond yields to move to 1.25% by year-end 2021 and others are projecting higher numbers. Furthermore, a quick review of five-year inflation breakevens contend that the bond market is worried about some sort of a sharp CPI rebound from expectations nine months ago.

Figure 5. Small vs Large Model Lead Indicator Model



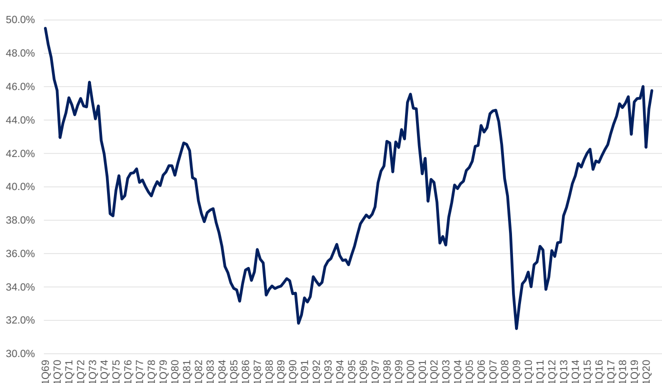
Source: Haver Analytics and Citi Research – US Equity Strategy

Figure 6. Growth rel Value Lead Indicator Model versus Growth rel to Value



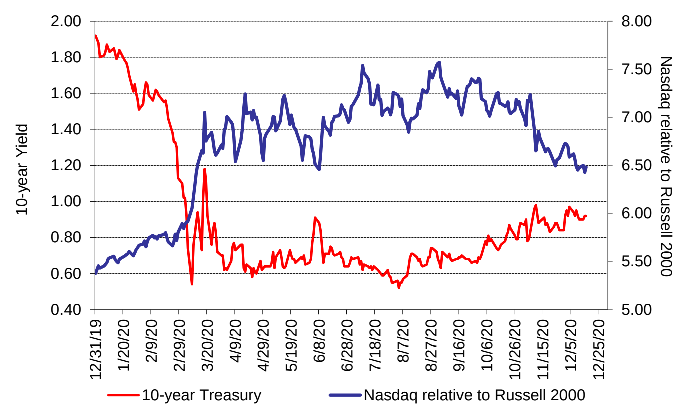
Source: Haver Analytics, FactSet, and Citi Research – US Equity Strategy

Figure 7. Household & Nonprofits: Corp Equities + Equity in Non-corporate Business + Mutual Fund as % Financial Assets



Source: Haver Analytics and Citi Research – US Equity Strategy

Figure 8. 10-year Yield vs Nasdaq Composite relative to Russell 2000

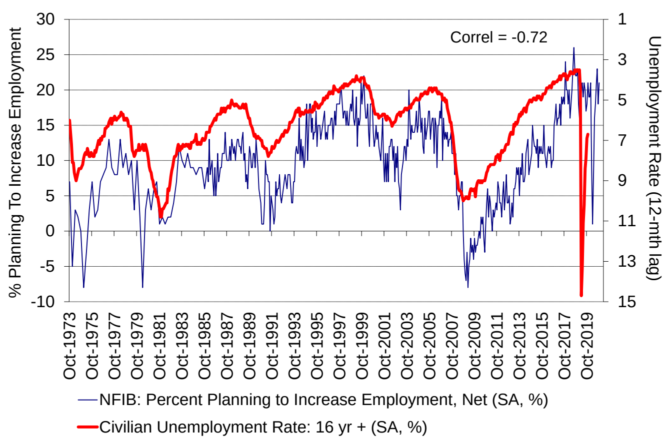


Source: Haver Analytics and Citi Research – US Equity Strategy

The outlook for 2021 is quite good in economic terms (GDP rising 4.9%) and unemployment falling with recovered hiring intentions (presented in Figure 9). Capital spending is anticipated to bounce back as well (Capex Insights for 2021) and consumers are sitting on nearly $1.3 trillion of incremental savings that could be used for more spending alongside rising consumer sentiment (laid out in Figure 10).

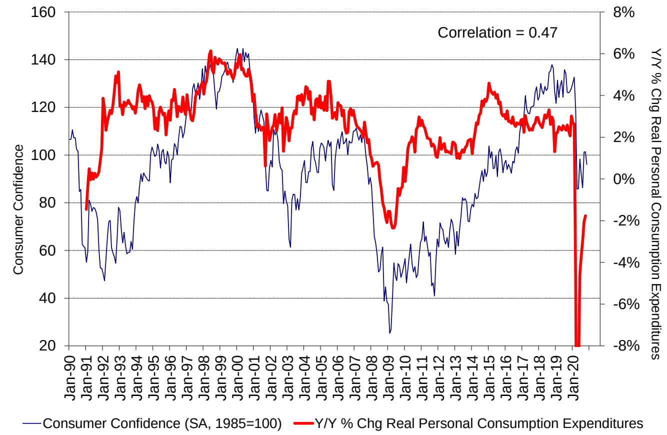
The key question is how much of the market returns have been pulled forward and we suspect a great deal.

Figure 9. NFIB: Percent Planning to Increase Employment vs Unemployment Rate (12-mth lag)



Source: Haver Analytics and Citi Research – US Equity Strategy

Figure 10. Consumer Confidence vs Y/Y % Chg Real PCE



Source: Haver Analytics and Citi Research – US Equity Strategy

Small/Mid-Cap Strategy

’21 Outlook: Expect Moderate Gains

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- **Russell 2000 Target of 2,100** — We establish a base-case +10% return opportunity in ’21 for the R2000 and broader SMID indexes. 1H ’21 sets up constructively as investors gain confidence in post-COVID-19 macros. 2H ’21 risk relates to ’22 macro deceleration and a less accommodative Fed. Econ Sensitives/Value relative performance is set to improve and drives our base case.

- **Early Cycle Conditions to Continue** — The R2000 +25% rally since the end of October is at the expense of next year’s returns but doesn’t completely eliminate the opportunity for early-year follow-through. Our view is that valuations remain supportive, while expected earnings growth trends reflect a post pandemic, early-cycle bias.

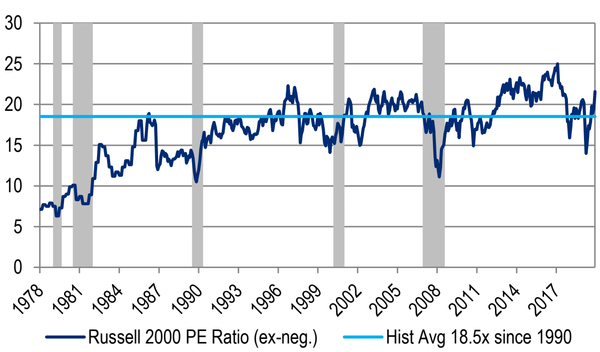
- **The Pressure is on Forward Growth Expectations** — Earnings growth expectations have begun to improve, but we expect further upside, which is critical to our view. This should be mostly centered on Econ Sensitive sectors, implying a Value-style tailwind. An upward bias to ’21 growth is a necessary condition of SMID follow-through, in our view.

- **Relative Set-Up Favors Econ Sensitives/Value** — SMID Growth-style valuations have pushed to all-time highs, while Value is more akin to historical averages. The difference relates to growth drivers. We see more upside in Value EPS expectations, while the burden is on Growth to sustain longer-term expectations. Valuations, in and of themselves, are not always a reason to sell.

- **Shifting the Investment Barbell** — Our call is to deploy new money toward Econ Sensitives/Value, while maintaining representative structural Growth exposure. Overweights on Technology, Industrials and Materials reflect this barbell strategy. We remain cautious on traditional defensive sectors, Utilities Staples, as well as on Energy and Health Care.

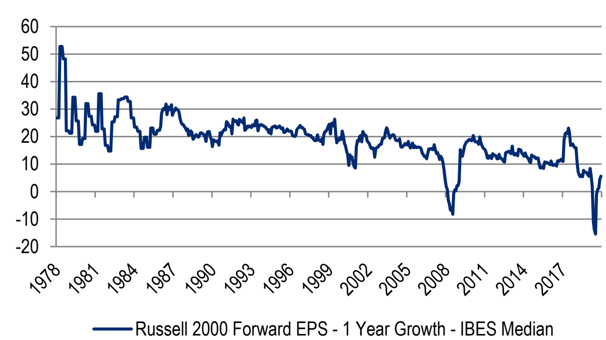
- **What’s the Risk?** — Without oversimplifying a complex situation, the main risk to our upside case consists of two components. One is that global growth drivers stagnate, thus negating our rising earnings growth expectation and precipitating a valuation issue. Another is a change in Fed accommodation sooner than the market is ready.

Figure 1. R2000 Trailing P/E Ratio



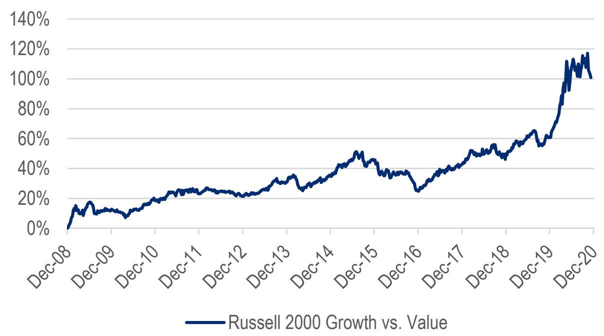
Source: BNY Mellon, Russell, Citi Research

Figure 2. R2000 Forward EPS 1Y Growth



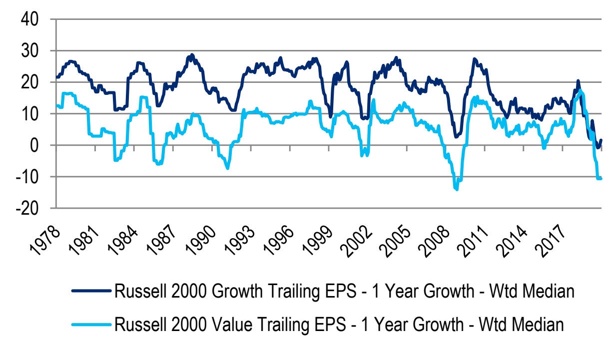
Source: BNY Mellon, Russell, Citi Research

Figure 3. R2000 Growth vs. Value Performance, since end of 2008



Source: FactSet, Russell, Citi Research

Figure 4. R2000 Growth and Value Trailing 1Y EPS Growth



Source: BNY Mellon, Russell, Citi Research

Figure 5. "Value Creators" SMID Focus List

Total Returns	2020YTD	2019	2018	2017	2016	2015	2014	2013	Since Inception
Russell 2500	18.2%	27.8%	-10.0%	16.8%	17.6%	-2.9%	7.1%	36.8%	213.0%
"Value Creators" Equal Weight	40.2%	55.5%	-4.9%	31.8%	9.8%	0.7%	17.8%	57.0%	516.5%

	Statistical Overview						Analyst Ratings, Targets & Estimates						
	Date	Price	Price	Mkt Cap	Price Return			Price	EPS Estimates		P/E		Div.
Name (Ticker)	Added	Added	12/17/20	(MM)	Since Add	YTD	Rating	Target	2020	2021	2020	2021	Yield
Consumer Discretionary													
Etsy (ETSY)	12/9/19	41.16	188.10	23,820	357.0%	324.6%	1H	170.00	2.75	2.55	68.8	74.0	nm
PulteGroup (PHM)	4/24/20	25.64	44.79	11,962	74.7%	15.4%	1	53.00	4.60	5.65	9.7	7.9	1.1%
Polaris Inc (PII)	11/24/20	95.33	97.00	5,982	1.8%	-4.6%	1H	120.00	7.30	7.40	13.3	13.1	2.6%
Financials													
OneMain Holdings (OMF)	1/6/20	41.67	45.35	6,010	8.8%	7.6%	1	45.00	5.37	6.00	8.3	7.5	nm
Health Care													
Surgery Partners (SGRY)	1/6/20	15.82	28.67	1,459	81.2%	83.1%	1H	35.00	-1.19	0.25	-24.4	113.8	nm
Guardant Health (GH)	3/16/20	59.04	126.54	12,633	114.3%	61.9%	1H	155.00	-2.47	-1.43	-51.1	-88.3	nm
Epizyme (EPZM)	6/2/20	17.46	12.74	1,265	-27.0%	-48.2%	1H	35.00	-2.34	-2.31	-5.3	-5.4	nm
Industrials													
Mercury Systems (MRCY)	1/9/17	29.68	84.32	4,692	184.1%	22.0%	1	100.00	2.30	2.42	36.5	34.7	nm
Oshkosh (OSK)	4/9/18	75.59	86.28	5,860	14.1%	-8.8%	1	100.00	5.08	5.81	16.9	14.8	1.4%
Chart Industries (GTLS)	12/9/19	55.99	113.20	4,067	102.2%	67.7%	1	137.00	2.57	3.44	43.8	32.7	nm
Information Technology													
Logitech International (LOGI)	9/28/18	44.72	93.71	16,230	109.5%	98.7%	1	105.00	3.47	3.52	27.0	26.6	0.9%
Synnex (SNX)	6/19/19	47.30	83.76	4,350	77.1%	29.8%	1	73.33	12.48	14.63	6.8	5.8	nm
Bottomline Technologies (EPAY)	11/11/19	46.63	50.37	2,243	8.0%	-6.0%	1	56.00	1.20	1.38	41.4	36.0	nm
Entegris (ENTG)	4/24/20	51.21	96.29	12,957	88.0%	92.2%	1	92.00	2.48	2.83	38.7	33.9	nm
Science Applications Intl Corp (SAIC)	4/24/20	85.25	97.77	5,747	14.7%	12.4%	1	108.00	6.08	7.38	16.2	13.4	1.5%
Dropbox (DBX)	9/28/20	19.28	23.89	9,956	23.9%	33.4%	1	30.00	0.90	1.04	26.6	23.0	nm
Materials													
Berry Global Group (BERY)	12/9/19	47.20	54.29	7,229	15.0%	14.3%	1	66.00	4.95	5.31	10.9	10.2	nm
Eagle Materials (EXP)	2/18/20	90.17	100.04	4,166	10.9%	10.3%	1	110.00	6.23	6.60	16.0	15.1	0.3%
Real Estate													
Hudson Pacific Properties (HPP)	3/19/18	32.45	25.08	3,848	-22.7%	-33.4%	1	30.00	0.17	0.24	145.1	106.1	4.0%

Note: Portfolio performance based on daily index level as calculated by S&P indices; index performance incorporates historical constituent changes and is measured using daily close prices. Price added is prior day's close when stock is added b/f market open. Price added is same day close when stock is added after market open. Any additions are added at an equal weight based on the number of constituents on the effective open date. A full history of changes to our model portfolio is available upon request. No transaction costs are assumed. Past performance not indicative of future performance. FFOPS used instead of EPS for REITs. Calendarized data used. List changes are announced via a call note posted on Velocity and other internal research systems."Value Creators" SMID Focus List performance inception date December 20, 2010.

Note: R2500 and SMID "Value Creators" total returns as of Dec 16, 2020; Stock prices as of Dec 17, 2020 close.

Source: Citi Research, S&P Global Indices, Bloomberg, FactSet, Russell

Global Macroeconomics: Prospects 2021

Global Growth Headwinds and Financial Turbulence Ahead

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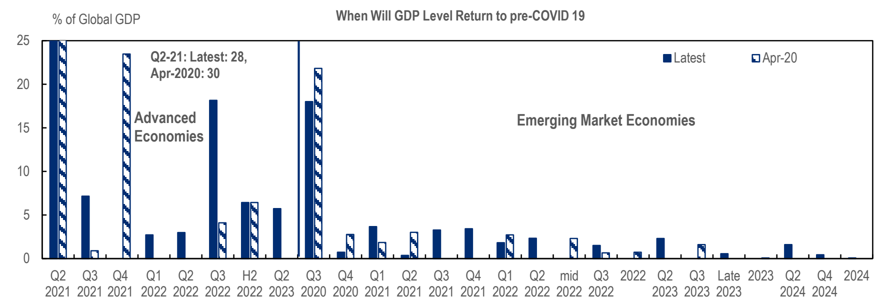
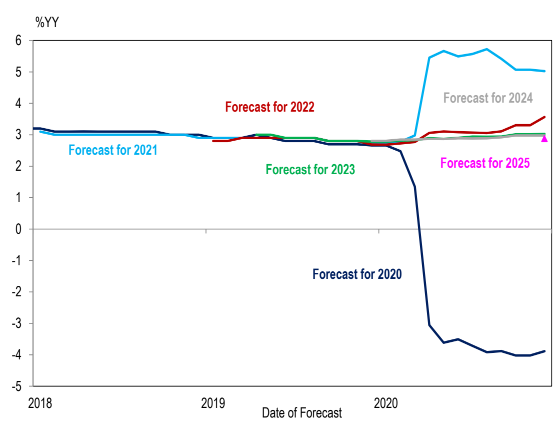
Figure 11. Global – Timetable for Return to pre-COVID Level of GDP (% of Global GDP)



Source: Citi Research

- **[The asynchronous timetable](#) to return to pre-COVID GDP is a headwind for recovery in 2021.** But projections that appear to have stabilized, along with vaccine discovery, potentially provide more solid ground for growth ahead. Even so, lost GDP from the pandemic is not expected to be recovered.
- Signs of normalization of services, business investment, and trade are mixed; signs of sustained GDP momentum are not until 2022. Signs of the vaccine are key with the vaccine discovery a shot in the arm, but not until 2022.
- Signs of financial turbulence ahead are flashing. Financial valuations are running well ahead of real-side prospects. Base effects in Q2 activity data, inflation surprises, evolution of central bank net-asset purchase-programs, and out-of-consensus dollar moves are all potential catalysts for financial turbulence.

Figure 12. Global – GDP Growth Forecast Revisions (%YY)



Note: Aggregate at market exchange rates. Source: Citi Research

Figure 13. Global – Equities and EPS

See: Global Equity Quarterly: Challenging Times. Source: MSCI, Factset Consensus Data and Citi Research

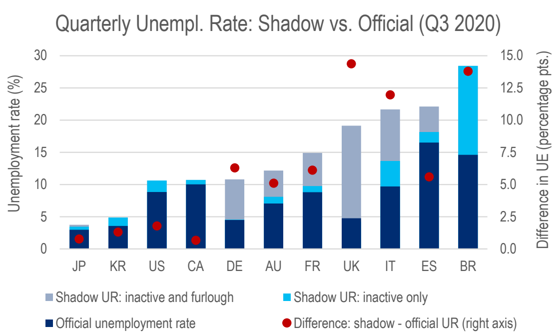
Global Labor Markets to Strengthen Only Modestly in 2021

- **Global labor markets were significantly affected by the pandemic in 2020.** The unprecedented exit from the labor force and extensive furloughing schemes imply a more severe labor market impact than headline unemployment rate suggests.

- The [shadow unemployment rate] corrects for these factors and includes inactive and furloughed workers and gives a more nuanced picture of global labor markets during the pandemic.

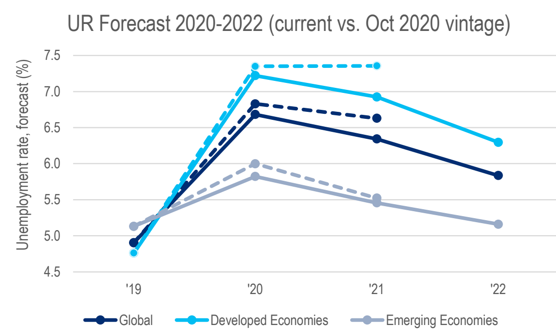
- In most economies, the unemployment rate will remain above pre-pandemic levels until at least 2022, and in some as long as 2024. Global unemployment rate is forecast to be 6.3% in 2021 and 5.8% in 2022 vs. 4.9% in 2019.

Figure 4. Selected Economies – Shadow Unemployment Rate



Source: National Statistics, Citi Research

Figure 5. Global – UR Forecasts Revised Down Slightly

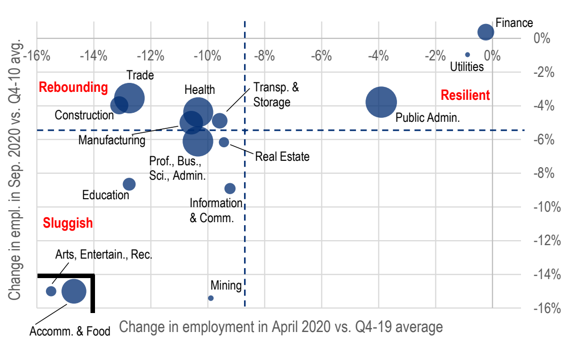


Note: Solid line is current forecast, dashed line is the October 2020 forecast vintage.
Source: National Statistics, Citi Research

- There was considerable heterogeneity in how labor markets in different sectors responded to COVID-19. Employment in many of the hardest-hit sectors remains sluggish, which is set to persist into 2021 and likely lead to a rise of structural unemployment.

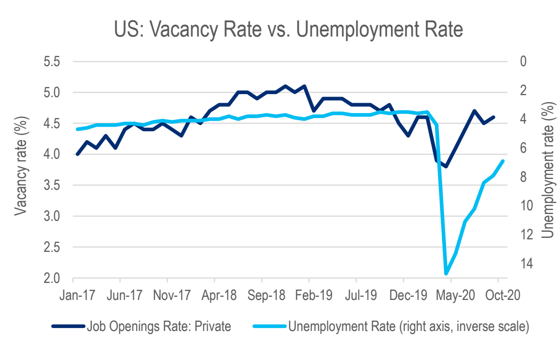
- See here a country-by-country overview of labor market policies implemented in 2020 and expected policies for 2021.

Figure 6. US – Rebounding; Sluggish; Resilient Sectors



Source: BLS, Citi Research

Figure 7. US – Unemployment Rate Remains Elevated



Source: BLS, Citi Research

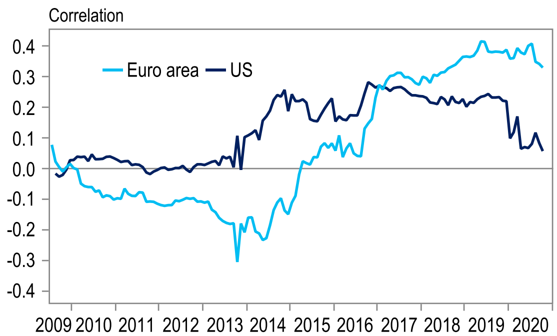
An Inflation Spike in Q2-2021 Does Not Presage Sustained Inflation

- **A key inflation theme of 2021 will come from base effects and how they affect financial markets.** Higher inflation prints can affect even longer-dated pricing of inflation, but base effects are very different from long-term reflation.

- Base effects will be present in core price inflation due to [the lockdowns] and the economic weakness. The rise in core price inflation could be significant, but it also depends on the economic situation.

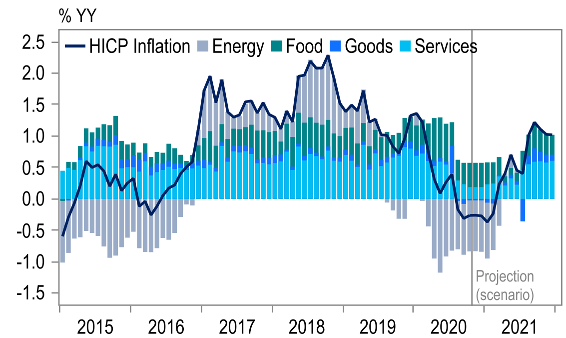
- The global output gap results in persistent labor market weakness, which is a headwind to inflation, but [it is more important for slack sensitive inflation that businesses are lacking pricing power].

Figure 8. US, EZ – 5y5y Inflation Swap Relates to CPI Inflation



Note: 5Y moving correlation between monthly pp change in CPI inflation and 5y5y inflation swap. Source: Bloomberg, Macrobond, Citi Research

Figure 9. Eurozone – HICP Inflation, Base Effect Scenario



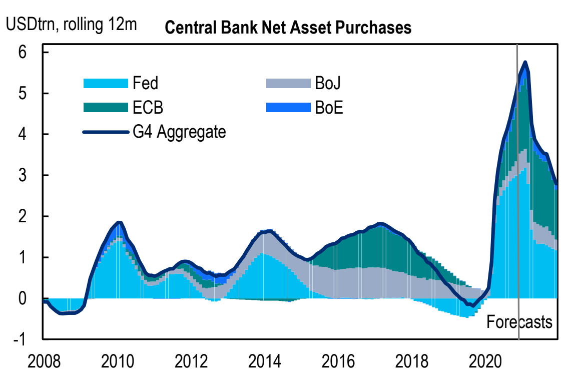
Note: NSA. Goods prices are non-energy industrial goods. Food prices are including alcohol and tobacco. Source: Eurostat, Citi Research

- Unprecedented QE purchases from central banks [mainly affects financial markets] and not inflation. But while financial turmoil or [a housing collapse] would weaken the economy, strong financial and [housing inflation is not reflected in CPI inflation].

- The USD depreciation has not prevented a fall in US inflation. In theory, the FX impact on inflation should happen with some delay, but the pass-through requires stronger firms' pricing power.

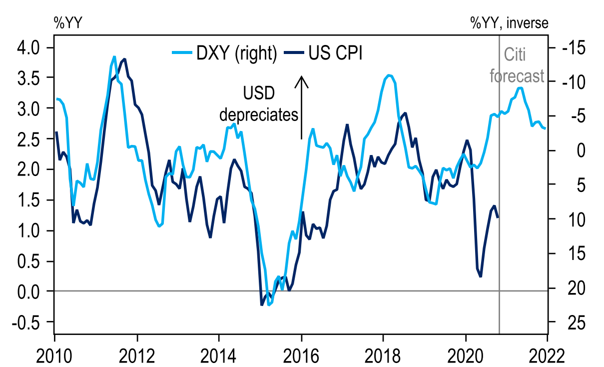
- [Oil price scenarios] leave larger downside than upside risks to inflation prospects and oil prices could contribute to inflation with significant volatility. **Could we be wrong?** See more in [our note].

Figure 140. G4 – Unprecedented Central Bank Asset Purchases



Source: IMF, National Central Banks, Citi Research

Figure 11. US – USD Depreciated, But Inflation Did Not Rise



Source: BLS, ICE, Macrobond, Citi Research

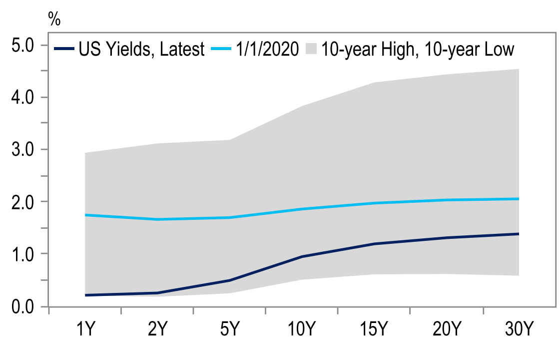
Central Banks Still Have Tools, How Should They Use Them in 2021?

- **Despite positive vaccine news, downside risks to growth prospects call for additional policy support.** A post-pandemic recovery requires effective policies and relies on fiscal policymakers. But what if there is no fiscal stimulus? Central banks will be in the spotlight as inflation is weak.

- Strengthening forward guidance; buying additional government bonds; purchasing longer-dated bonds; and introducing yield curve control are all tools that help lower bond yields and require fiscal actions for an effective economic boost.

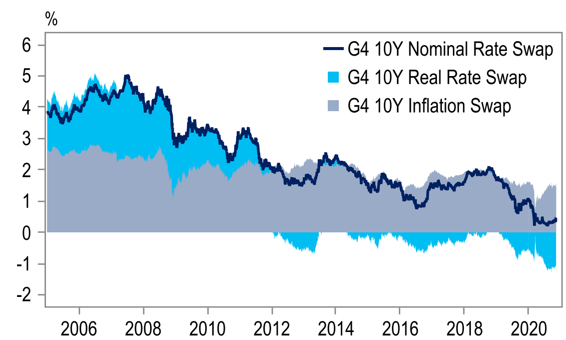
- Trying to anchor inflation expectations, when nominal yields are bound, also requires other tools that demonstrably can lift actual inflation.

Figure 12. US – Very Low Yields Across The Curve



Source: Bloomberg, Macrobond, Citi Research

Figure 13. G4 – Accommodative Policy Keeps Real Rates Low



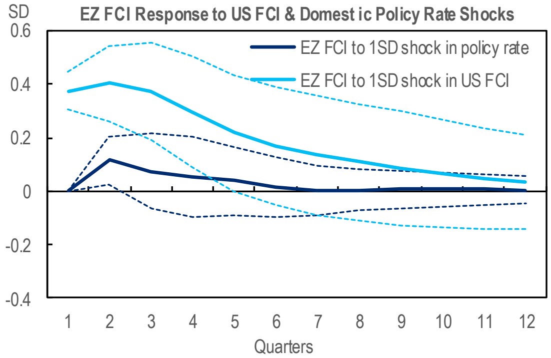
Source: Bloomberg, IMF, Macrobond, Citi Research

- Cutting policy rates may be attempted by central banks, if fiscal policymakers remain on the sideline, but further cuts send rates into negative territory.

- Certain aspects of negative policy rates are non-trivial economically. But the first issue is whether banks transmit negative rates to consumers and businesses. If not, the cost for the banks implies the reversal rate goes up over time.

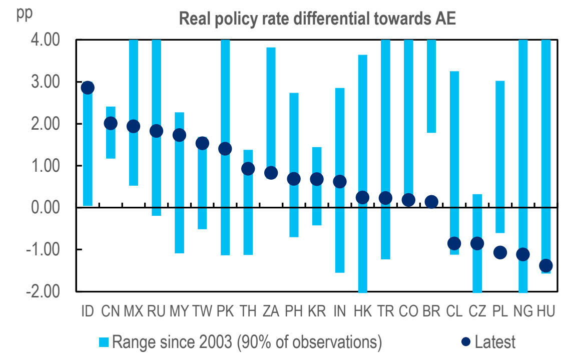
- Suppose the Fed introduces negative rates; this would have feed-through effects to the rest of the world and emerging markets could use the space provided by the Fed for further easing on their own.

Figure 14. Eurozone – FCI Response to US FCI Shock



See: GEV: Coronavirus' Global Impact: Fed Returns to its Role as Global CB. Source: Bloomberg, Macrobond, National Statistics, Citi Research

Figure 15. EM – AE Rate Cuts Would Open Space for Easing



Source: Haver, Citi Research

Fiscal Policy Needs to Pivot from Life Preserver to Catalyst in 2021

- **The massive fiscal measures during COVID-19 have been costly, but a recovery requires fiscal stimulus beyond the fiscal life preserver.** The initial fiscal measures amount to ~12% of GDP globally, but have extremely low fiscal multipliers and have not boosted economic activity.
- A dual equilibrium exists post-pandemic; elevated uncertainty post-COVID and high debt among low-income households and non-financial corporates imply cautious micro decisions will hold back the macroeconomic recovery. Fiscal easing, however, can boost confidence and with the right policy choices, catalyze private sector activity.

Figure 156. Selected AE – Fiscal Response to COVID-19 Crisis

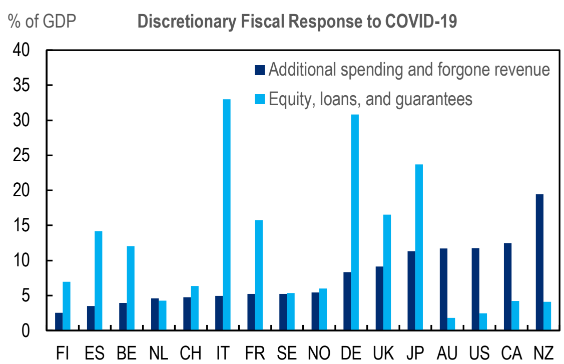
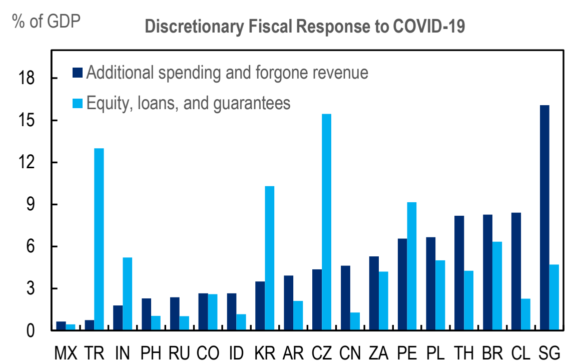


Figure 17. Selected EM – Fiscal Response to COVID-19 Crisis

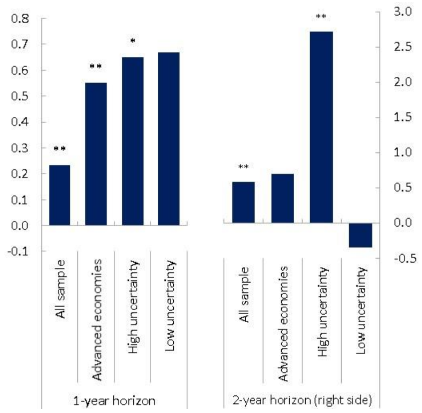


Note: The timeframe for the announced measures is country specific, but most measures announced are short-term crisis-response measures to be implemented in 2020–21.
Sources: Database of Country Fiscal Measures in Response to the COVID-19 Pandemic, IMF staff estimates, Citi Research

- Public investment multipliers are particularly high, when uncertainty is elevated, as public investment can catalyze private investment. Moreover, fiscal multipliers are larger under loose monetary policy and a monetised fiscal stimulus improves fiscal multipliers, as it limits crowding-out effects and avoids 'Ricardian equivalence' behaviour.
- Fiscal policy in the advanced economies will remain supportive in 2021, but less than in 2020, and the post-pandemic fiscal outlook is uncertain.

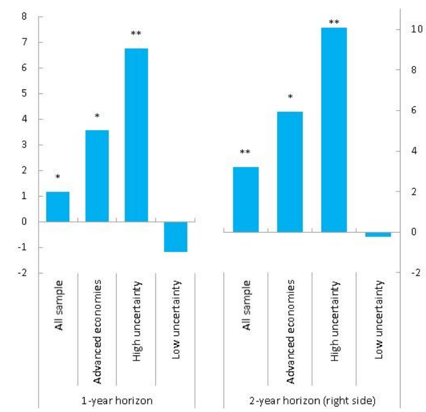
- Many emerging market economies face fiscal contraction already in 2021, but there is a lot of dispersion across economies.

Figure 18. Public Investment Impact on Output



See: IMF Fiscal Monitor. Source: IMF staff estimates, Citi Research

Figure 19. Public Investment Impact on Private Investment



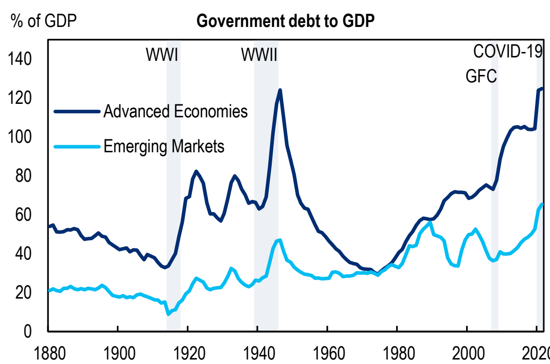
See: IMF Fiscal Monitor. Source: IMF staff estimates, Citi Research

No Public Debt Crisis, But 3 Key Risks in 2021

- **We do not expect to enter into a public debt crisis in 2021**, but there is a small margin for error and three risk factors are worth watching. High public debt is problematic as it can require fiscal surpluses; exacerbates economic vulnerability to shocks; exposes an economy to a rollover crisis; and may be detrimental to growth.

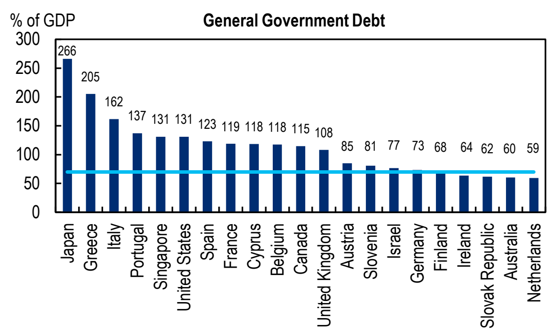
- Risk #1: Inflation rises and central banks tighten. Central banks have facilitated fiscal actions with low inflation justifying support to governments, but if inflation rises and central banks tighten, debt sustainability would look different. Many central banks likely would look past a rise in inflation and markets should not over-interpret higher inflation.

Figure 20. AE, EM – Historical Patterns of Government Debt



Source: IMF, Historical Public Debt Database; IMF, World Economic Outlook database; Maddison Database Project; IMF staff, Citi Research

Figure 161. Selected AE – Government Debt-to-GDP Ratios

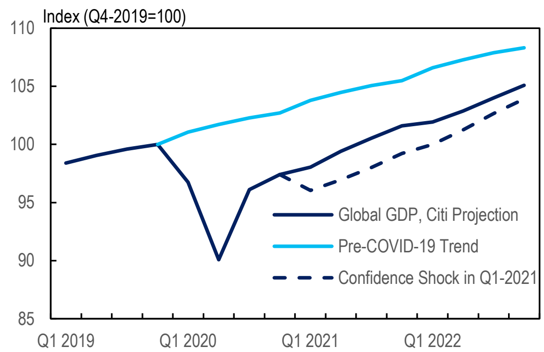


Source: IMF forecasts, Haver, Citi Research

- Risk #2: Activity disappoints on high uncertainty. There is a dual equilibrium post-pandemic and public debt is even higher in the bad equilibrium. But fiscal actions with high multipliers can initiate private sector activity and eventually improve debt sustainability. Rating agencies need to praise, rather than punish, such fiscal policy actions.

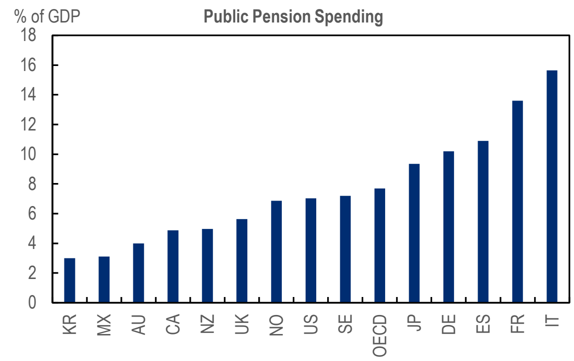
- Risk #3: Fiscal burden is larger than anticipated. Fiscal expansions that lift public debt in the short term would support growth and debt sustainability over the medium term, if focused on tools with the highest 'return'. The fiscal burden could be large with fiscal policy needed for economic stabilization and an ageing labor force a potential issue.

Figure 22. Global – GDP Forecast; Trend; and Alternative



Source: Oxford Economics, Citi Research

Figure 23. Selected Economies – Public Pension Spending



Source: OECD, Citi Research

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US Economics

2021 Outlook: (Still) better than most think

- **After 9-months of above-consensus forecasts, we (still) see mainly upside risks to consensus projections** for growth and inflation and expect that Fed policy will be slightly more-hawkish than most anticipate. We project 5.1% year-on-year real GDP growth, a core inflation overshoot followed by ~2%YoY core PCE and that the Fed will taper asset purchases in Q4 2021 and may raise rates as early as December 2022. Surging activity as pent-up-demand is released and excess savings are spent means consumer spending can continue to surprise to the upside. Housing activity should remain strong in coming quarters. Business equipment investment is rebounding – its next move is an important signal of the growth trajectory

- **Our road through 2021 is paved with three key assumptions:** (1) A COVID-19 vaccine made broadly available by mid-2021, (2) That there is enough comfort among individuals to resume more normal levels of activity like eating out and domestic travel by H2 2021, (3) A new fiscal package ~$1 trillion in size including further unemployment benefits is enacted fairly soon. While none of these are particularly controversial assumptions, there certainly are quite a few things that need to “go right”, to keep the road ahead as smooth as our forecasts imply.

- **Unlike typical investment-driven downturns, 2020 showed a dramatic contraction and re-expansion in consumption.** With consumer spending accounting for roughly 70% of GDP our forecast depends on continued improvement, particularly in still-subdued service sectors. We are watching three key consumption dynamics as we move into 2021: **(1) The timing and magnitude of vaccine-induced normalization in consumer spending levels on activities like travel and dining-out, (2) The extent to which goods spending, which may have overshot, becomes a source of weakness and the extent to which rising services spending acts as an offset, and (3) Whether substantial savings and rapidly rebounding incomes can continue to power spending, as fiscal stimulus fades.**

- **Business equipment investment will be a key bellwether for sustained growth further into 2021.** After lagging the rebound in consumer spending, recent data indicate business equipment investment will be rebounding strongly entering 2021. However, this is a volatile subcomponent and typically a leading indicator of broader growth conditions**.** While the near-term rebound in investment is all but assured this will be the category to watch in 2021 to understand the further trajectory for growth. Continued strength into H2 would suggest an economy responding to low interest rate and ample liquidity. A slowdown in investment, perhaps because labor markets remain slack or surging demand for services is met with existing spare capacity, would point to a situation where even very accommodative monetary and fiscal policy is unable to sustain a robust recovery.

- **Job growth will continue alongside GDP growth, but unemployment will remain elevated. About 60% of the 21 million jobs lost have been recreated, but that still leaves a deficit of about 8.5mln jobs.** Even at a healthy average rate of 350K/mth it would take about 2 years (until the end of 2022) to recover all those lost jobs. That would still be faster than the jobs recovery following 2008 and even the mild downturn in the early 2000s, which is a reminder of how long a road the return to full employment typically is. One hopeful signal is that “temporary” unemployed workers still account for 2.8 million of the 7.4mln reporting being unemployed.

- **Inflation data will remain volatile into 2021 as prices for many goods and services have been disrupted by virus-control measures and should continue to normalize with activity levels next year.** Base effects should push the Fed's preferred core PCE inflation temporarily above 2% around Q2-2020, but we then expect inflation to settle back towards the 2% target by the end of the year.

- **Our "bottom up" forecast for core inflation to overshoot 2% for several months beginning in April 2021 and then settling around target is based on the following**: (1) A base-effect driven overshoot as more "normal" 2021 spring prices are compared to deeply depressed prices in spring 2020, (2) Rapid rises in prices for categories like travel and apparel as a vaccine-induced normalization of demand meets with potential temporary supply constraints, (3) A probable pullback in used-auto prices, which have recently surged, (4) Shelter price (rent) inflation that gradually strengthens from currently low rates, and (5) Medical services inflation that remains somewhat softer.

- **As activity returns to normal through 2021, we expect the Fed to decide to begin tapering asset purchases.** Fed officials gave guidance at the December FOMC meeting that they will continue asset purchases at least at the current rate until significant progress has been made toward the economy being on-track to achieve the full employment and inflation objectives**.**

- **Given the planned roll-out of vaccines, FOMC officials should be increasingly confident the qualitative conditions are met by mid-year and our "point estimate" for the announcement of tapering is September 2021.** At that point Treasury purchases may decline by $10bln/mth and MBS by $5bln/mth. That would mean new purchases would cease by mid-2022.

Figure 17. Economic Forecasts

		2020F YoY	2021F YoY	2020 Q1 QoQ	Q2 QoQ	Q3 QoQ	Q4 QoQ	2021 Q1 QoQ	Q2 QoQ	Q3 QoQ	Q4 QoQ
GDP	%	-3.4	5.1	-5.0	-31.4	33.1	6.3	5.3	5.1	2.7	2.0
Consumption	%	-3.7	6.0	-6.9	-33.2	40.7	5.4	5.4	6.6	3.9	2.6
Business Equip. Investment	%	-2.8	7.6	-15.2	-35.9	41.9	20.0	6.0	5.0	5.0	5.0
Business IPP	%	2.0	4.7	2.4	-11.4	5.5	5.5	5.5	5.5	5.5	5.5
Business Structures	%	-10.3	-3.4	-3.7	-33.6	-15.0	0.0	5.0	0.0	0.0	0.0
Residential Investment	%	4.3	5.5	19.0	-35.5	59.3	11.7	3.4	-1.9	-1.9	1.9
Final Private Domestic Demand	%	-2.7	4.9	-4.6	-27.1	29.2	5.6	4.6	5.0	3.2	2.5
Government	%	1.3	0.2	1.3	2.5	-4.5	1.4	0.6	0.6	0.6	0.7
Exports	%	-13.6	3.0	-9.5	-64.4	59.7	7.9	4.2	4.2	4.2	4.2
Imports	%	-10.4	8.7	-15.0	-54.1	91.1	9.2	5.7	6.6	6.6	6.6
Inventories	pp cont.	-0.9	-1.3	-1.7	-4.3	6.6	-3.3	-3.3	-1.7	0.0	0.0
Core PCE Deflator	% YoY EOP	1.4	1.9	1.8	1.0	1.7	1.4	1.5	2.2	1.8	2.0
Core CPI	% YoY EOP	1.7	2.1	2.1	1.2	1.7	1.6	1.6	2.5	2.1	2.2
Headline CPI	% YoY EOP	1.2	2.0	1.5	0.5	1.4	1.2	1.4	2.6	2.0	2.1
Average Hourly Earnings	% YoY EOP	4.1	3	3.1	4.9	4.7	4.2	3.3	1.8	2.3	2.8
Unemployment Rate	% EOP	8.1	5.9	4.4	11.1	7.9	6.8	6.4	6.0	5.7	5.5
Monthly payroll growth	(1,000s) avg.	-702.3	312.5	-70	-4427	1303	385	350	400	300	200
ISM Manf	EOP	55.0	55	49	53	55	55	55	58	55	55
Policy Range	% EOP	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25

Commodities

Annual Commodities Market Outlook 2021: Curb Your Enthusiasm

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- **Enthusiasm for commodities surged in late 2020 and should carry into 2021 given optimism over vaccine availability, economic and pandemic recovery in Asia, signs of renewed vigor in global trade, and tightening market conditions. However, it will be a while before vaccines are widely distributed or the pandemic peaks or the global economy ex-Asia rebounds.** Still, the 2021 commodities outlook is robust, and we expect higher prices for aluminum by end-year and copper by 2022, outweighing speculative buying to date. Gold should rebound into 2021, and we are bullish silver, palladium and platinum as well as row crops and natural gas. We are also bullish oil, as OPEC+ reduces the 1H'20 huge inventory build. China will remain a disproportionately large buyer of commodities as security concerns unleash strategic stockpiling. Strong fundamentals and growing backwardation across critical commodities should also strengthen over 2021, supporting continued positive inflows into commodities.

- **Commodities flows and AUM should stay strong in 2021 amid the broader reflation narrative while the rotation from precious metals to other sectors should also continue.** Cumulative YTD net inflows to commodity ETFs and index products totaled ~$75Bn by early December. Despite the recent reversal in gold prices and holdings, precious metals still account for ~80% of the cumulative YTD inflows. Investor sentiment also improved for other sectors as prices recovered from the Mar/Apr troughs and all major commodity sectors now have cumulative net inflows in 2020. We estimate total commodities AUM at ~$594Bn by the end of November. Index rebalancing should support inflows into crude oil but there should be modest reductions in metals and some other commodity holdings.

- **Following the latest deal from OPEC+ we revise up our 1Q'21 and 2Q'21 crude oil forecasts slightly to $51/bbl, and $53/bbl respectively (from $48/bbl and $50/bbl before), and 2022+ down slightly to $54/bbl (from $57/bbl before).** The producer group's decision to taper planned additional supply to 0.5-m b/d per month and to meet monthly to determine exact measures should bring added stability to prices in 2021. We see the affirmation of OPEC+ monthly monitoring as supporting financial flows, and ongoing market tightness as indicated by Brent flirting with backwardation. From 2022 onwards, we see stronger OPEC+ supply including out of the UAE putting slight downward pressure on prices. We do not believe there will be significant additions of Iranian supply in 2022 but see modest supply gains in 2H'21 with the likely resumption of US-Iran negotiations. Disruption risks from unstable producers puts risks on the more bullish side.

- **In industrial metals, we are most bullish aluminium prices between now and the Chinese New Year, followed by zinc. We remain bullish copper over the medium term view on the decarbonization and global recovery themes but for the short term copper is simply 'too hot to handle'.** We now see copper trading $8000/t+ from 2022 onwards but in Jan/Feb 2021 we are concerned that China tightening credit policy could lead to a pullback in extreme net speculative positioning. We also see copper's physical market 'fighting back' as Chinese imports are likely to retreat and as stocks build seasonally in Jan/Feb. In aluminium, we expect strong Chinese physical demand and low onshore inventories drives SHFE prices that LME tracks higher.

- **We continue to advocate buying the dip in gold one more time. We expect strong buying support on dips below $1,800/oz into 2021 and our 6-12m target is $2,100/oz with an average of $1,900/oz over the next year; with higher prices in 1H'21 trending lower into 2022 along with global economic recovery.** A broadly distributed COVID-19 vaccine and sharp global growth should slow but not yet end the secular gold market bull cycle so long as the US dollar continues to weaken and Fed monetary policy stays accommodative at the ZLB—committed to dovish guidance and continuing its QE program—which is our base case for 1H'21 but seems tenuous longer-term.

- **After a half-decade of largely weaker price trend, bumper harvests, a devastating US-China trade policy rift, and most recently the coronavirus pandemic shock, staple cereals have finally broken out into what should be a sustained bull cycle through 2020/21 and maybe even 2022.** For the staple cereals on CBOT, we are more bullish than consensus on the prospects for US exports and China stockpiling in 2021 and more bearish than consensus for Latin American row crop production in the short-term. High prices should incentivize a supply response in the US and abroad in the next year, but markets are tight for now and we can see envisage an environment where prices rally 15-25% over the next 6-12m (particularly beans followed by corn). Equatorial softs on ICE also appear to have bottomed in 2019/20. We outline a neutral-to-bullish outlook for the ICE softs, and upgrade our coffee and cocoa price forecasts, while volatile raw sugar prices face bimodal risks based on Indian export subsidy decisions.

Figure 1. 6-12 Month forward outlook* (vs spot/nearby forwards)

	Bullish	Neutral-to-bullish	Neutral	Neutral-to-bearish	Bearish
Energy	Brent, WTI, US Gas		Asia LNG, EU Gas		
Base Metals		Aluminium	Copper, Lead, Zinc	Nickel	
Precious Metals	Palladium	Gold, Platinum, Silver			
Bulks		Coking Coal, Thermal Coal		Iron Ore	
Agriculture	Corn, Soybeans	Coffee, Ethanol	Wheat, Sugar, Cocoa		

Source: Citi Research, *As of Mid-Dec 2020 subject to revision

Figure 18. Commodity Price Forecasts*

		Point Prices													Annuals					
		0-3M	6-12M		Q1 2020	Q2 2020	Q3 2020	Q4 2020E	Q1 2021E	Q2 2021E	Q3 2021E	Q4 2021E	Q1 2022E	Q2 2022E	2018	2019	2020E	2021E	2022E	2023E
Energy				**5Y Cyclical**																
ICE Brent	USD/bbl	53	56	55	51	33	43	44	51	53	55	56	56	55	72	64	43	54	56	55
NYMEX WTI	USD/bbl	50	53	50	46	28	41	42	48	50	52	53	52	51	65	57	39	51	52	51
Henry Hub Natural Gas	USD/MMBtu	3.2	3.5	2.5	1.9	1.8	2.2	2.8	2.8	3.2	3.5	3.5	3.2	2.8	3.1	2.6	2.1	3.3	2.9	2.5
Base Metals				**LT Price**																
LME Aluminum	USD/MT	2,100	2,150	2,200	1,691	1,501	1,707	1,900	2,050	2,000	2,050	2,100	2,100	2,150	2,108	1,800	1,700	2,050	2,150	2,250
LME Copper	USD/MT	7,200	8,000	7,500	5,640	5,351	6,525	7,000	7,200	7,500	7,500	7,800	8,000	8,000	6,529	6,010	6,129	7,500	8,000	8,000
LME Lead	USD/MT	2,100	2,100	2,000	1,843	1,678	1,874	1,925	2,000	2,100	2,100	2,100	2,100	2,050	2,241	1,996	1,830	2,075	2,100	2,100
LME Nickel	USD/MT	16,500	14,500	16,000	12,708	12,233	14,260	15,900	16,250	16,250	15,500	15,000	15,000	14,500	13,117	13,893	13,775	15,750	14,625	15,000
LME Zinc	USD/MT	3,000	2,500	2,400	2,125	1,968	2,340	2,650	2,700	2,700	2,600	2,500	2,500	2,450	2,921	2,550	2,270	2,625	2,450	2,400
Precious Metals				**LT Price**																
COMEX Gold	USD/T. oz	1,850	2,100	1,400	1,588	1,725	1,921	1,850	1,875	1,975	1,900	1,850	1,765	1,715	1,269	1,394	1,770	1,900	1,700	1,550
Silver	USD/T. oz	22.0	28.0	16.5	16.9	16.4	24.4	23.0	25.0	26.0	27.0	28.0	27.0	26.0	15.7	16.2	20.2	26.5	26.0	22.0
Platinum	USD/T. oz	1,000	1,050	1,150	902	795	905	900	1,000	1,050	1,050	1,100	1,100	1,200	880	866	876	1,050	1,200	1,300
Palladium	USD/T. oz	2,500	3,000	800	2,296	1,987	2,172	2,400	2,600	2,800	3,000	2,800	2,200	2,100	1,030	1,539	2,215	2,800	2,000	1,500
Bulk Commodities				**5Y Cyclical**																
Hard Coking Coal (Spot)	USD/MT	100	140	140	156	119	116	108	110	120	140	150	160	150	208	177	125	130	150	150
Thermal Coal Asia (NEWC)	USD/MT	63	67	75	68	55	52	61	63	65	65	67	70	68	107	78	59	65	70	75
Iron Ore Spot (TSI)	USD/MT	140	100	60	89	93	118	120	130	120	110	100	95	90	69	93	105	115	90	80
Agriculture																				
CBOT Corn	USD/bu	450	500	N/A	375	322	340	425	450	475	500	525	N/A	N/A	369	384	365	488	525	N/A
CBOT Soybeans	USD/bu	1,250	1,400	N/A	890	851	932	1150	1,225	1,300	1,300	1,350	N/A	N/A	932	890	955	1,295	1,375	N/A
CBOT Wheat	USD/bu	650	675	N/A	550	517	529	600	625	675	650	650	N/A	N/A	495	494	550	650	650	N/A
ICE Sugar	USD/lb	14.5	13.5	N/A	13.6	10.9	12.4	14.5	14.0	13.5	13.4	13.6	N/A	N/A	12.2	12.3	12.9	13.6	13.6	N/A
ICE Coffee	USD/lb	115	125	N/A	112	105	114	120	115	120	125	125	N/A	N/A	113	101	112	121	135	N/A
ICE Cocoa	USD/MT	2,700	2,500	N/A	2,656	2,378	2,460	2,600	2,615	2,500	2,500	2,400	N/A	N/A	2,309	2,386	2,525	2505	2400	N/A

Source: Citi Research, *subject to revision

Quantitative Analysis

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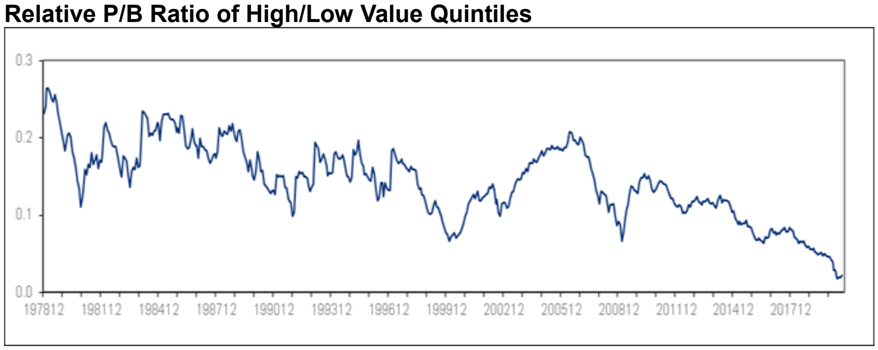
Factor Outlook: More Upside to Value

- **Key factor investment theme for 2021**: **Continuation of Growth vs. Value Rotation**: The key factor rotation has shifted from Low Vol (defensive) vs. Value (cyclical) in early 2020 to Growth vs. Value in the second half of 2020, with the Fed's new QE policies and government stimulus support effectively removing the worst case of deep recession risk. Growth has become the most crowded factor in the U.S. since late summer and we expect the rotation to Value to continue with the support of effective vaccines and a potential new stimulus package.

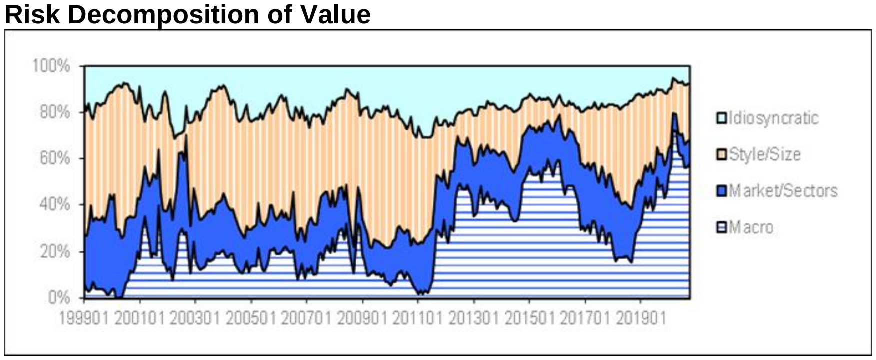
- **Value looks attractive** — Valuation for Value is still near the historical low reached a few months ago. Its macro risk has started to drop, albeit remaining at a high level. 10-year UST yield is the key driver of Value performance.

Relative P/B Ratio of High/Low Value Quintiles



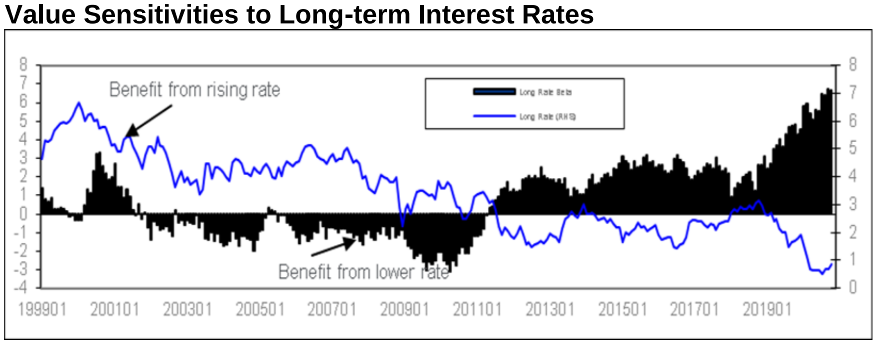
Source: Citi Research.

Risk Decomposition of Value



Source: Citi Research.

Value Sensitivities to Long-term Interest Rates

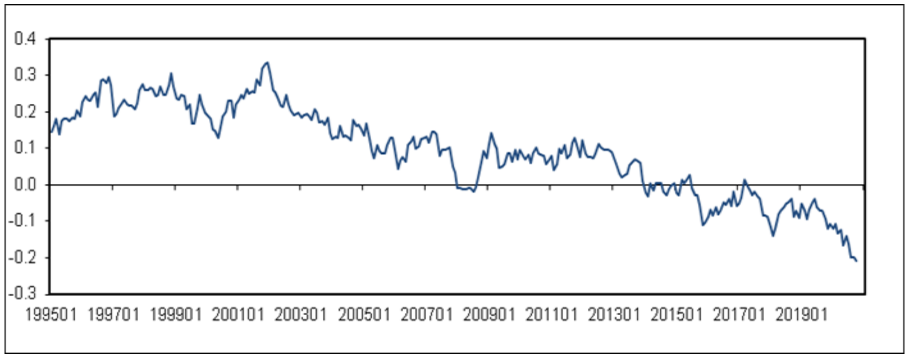


Source: Citi Research.

- **Positive Catalysts for Value** — Effective vaccines and a new stimulus package are the key catalysts for a more sustainable Value rebound as that may result in reopening of the economy and higher 10-year yields as expected by our rate strategists. Latest Fed policy of tolerating more than 2% inflation is conducive to Value performance.

- **Growth remains most crowded** — Short interest in high growth stocks is the lowest in 20+ years, and valuation of Growth is at the highest level since the Tech Bubble in early 2000's.

Cross-sectional correlation between Growth and Short Interest



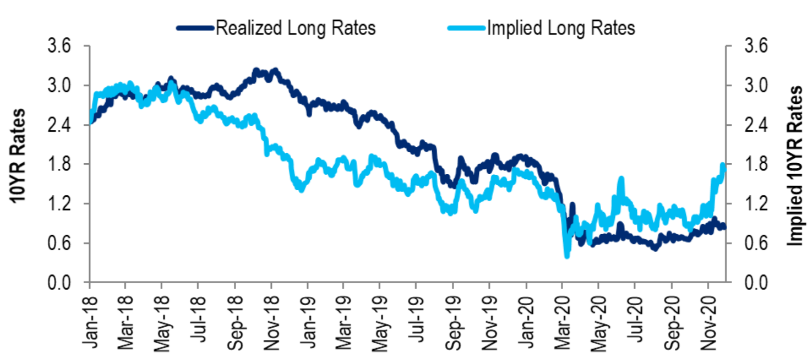
Source: Citi Research.

Relative P/B Ratio of High/Low Growth Quintiles

Source: Citi Research.

- **Short-term headwind for Value** — The U.S. equity market has priced in higher 10-year yields than the bond market indicates. This is a short-term risk, should there be any glitches in the vaccination programs and more severe lockdowns.

Equity Implied vs. Actual 10-year Yields



Source: Citi Research.

- **Recommendation** — We are positive on Value for 2021. In the near-term, we suggest to overlay Growth and Earnings Revision on Value to mitigate the rotational risk until vaccines become widely available to the general public, and we begin to see a further steady rise of long-term interest rates.

Equities

US Focus List & Catalyst Watch

High Conviction Alpha Opportunities

- **Citi's Focus List.** — The Focus List highlights our US analysts' highest conviction near-term alpha opportunities. Analysts with nonconsensus, catalyst-driven stock picks (Buy or Sell) can place further emphasis on a name by adding it to the list. The up-to-date list of long-only names can be consulted at any time on Bloomberg: CGRBFLUS Index GO

Figure 19. U.S. Focus List

Industry	Analyst	Company Name	Symbol	Current Price	Market Cap	Rating	Target	ETR
Financial								
Brokers & Asset Mgers	William R Katz	LPL Financial Holdings Inc	LPLA	$102.77	8,163	1	$157.00	53%
Brokers & Asset Mgers	William R Katz	KKR & Co Inc	KKR	$40.42	34,420	1	$53.00	33%
Diversified Banks	Keith Horowitz, CFA	State Street Corporation	STT	$70.74	25,003	1	$86.00	24%
Insurance - Brokers	Suneet Kamath, CFA	Aon	AON	$211.30	48,135	1	$255.00	22%
Life Insurance	Suneet Kamath, CFA	Ameriprise Financial Inc	AMP	$190.05	22,295	1	$222.00	20%
SMID Financials	Arren Cyganovich, CFA	Navient Corp	NAVI	$9.42	1,755	1	$14.00	55%
Health Care								
Healthcare Facilities	Ralph Giacobbe	Cigna Corp.	CI	$202.63	71,831	1	$273.00	37%
Medical Supplies & Technology	Joanne Wuensch	Zimmer Biomet Inc	ZBH	$151.36	31,125	1	$180.00	21%
REITs								
Single Family Rental REIT	Michael Bilerman	Equity Lifestyle Properties Inc	ELS	$62.82	11,546	1	$70.00	12%
Industrials								
Autos	Itay Michaeli	General Motors Company	GM	$42.03	59,270	1H	$60.00	45%
Materials								
Chemicals	P.J. Juvekar	FMC Corporation	FMC	$115.62	14,871	1	$127.00	13%
Technology								
Electronic Components	Jim Suva, CPA	Amphenol Corp	APH	$132.17	39,243	1	$140.00	8%
SMID Internet	Nicholas Jones	Carvana Co.	CVNA	$271.99	45,551	1H	$250.00	-6%

Source: Citi Research, Ratings, Price Targets, Capital Appreciation, & Dividend Yields based on latest price on Dec 17, 2020

- **Citi's Catalyst Watch.** — The Catalyst Watch system allows our fundamental analysts to provide tactical insights around events while maintaining a 12-month rating and target price. Analysts can highlight catalysts 30 or 90 days out and offer a view on how the shares will trade around the event (upside or downside) in the context of their longer-term ratings. Calls expire automatically at the 30- or 90-day mark or can be closed ahead of time by the analyst. As shares rarely trade in a straight line, the Catalyst Watch system is a helpful tool for analysts to add value for investors around near-term volatility. Below we overlay the Crowding Composite on the Citi Research Catalyst Watch system. Stocks with a downside catalyst that are deemed more crowded may have more difficulty finding marginal investors and are subject to greater risk if a negative inflection emerges. To the contrary, stocks with an upside catalyst that are less crowded could react more positively to constructive fundamental catalysts.

Figure 2. U.S. Catalyst Watch with Crowding Scores

Company Name	Country	Reuters Code	Sector	Citi Rating	Catalyst Watch	Price (USD) (11-Dec-2020)	Mktcap (USDm)	Crowding Composite Rank
3M CO COM	United States	MMM.N	Industrials	2	UPSIDE	174.02	100,379	5.2%
UNITED STATES CELLULAR CORP COM	United States	USM.N	Communication Services	1	UPSIDE	30.41	1,613	10.2%
QIAGEN NV SHS NEW	United States	QGEN.N	Health Care	1	UPSIDE	51.92	11,985	14.9%
AMGEN INC COM	United States	AMGN.O	Health Care	1	UPSIDE	227.40	132,385	19.1%
SPIRIT AIRLS INC COM	United States	SAVE.N	Industrials	1	UPSIDE	26.23	2,562	22.0%
RMR GROUP INC CL A	United States	RMR.O	Real Estate	2	UPSIDE	38.24	589	24.1%
ELANCO ANIMAL HEALTH INC COM	United States	ELAN.N	Health Care	1	UPSIDE	28.65	13,520	35.6%
VONAGE HLDGS CORP COM	United States	VG.O	Communication Services	1	UPSIDE	13.40	3,328	45.7%
TELEPHONE & DATA SYS INC COM NEW	United States	TDS.N	Communication Services	1	UPSIDE	18.66	1,998	46.3%
STANLEY BLACK & DECKER INC COM	United States	SWK.N	Industrials	1	UPSIDE	175.20	28,071	48.4%
WEYERHAEUSER CO MTN BE COM NEW	United States	WY.N	Real Estate	1	UPSIDE	32.00	23,886	58.2%
OVID THERAPEUTICS INC COM	United States	OVID.O	Health Care	2H	UPSIDE	2.56	162	62.4%
TECK RESOURCES LTD CL B	Canada	TECKb.TO	Materials	2	UPSIDE	18.02	9,431	72.7%
BIO RAD LABS INC CL A	United States	BIO.N	Health Care	1	UPSIDE	567.26	14,034	75.9%
JABIL INC COM	United States	JBL.N	Information Technology	1	UPSIDE	39.62	5,962	79.9%
KBR INC COM	United States	KBR.N	Information Technology	1	UPSIDE	28.39	4,046	80.8%
GATES INDUSTRIAL CORPRATIN P ORD SHS	United States	GTES.N	Industrials	1	UPSIDE	13.27	3,859	83.8%
WARRIOR MET COAL INC COM	United States	HCC.N	Materials	2H	UPSIDE	19.46	996	91.3%
GLOBAL PMTS INC COM	United States	GPN.N	Information Technology	1	UPSIDE	192.06	57,491	91.4%
SWITCH INC CL A	United States	SWCH.N	Information Technology	1	UPSIDE	15.62	1,859	92.1%
XPO LOGISTICS INC COM	United States	XPO.N	Industrials	1	UPSIDE	120.87	11,049	95.2%
ENTEGRIS INC COM	United States	ENTG.O	Information Technology	1	UPSIDE	94.19	12,715	98.3%
CENTENE CORP DEL COM	United States	CNC.N	Health Care	1	DOWNSIDE	60.71	35,200	64.5%
ATKORE INTL GROUP INC COM	United States	ATKR.N	Industrials	2H	DOWNSIDE	43.55	2,071	56.6%
MACK CALI RLTY CORP COM	United States	CLI.N	Real Estate	2	DOWNSIDE	13.14	1,192	7.7%

Source: Citi Research, Ratings, Price Targets, Capital Appreciation, & Dividend Yields based on latest price on Dec 10, 2020

Consumer

Beverages

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Companies mentioned: (SAM.N; US$958.37; 1; 17 Dec 20; 16:00); (COKE.O; US$268.58; 2; 17 Dec 20; 16:00); (TAP.N; US$45.97; 1; 17 Dec 20; 16:00); (STZ.N; US$217.80; 2; 17 Dec 20; 16:00); (BFb.N; US$78.91; 2; 17 Dec 20; 16:00); (SBUX.O; US$103.21; 1; 17 Dec 20; 16:00); (MNST.O; US$90.14; 2; 17 Dec 20; 16:00); (PEP.O; US$145.71; 1; 17 Dec 20; 16:00); (KDP.O; US$31.13; 2; 17 Dec 20; 16:00); (PRMW.N; US$15.94; 1; 17 Dec 20; 16:00)

Beverage Industry Dynamics Are Challenged, but We Still Have a Positive Outlook for Some

The beverage companies are riding out the COVID storm and we expect many of them to make a full recovery when the world normalizes. We believe that SAM and PEP to continue to be winners both in a COVID and post-COVID environment.

- **Like Many Industries, COVID-19 Had a Major Impact on the Beverage Sector in 2020** — The U.S. beverage companies are all being pressured by the impact of COVID-19, some to a greater extent than others, as consumer behaviors have shifted. Overall, while the length and full impact of COVID-19's economic impact remain uncertain, we see promising trends at a handful of consumer companies, as business has now normalized in China, which we consider to be a leading-indicator of sorts of what the U.S. might look like over time. And for the most part, we remain confident in our companies' abilities to manage through this difficult time from a liquidity perspective, as the majority of our companies are investment-grade credits, with ample balance sheet flexibility. Given the closure (and recent re-closure in some regions) of bars and restaurants globally, the companies seeing the greatest negative impact have been those with the most exposure to the on-premise channel.

- **Top Line Growth Will Have Slowed in 2020 For Most of Our Companies Due to COVID-19, but Less So Than We Originally Thought** — On an organic basis, we expect that top line growth will decelerate at many of our beverage companies in 2020 given COVID-19. However, we note that we expect most of our companies to post better top line growth than we originally thought in June. That said, while the industry has seen stronger growth in grocery and at-home consumption, it has generally not been enough to offset the significant declines in the on-premise channel as a result of bars and restaurants being closed for several months and open at a limited capacity in many places even now. As a result of the current environment, many of our companies are suspending large innovation plans and shifting marketing strategies. Notably, due to some plant closures, some of our companies have been dealing with supply chain constraints and out of stocks, although many are expecting this to normalize over the coming months. This has led to our companies generally reducing promotional levels and maintaining pricing at a rational level.

- **We Expect Reported EPS Growth Will Be Mixed in 2020** — As a result of a mix of (i) slower top line growth, (ii) operating expense deleverage, (iii) f/x headwinds, and (iv) some of our companies reducing or suspending their share repurchase programs, we expect a deceleration in median EPS growth for the group in 2020 when compared to 2019. Overall, for 2020, we expect median EPS growth of 8% (below the 14% median growth seen in 2019), with a range of -59% (for SBUX, as the company has outsized exposure to the on-premise channel in both the U.S. and China) to +70% (for COKE, which continues to see strong operating margin expansion and better-than-expected top line growth given its business mix which is predominantly packaged beverages that are consumed at home).

- **Recap of Stock Price Performance** — Performance for the Beverage names was mostly positive in 2019 (only PRMW and TAP stocks declined modestly); however only five of our 11 U.S. beverage names in fact outperformed the S&P's robust +29% performance. In 2020, while stock price performance in 1Q was negative for all of our beverage names, it has gradually improved throughout the year, although only five of our 11 names have outperformed the S&P 500's +15% YTD performance thru December 17, 2020 (see Figure 1 below).

- **Valuation Is Below Historical Levels** — Today, the Beverages group is trading at an average ~27x our 2021 EPS estimates, or a 16% premium to the S&P 500 (vs. an average 24x and a 16% premium six months ago). Today's average valuation levels are below the average historical relative premium for the group of 43%. Within this, we note that only SAM and BFB are currently trading above their historical relative valuation levels, while COKE, TAP, STZ, TAP, and KDP are currently trading notably below their historical levels (on a relative P/E basis).

- **Who Is Left behind in the Recovery?** — While we are not Sell rated on any of the beverage companies under our coverage today, in terms of the names that we would expect to have the largest downside risk, we highlight KDP. The company has been insulated by its Keurig coffee business, which has benefitted from consumers working from home, but we expect that as a vaccine is distributed and more employees return to working in the office, they will shift back to visiting SBUX and other coffee shops to get their coffee.

Figure 20. Beverage Stock Price Performance

	Absolute Stock Price Performance											
	2013	2014	2015	2016	2017	2018	2019	1Q20	2Q20	3Q20	4Q20	2020
SAM	80%	20%	-30%	-16%	13%	26%	57%	-3%	46%	65%	8%	154%
BFb	19%	16%	13%	-10%	53%	-13%	42%	-18%	15%	18%	3%	17%
COKE	10%	20%	107%	-2%	20%	-18%	60%	-27%	10%	5%	11%	-5%
KO	14%	2%	2%	-3%	11%	3%	17%	-20%	1%	10%	7%	-4%
STZ	99%	39%	45%	8%	49%	-30%	18%	-24%	22%	8%	13%	15%
KDP	10%	47%	30%	-3%	7%	16%	13%	-16%	17%	-3%	11%	8%
TAP	31%	33%	26%	4%	-16%	-32%	-4%	-28%	-12%	-2%	38%	-15%
MNST	28%	60%	37%	-11%	43%	-22%	29%	-11%	23%	16%	12%	42%
PEP	21%	14%	6%	5%	15%	-8%	24%	-12%	10%	5%	5%	7%
PRMW	0%	-15%	60%	3%	47%	-16%	-2%	-34%	52%	3%	12%	17%
SBUX	46%	5%	46%	-8%	3%	12%	37%	-25%	12%	17%	20%	17%
SPX	30%	11%	-1%	10%	19%	-6%	29%	-20%	20%	8%	10%	15%

Note: 4Q20 and 2020 prices are as of the close on December 17, 2020.
Source: FactSet and Citi Research

- **Top Picks** — Among our beverage names, we continue to favor SAM and PEP.
  - For SAM, we believe that the company's strong growth in the hard seltzer and hard tea categories will continue for the foreseeable future, despite more competition coming into the hard seltzer category, and will more than offset weak growth for SAM in its core craft beer and cider categories. What is more, we are cautiously optimistic that SAM's incremental capacity for the production of its Truly hard seltzer products will help alleviate some of the gross margin pressure we have seen on the business recently.
  - For PEP, we believe the company continues to execute well and deliver on its targets. We are confident that PEP can continue to be a relatively consistent top line growth story and expect that the company can improve profit margins in its North America Beverage business, which will lead to an acceleration in EPS growth in 2021.

Beverages: Top Buys

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Boston Beer Company	**SAM**	**Buy**	**$958.37**	**$1,150.00**	**0.0%**	**20.0%**	**45.6x**	**12.5x**	**21.1%**
SAM is delivering best-in-class growth driven by strength in the hard seltzer category and its Truly brand and we expect this to continue driving strong bottom-line results.									
PepsiCo	**PEP**	**Buy**	**$145.71**	**$169.00**	**2.8%**	**18.7%**	**24.1x**	**14.9x**	**51.0%**
We like the track record of solid execution and believe that EPS growth will accelerate, leading to multiple expansion.									

Source: Citi Research

Food Manufacturers -- U.S.

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Companies mentioned: (BRBR.N; US$24.66; 1; 17 Dec 20; 16:00); (CPB.N; US$47.78; 2; 17 Dec 20; 16:00); (BYND.O; US$143.23; 2; 17 Dec 20; 16:00); (GIS.N; US$59.70; 2; 17 Dec 20; 16:00); (HSY.N; US$151.61; 1; 17 Dec 20; 16:00); (K.N; US$62.48; 1; 17 Dec 20; 16:00); (POST.N; US$98.84; 1; 17 Dec 20; 16:00); (WW.O; US$27.99; 1; 17 Dec 20; 16:00); (NOMD.N; US$25.08; 1; 17 Dec 20; 16:00); (SMPL.O; US$25.83; 1; 17 Dec 20; 16:00)

More than Just COVID-19 Outperformers and Underperformers

Though investors desperately want to characterize food stocks as stay-at-home beneficiaries, which might struggle to grow in a recovery trade, we believe the sector is a bit more nuanced. In fact, we are recommending those names which we believe had strong growth potential going into the pandemic, and for whom that growth potential should be intact coming out of the pandemic. We note that several of these names actually saw their business pressured in part by the pandemic, and as a result, should have easier YoY comps in 2021 as we come out of COVID-19. Specifically, we like MDLZ, HSY, K, SMPL and BRBR.

- **Investors Fear the Best Is Behind Us for Food…** — Before the pandemic, many of the food companies seemed to be just starting to get their feet on the ground after a few years of changing consumer dynamics (particularly the consumer shift to health and wellness) and under-investment in favor of cost cutting had left them flat-footed to respond to changing consumer dynamics. As a result, while stay-at-home behavior during the pandemic might have boosted top line growth many of the more domestically-focused companies, investors seemed to think that most of the U.S. packaged food names will not only show especially slow growth in 2021 (or even declines) as a result of tough YoY comps, but that even on a more normalized basis, most U.S. food companies will struggle to grow over the longer term. While we agree with this thesis for several names in the group (e.g. CPB and GIS), we believe that this over-arching bearish thesis with regard to packaged food is perhaps a little unfair.

- **… We Like the Companies Which Haven't Necessarily Benefitted as Much in 2020, but Also Play in Categories and Georgraphies Which Should Bounce Back in 2021** — As we have rolled out our initiations on the U.S. packaged food manufacturing companies since the start of the pandemic in March, we have looked for those stories which were operating pretty well before the pandemic, but might have exposure to countries and categories which have in fact been pressured by the pandemic. Many of the names that fit this idea are those that have exposure to the convenience & foodservice channels, international markets, or convenient nutrition (where food is consumed largely away-from-home and on-the-go).

- **Convenience & Foodservice Have Been Pressure Points for HSY, POST and K –** Given that many consumers have stayed at home to work, play and study, those companies that have the most exposure to vending machines, foodservice locations such as cafeterias and schools, and travel and lodging locations such as hotels and airports, have all suffered. The companies that we cover with the greatest exposure to these channels are HSY (think candy bars in vending machines), K (think Pringles in hotel rooms) and POST (think liquid eggs and frozen potatoes in school cafeterias). We expect all of these businesses to see accelerating growth over very depressed bases in 2021.

- **International Markets Might See Near-Term Pressure, But Should Still Be Long Term Growth Drivers –** We believe that faster growth will likely come from outside the U.S. over the next few years, as these countries have growing populations and more importantly, growing middle classes who are trading into and up within various packaged good categories. Mondelez International was on a roll as we headed into the pandemic, starting to benefit from the investments it has made into its international markets since CEO Dirk Van de Put's arrival. The company has executed consistently well throughout 2020 and as of its 3Q20 earnings call, the company was gaining share in ~80% of its markets internationally, which is remarkable among our CPG coverage. Similarly, we are excited by the seeds K is planting in emerging markets to benefit from the net leg of snacking growth. We expect K to benefit from increasing scale over the next few years, which should positively impact the company's international margin story.

- **Health/ Wellness Has Been Less Relevant in Food in 2020… But We Expect A Re-Appraisal in 2021** - Before the pandemic, health and wellness was one of the fastest growing categories within food. Consumers used convenient nutrition products such as bars and protein shakes as meal replacements in their busy and mobile day-to-day lives. Early in the pandemic, bar/ shake categories even benefitted from surging demand as consumers filled their pantries with healthy, protein-packed (most importantly, shelf-stable) options. However, eating occasions for these products have suffered as consumers remained at home and can easily prepare meals out of their fridges. BRBR and SMPL are both in this camp – each benefitted early in the pandemic, has suffered from fewer on-the-go eating occasions, and should benefit from the re-opening trade as consumers return to more normal lives. Outside of core food players, we believe WW is setting itself up with a full slate of tech innovation to capitalize on pent-up demand in the health/ wellness space during the key upcoming Diet Season.

- **Plant-based Protein: Here to Stay?** — If 2020 is the year plant-based protein went mainstream, then will 2021 be the year that plant-based protein becomes even more competitive? With the growing number of plant-based protein options entering the grocery store this year to compete with Beyond Meat (K's Incogmeato, Impossible Foods' Impossible Burger, and NOMD's Green Cuisine in Europe), we expect 2021 to be a bit more competitive on pricing. This year, BYND launched its Cookout Classic value pack in retailers across the U.S. which helped narrows its price gap to animal-based meat. While we are optimistic about strong category growth ahead for plant-based protein, we think its early to call with much certainty who the winners might be.

U.S. Food Manufacturers: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Mondelez International	**MDLZ**	**Buy**	**$57**	**$68**	**2.0%**	**20.9%**	**20.4X**	**3.0X**	**11.5%**
MDLZ came into the pandemic with strength, has executed well throughout the pandemic, and should emerge with strength as international markets recover.									
Hershey Company	**HSY**	**Buy**	**$152**	**$172**	**2.1%**	**16.5%**	**23.0X**	**15.1X**	**62.1%**
HSY has seen mixed trends of late, but we believe can continue to gain market share over time and improve upon its industry-leading margins.									
Kellogg Company	**K**	**Buy**	**$62**	**$75**	**3.7%**	**25.6%**	**15.5X**	**7.0X**	**35.1%**
K has diversified its portfolio into growthier categories (plant-based protein and snacks) which we believe will allow for margin expansion.									

Source: Citi Research

Gaming

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Companies mentioned: (0027.HK; HK$57.80; 1; 18 Dec 20; 16:10); (MLCO.O; US$18.72; 1; 17 Dec 20; 16:00); (0880.HK; HK$8.95; 1; 18 Dec 20; 16:10); (LVS.N; US$57.34; 1; 17 Dec 20; 16:00)

Top Picks Las Vegas Sands and MLCO

Las Vegas: Flexibility in Capacity Optimization Remains Key; Macau: Expect New Supply to Drive Demand after Travel Restrictions are Completely Lifted

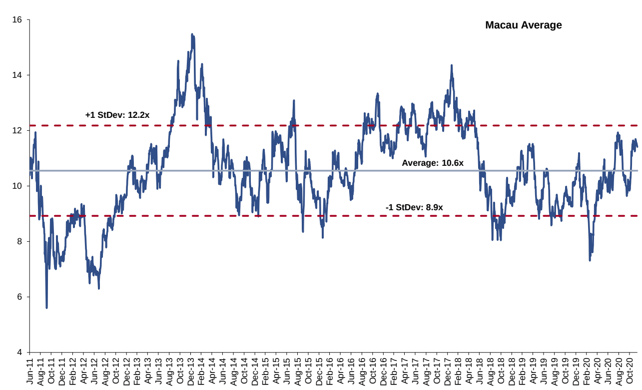
- **Las Vegas** — Las Vegas Strip GGR fell ~44% YoY to ~US$3.1bn in 10M20, reflecting the casino closures in March to May and the negative impact from the implementation of capacity caps and social distancing measures due to COVID-19. Baccarat win fell ~45% YoY to ~US$486m during the period, hit by a ~33% YoY decline in Baccarat volumes (likely reflecting fewer high-end Asian players due to travel restrictions). The YoY decline in Non-Baccarat win was 43% (similar to that of Baccarat). We are encouraged by the fact that GGR recovered to 60-70% of 2019A levels during the months when COVID-19 restrictions were partially relaxed. However, to fight against the latest wave of new COVID cases, Neveda Governor Sisolak decided to extend the COVID-19 restrictions through January 15th. While we do not have any crystal ball for predicting when GGR will start recovering, we anticipate that the relaxation of COVID-19 restrictions will happen after vaccines are rolled out (hopefully throughout 2021). We expect domestic demand to drive GGR recovery first – GGR could recover to the watermark set in summer 2020. We think a full recovery will be achieved only when convention business and fly-in visitation normalize (likely a 2022 event in a best-case scenario). For now, we forecast Las Vegas Strip GGR to amount to ~US$3.5bn in FY21E, equivalent to ~2/3 of the 2019 levels. That said, we believe the casino operators will have developed the flexibility in closing down capacity in order to minimize EBITDAR losses.

- **Macau** — We remain bullish on Macau as we anticipate more Mainland Chinese would return to Macau when the self-service tourist visa kiosks resume (which will effectively remove the "soft cap" on the number of Macau-bound visas issued by the Chinese government). A more favorable GGR mix and opex savings will help the six casino operators catch up on EBITDA next year, on our analysis. New property openings (namely LVS' Londoner Macao, SJM's Grand Lisboa Palace and Galaxy's GM Phase 3) in 2021 are expected to draw Premium players' attention when travel restrictions are completely lifted.

Figure 21. Las Vegas Sands – Londoner Macao (artistic rendering)

Source: Company Reports

Figure 22. Macau – 2-year forward EV/EBITDA Chart (consensus EBITDA forecasts) - ~11.4x – ~0.5 S.D. above historical average of ~10.6x



Source: Citi Research estimates

- **Singapore** — Investors were positively surprised by the fact that both Marina Bay Sands and Resorts World Sentosa were able to return to black in EBITDA terms in 3Q20 (having suffered only one quarter of LBITDAs in 2Q20), despite the fact that only Singaporean loyalty program members were allowed to play in the casinos. We anticipate GGR to continue to recover in FY21E (both in terms of GGR from local players and foreign players – with the assumption that there will be some degree of relaxation in travel restrictions). However, we also continue to expect that the outdoor theme park at Resorts World Genting in Malaysia, when opened in mid-2021 (as guided by Genting Malaysia management) will put some downward pressure on the already saturated Singapore gaming market. Net-net, we conservatively forecast Singapore GGR to reach S$4.5bn (or ~US$3.3bn) in FY21E, which is equivalent to ~73% of FY19A GGR.

- **Global Top Pick: Las Vegas Sands** — We continue to rank LVS as our Global Top Pick for the following reasons (assuming GGR begins to normalize in the near term): (a) stable operating cash flows from the Macau operations, thanks to its dominance in the defensive Grind Mass segment; (b) further upside potential in its Premium business thanks to the opening of Four Seasons / St. Regis suite towers and the Londoner in 2020/21; and (c) Marina Bay Sands continues to generate bond-like cash flows and provide growth opportunities with its expansion plan. In mid-2020, LVS announced that it will no longer pursue the integrated resort development opportunity in Japan and would instead focus its efforts on other opportunities, likely in Asia. We believe it won't be easy for LVS to find suitable M&A targets, as the operator has historically been very selective and patient in pursuing investment opportunities. If LVS cannot find any suitable investment targets in Asia in the near-term, we won't be surprised if management reinstates LVS' regular quarterly dividend program sooner than expected.

- **MLCO** — We also rate MLCO as Buy and continue to like it as a leader in Premium Mass, the most sought-after segment in Macau. We also like MLCO as it is one of the more aggressive operators on cost-cutting. In addition, MLCO is our favorite candidate to win a gaming license in Yokohama, Japan.

Gaming: Top Buys

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Las Vegas Sands	**LVS.N**	**Buy**	**$57.34**	**$63.00**	**0.0%**	**9.9%**	**23.7**	**10.5**	**60.5%**
Upside potential in its Macau Premium business with the new product upgrades									
MLCO	**MLCO.O**	**Buy**	**$18.72**	**$23.00**	**0.0%**	**22.9%**	**29.5**	**6.6**	**25.0%**
Leader in Premium Mass in Macau; our favorite candidate to win a gaming license in Yokohama, Japan									

Source: Citi Research estimates

Home and Personal Care

COVID-19 Has Created Outperformers and Underperformers

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Companies mentioned: (COTY.N; US$6.86; 1; 17 Dec 20; 16:00); (CHD.N; US$87.21; 2; 17 Dec 20; 16:00); (PG.N; US$138.25; 1; 17 Dec 20; 16:00); (CLX.N; US$202.34; 1; 17 Dec 20; 16:00); (VVV.N; US$23.45; 1; 17 Dec 20; 16:00); (IPAR.O; US$58.39; 2; 17 Dec 20; 16:00); (ENR.N; US$43.26; 1; 17 Dec 20; 16:00); (KMB.N; US$136.32; 3; 17 Dec 20; 16:00); (CL.N; US$85.66; 2; 17 Dec 20; 16:00); (EL.N; US$263.83; 2; 17 Dec 20; 16:00); (REYN.O; US$30.48; 1; 17 Dec 20; 16:00); (EPC.N; US$36.09; 2; 17 Dec 20; 16:00); (ELF.N; US$22.02; 2H; 17 Dec 20; 16:00); (HLF.N; US$48.46; 1; 17 Dec 20; 16:00); (NUS.N; US$52.24; 2; 17 Dec 20; 16:00); (TUP.N; US$31.28; 2H; 17 Dec 20; 16:00); (NWL.O; US$20.09; 1; 17 Dec 20; 16:00); (YETI.N; US$71.97; 1; 17 Dec 20; 16:00)

COVID-19 has been a catalyst for growth for many of our HPC companies in 2020. And given that tough compares lie ahead for many, we favor those companies with strong fundamentals and for which growth opportunities exist even ex-COVID impact. Our top Buy-rated names are PG, COTY, and CLX.

- **COVID-19 Has Driven Divergent Performance Across the HPC Sector** — While COVID-19 has clearly affected many HPC companies in 2020, the impact to those in our coverage universe has varied given the wide array of businesses amongst the group and the differences in product and geographic portfolios. On the one hand, companies with health & wellness businesses and products related to at-home time have benefited from elevated consumer demand, while others, like cosmetics, have experienced notable pressure. And while a vaccine(s) is on the horizon, we think that at this point, it is still too soon to know how long the pandemic will last and what the ultimate impact will be (especially if there is prolonged economic fallout that persists after the pandemic passes). Nonetheless, we have seen encouraging signs with some of our companies leaning into and investing behind the strength experienced this year (whether that be in areas such as advertising or more manufacturing capacity), while many of those that were negatively impacted have seen their businesses come back more quickly, particularly in beauty, buoyed by strength in China and pockets in Travel Retail.

- **We Expect Sales Growth To Be Lumpy in 2021 As Our Companies Lap COVID-19 Impacted Compares** — With the pandemic having driven a wide range of sales outcomes across our group in 2020, we expect that topline growth will be lumpy for companies as they begin to lap these compares. For those with health & wellness businesses and products related to at-home time, while we expect that some of the consumer behavior and habits formed this year will persist in 2021, we believe that organic sales growth will likely either slow or turn negative, particularly as we begin to cycle the height of the pantry-loading trend seen in March/April. Conversely, we anticipate that our Beauty companies and others such as VVV, for which results were depressed in 2020, will see growth accelerate as they lap easier compares as the environment continues to evolve and normalize.

- **Other Trends To Watch In 2021** — In addition to watching the cadence of performance, there are several other trends that we will be monitoring in 2021 including: 1) e-Commerce sales accelerated for many in 2020 as the brick & mortar channel came under pressure from closures. With many investing in digital capabilities, we will be watching the growth, sales mix and profitability of this channel in 2021. 2) In response to COVID uncertainty, many of our companies scaled back expenses in advertising, SG&A, etc. With now a greater degree of visibility, we will be monitoring the extent to which these costs come back in the new year. 3) The promotional environment has been largely depressed in 2020 as companies cut promos on the back of supply constraints and out-of-stocks. However, as inventories and the broader environment further normalizes, several have indicated a return to a more normal promotional environment in 2021. 4) Unlike in 2020 where FX was a headwind for many of our companies, based on current spot rates, the USD should weaken against several currency pairs YoY. With many of our companies having large International businesses, this could create a tailwind for some.

- **Recap of Stock Price Performance** — Price performance for our HPC companies has mostly been positive in 2020 (with only COTY, IPAR, ENR, and KMB in negative territory on a YTD basis). Additionally, nine of our 18 companies have outperformed the S&P 500 YTD. Interestingly, all but one of our companies (CLX) had negative price performance in 1Q20, but for many, performance has notably improved since the market sell-off early in the year (see Figure 1 below).

Figure 23. HPC Stock Price Performance

	2018	2019	1Q20	2Q20	3Q20	YTD 2020
CHD	31%	7%	-9%	21%	20%	24%
CLX	4%	0%	13%	26%	-4%	32%
CL	-21%	16%	-4%	12%	6%	24%
COTY	-67%	71%	-54%	0%	-38%	-39%
EL	2%	59%	-23%	23%	15%	28%
KMB	-6%	21%	-7%	12%	4%	-1%
NWL	-40%	3%	-31%	28%	9%	5%
PG	0%	36%	-12%	9%	16%	11%
REYN				23%	-11%	7%
EPC	-37%	-17%	-22%	34%	-8%	17%
ELF	-61%	86%	-39%	104%	2%	37%
ENR	-6%	11%	-40%	67%	-16%	-14%
HLF	74%	-19%	-39%	64%	4%	2%
IPAR	51%	11%	-36%	19%	-21%	-20%
NUS	-10%	-33%	-47%	86%	30%	27%
TUP	-50%	-73%	-81%	235%	261%	265%
VVV	-23%	11%	-39%	62%	0%	10%
YETI		134%	-44%	137%	3%	107%
SPX	-6%	29%	-20%	25%	8%	15%

Note: YTD 2020 prices are as of the close on December 17, 2020.
Source: FactSet and Citi Research

- **Who Is Left behind in the Recovery?** — We are are currently Sell-rated on KMB. While KMB experienced a notable increase in organic sales growth in 1Q20, that growth has decelerated over the course of the year. Nonetheless, KMB will still face challenging sales growth compares in 2021 and with it, likely some margin pressure given less fixed cost leverage. Additionally, we remain concerned about the competitive environment (including that of private label), particularly as KMB's market share in some of the company's key categories have been under pressure in recent years. And, should a vaccine lead to more away-from-home time, this could accelerate the pressure in KMB's key consumer categories.

HPC: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Procter & Gamble	**PG**	**Buy**	**$137.27**	**$165.00**	**2.4%**	**22.6%**	**24.9x**	**7.8x**	**31.0%**
We believe PG can continue to drive sales growth with a COVID-19 demand tailwind & also achieve cost savings and productivity efficiencies.									
Coty Inc	**COTY**	**Buy**	**$6.82**	**$10.00**	**0.0%**	**46.6%**	**136.4x**	**1.3x**	**3.2%**
We have increased confidence in COTY's turnaround with the Wella sale now complete & believe in new CEO Sue Nabi's ability to lead the business.									
The Clorox Company	**CLX**	**Buy**	**$203.44**	**$249.00**	**2.2%**	**24.6%**	**25.1x**	**23.0x**	**102.6%**
The demand tailwind from COVID-19 will likely persist, and there are attractive opportunity for the company to expand its International and Professional businesses.									

Source: Citi Research. Estimates for PG, COTY, and CLX based on respective FY21.

Leisure

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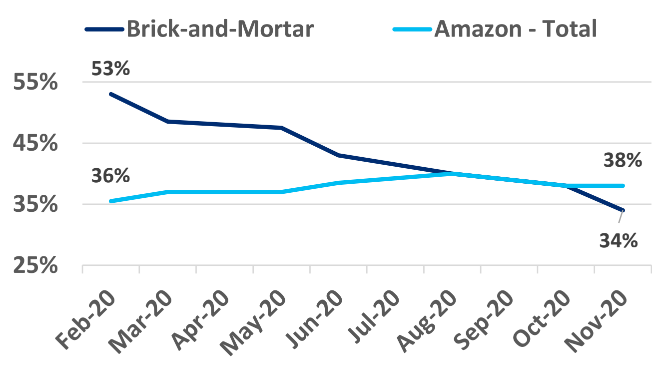
Companies mentioned: (WGO.N; US$59.54; 1; 17 Dec 20; 16:00); (BC.N; US$78.58; 2H; 17 Dec 20; 16:00); (HOG.N; US$36.39; 1; 17 Dec 20; 16:00); (HAS.O; US$93.21; 1; 17 Dec 20; 16:00); (LCII.N; US$133.98; 2; 17 Dec 20; 16:00); (PII.N; US$99.22; 1H; 18 Dec 20; 16:00)

We Favor Toys, RVs, and ATVs in 2021

Both the Toy Sector and Outdoor Recreation set-up well to remain robust thru 2021. Both sectors reacted well over the past few months and those positive trends remain intact.

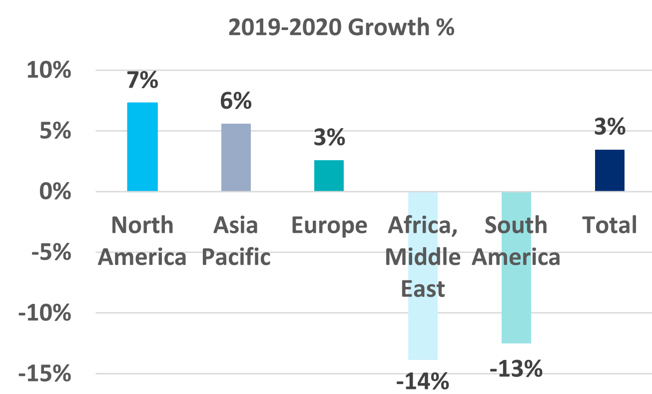
- **Pandemic Effect on US Toy Sales** — The Pandemic has had three effects.
  - 1) Driven consumers to buy toys on-line rather than from retail stores,
    2) Driven consumers to buy toys to entertain & educate kids for home learning,
    3) Internet provides parents & kids with a wider choice than in stores.
- **E-Commerce Thriving in Toy Sales** — The pivot from brick-and-mortar to online is expected to continue to gain strength until E-commerce is ~75% of toy sales. Klosters Trading estimates that ~54% of toy sales in '20 were through E-Commerce – where 1/3 is curbside pick-up and 2/3 is traditional E-Commerce.
- **US Toy Industry +8% Growth in 2020 Highest Ever Recorded** — This compares to global growth in the toy industry of +3% in 2020. The US toy industry generally grows in the range of 3-5%, but 2020 surprised toy buyers.
  - Strength in these US categories: Games & Puzzles +25%, Preschool +20%, Learning +20%, Building Sets +20%, Arts & Crafts +10%, Outdoor +10%.
- **Positive US Toy Industry Outlook for 1H 2021** — 2020 has been a year like no other. Our base case assumes the US passes a sizeable COVID stimulus bill, then toy buyers expect 1H 2021 to grow at a +2-3% rate. If direct payment to consumers occurs, then 1H 2021 should grow at a greater rate.

Figure 24. COVID Results in Toy Industry Fast Pivot from Shelf to Online
US Toy Market Shares Brick-and-Mortar to Online – Share %



Source: Citi Research, Klosters Trading & Lutz Muller

Figure 25. Global Toy Market Growth – Retail Sales – USD $ millions
North America $36 billion & Global Market $90 billion



Source: Citi Research, Klosters Trading & Lutz Muller

- **Top Pick in Toy Sector is Hasbro (HAS)** — Hasbro has a leading portfolio of brands, such as Monopoly, Nerf, Play-doh, and Transformers. We believe Hasbro is further along in its transition from a Toy company to Toy & Entertainment. Hasbro has a robust business making toys for movies. We expect several films postponed from '20 to occur in '21, including Raya (March 2021), Black Widow

(May 2021), Ghostbusters (June 2021), Shang-Chi (July 2021), Snake Eyes (Oct 2021), and Externals (Nov 2021). HAS should benefit from this in 2021.

- See Dec 9 – Initiate on Hasbro & Mattel: Global Toy Companies – Evolving in a Digital World

- **Outdoor Recreation Still Booming** — In early December, we hosted four management teams – Winnebago (WGO), Brunswick (BC), LCI Industries (LCII), and Harley-Davidson (HOG) – to hear the latest on recent business conditions. We also hosted a Dealer Panel with US outdoor recreation dealers.
  - **OEM Supply Chains Improving –** Corporates discussed recent supply chain challenges, resulting from the unprecedented 2-month shut-down and summer surge in demand. We thought the tone improved and appeared manageable.
  - Inventory **Restocking Pushed Out to ~2022** — OEMs supplying adequate inventory to its retail dealers, RVs, boats, and ATVs now appears as though it will take most all of 2021 rather than just 1H 2021. It may run into 2022.

- **Retail Trends Ranked: 1) RVs, 2) ATVs (tie), 2) Boats (tie), 4) Motorcycles** — All verticals are experiencing positive trends and we did not pick up that any were de-accelerating, except for normal seasonality. Seasonality is a factor as summer has turned into fall weather across most of the US.
  - See Dec 4 – Outdoor Recreation Still Booming: Citi RV & Powersports Corp Access Day: WGO, BC, LCII, HOG

- **Top Pick in RV Sector is Winnebago (WGO)** — We moved to Buy on the RV player in late October. This was after we initiated coverage on the RV group in early July with a Neutral rating due to valuation concerns and overall macro uncertainty. Since then, RV fundamentals remain especially strong (retail sales, inventories, backlog), less macro uncertainty (vaccination), and valuation became more compelling.
  - See Oct 26 – WGO: Move to Buy on RV Player – from Neutral

- **Top Pick in Powersports / ATV Sector is Polaris (PII)** — Polaris is the global leader in powersports – includes Off-Road vehicles, (PII is #1 market share player; 60% of Revenue), snowmobiles (#2), and motorcycles (#2). Polaris also manufactures pontoon boats (#1).
  - See Sept 15 – Outdoor Recreation Deep Dive: Initiate on Leader in Off-Road Vehicles & Leader in Rec Boating.

Leisure: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Hasbro	HAS	Buy	$94.76	$120.00	2.9%	29.5%	20.3x	4.2x	21.5%
Strong 2021 expected with release of Toy-related Films, including several Disney and Marvel big box and well-anticipated movies									
Winnebago	WGO	Buy	$58.91	$63.00	0.7%	7.7%	14.6x	2.1x	15.4%
RV Fundamentals remain especially strong – retail sales, backlog, and inventories, where we expect inventory re-stocking to run thru most all of 2021									
Polaris	PII	Buy/H	$96.44	$120.00	2.6%	27.1%	13.0x	4.3x	36.9%
We anticipate continued strong demand for ORV/Snow vehicles thru 2021 and remain especially encouraged by the outlook for the ORV sector									

Source: Citi Research

Retailing

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Companies mentioned: (DG.N; US$212.55; 1; 17 Dec 20; 16:00); (TGT.N; US$171.24; 1; 17 Dec 20; 16:00); (WMT.N; US$146.10; 1; 17 Dec 20; 16:00); (ANF.N; US$20.66; 1; 17 Dec 20; 16:00); (AEO.N; US$19.66; 1; 17 Dec 20; 16:00); (RL.N; US$100.99; 1; 17 Dec 20; 16:00); (KR.N; US$31.00; 2; 17 Dec 20; 16:00); (ACI.N; US$15.54; 1; 17 Dec 20; 16:00); (BJ.N; US$38.06; 2; 17 Dec 20; 16:00); (COST.O; US$370.29; 2; 17 Dec 20; 16:00); (LB.N; US$39.19; 3; 17 Dec 20; 16:00); (OLLI.O; US$83.15; 3; 17 Dec 20; 16:00); (DLTR.O; US$113.05; 1; 17 Dec 20; 16:00); (DECK.N; US$300.96; 1; 17 Dec 20; 16:00); (M.N; US$10.42; 3; 17 Dec 20; 16:00); (FL.N; US$41.10; 2; 17 Dec 20; 16:00); (SIG.N; US$26.86; 3; 17 Dec 20; 16:00); (PLCE.O; US$45.68; 2; 17 Dec 20; 16:00); (ROST.O; US$116.69; 1; 17 Dec 20; 16:00); (BURL.N; US$245.16; 1; 17 Dec 20; 16:00)

Good Time to Own Some Structural Winners and Some Turnaround Plays

- **COVID has accelerated trends already in place** — The retail world was turned upside down by COVID, causing both temporary and what we believe are more permanent changes to the sector. As we think about the post-pandemic period, we don't believe we can expect everything to go smoothly and go back to normal. As a result, we believe it pays to own the structural retail winners (DG, DLTR, TGT, WMT) as well as have exposure to the better turnaround plays (ANF, AEO, DECK, RL).

- **Temporary and permanent shifts**: Among the potential temporary shifts caused by the pandemic are that consumers are now spending on "things" rather than experiences (which favors retailers in general), are spending on essentials (which favors mass merchants and food retailers), and are spending on comfortable clothes (which favors athletic brands). On the more structural side, we have seen an acceleration in some key trends that were already in place prior to the pandemic – most notably the shift to Ecom, store closures, and traffic moving away from the mall and into off-mall shopping venues.

- **Those selling essentials have done the best** — Retailers that have been open through the pandemic and sell essentials have had the best results. These include WMT, TGT, the dollar stores (DG and DLTR), food retailers (KR and ACI), and warehouse clubs (BJ and COST). Each of these companies has posted strong sales and margin results through the pandemic. We believe the share gains achieved during the pandemic for DG, DLTR, TGT and WMT put these retailers in a favorable position post-pandemic as consumers have developed habits of shopping these stores, and these stocks can continue to outperform.

- **But consumers spending on more than essentials** — During this period, consumers have favored comfortable clothing, items for their homes and sporting goods/active items. Those that saw the biggest acceleration in their business (outside of essential retailers) include LB's BBW (sales accelerated from +10% in 4Q19 to +55% in 3Q20), OLLI (sales accelerated from -5% in 4Q19 to +58% in 2Q20/+27% in 3Q20), and DKS (sales accelerated from +5% in 4Q19 to +23% in 3Q20). Of the players in the active category, Hoka (DECK) has been a standout, with sales +58% in calendar 1Q-3Q. Although we believe DECK is benefitting from some shifts in consumer spending, we also believe that they can hold on to this share, and that Hoka is a hidden asset within the DECK portfolio.

- **Accelerating shift toward Ecom** — The pandemic has rapidly accelerated the shift to Ecom that was already occurring prior to the crisis. This shift was causing continued declining traffic to the mall and was resulting in significant store closures. As the crisis has progressed, many retailers have increased the number of stores they plan to close. These include M, FL, JWN, SIG, KORS, PLCE, and LB (VS). As we wrote in our 10/9/20 report *RWR: Closing Stores to Grow Profits… Does it Ever Work?* to the extent that history is any indication, they all seem to be facing an uphill battle. Particularly in sectors of retail that are secularly challenged, like mall-based retailers, we believe store closures will not represent a fix.

- **Off-price set up to gain significant share** — As a result of the large amount of store closures we expect across retail, we also expect a significant amount of share to be put up for grabs. We believe much of this share will go off-mall (in addition to going online) and we believe off-pricers will be big beneficiaries as they have been in the past. While some consumers may have become more comfortable with Ecom during the pandemic and may choose not to go back to stores (off-pricers don't offer Ecom), we still believe the off-pricers will have a top-line tailwind in the coming years. We have Buy ratings on both ROST and BURL.

- **Retailers great at preserving cash** — As we called out in our 3/27/20 note *RWR: Cash Burn – The Good News and Bad News…* retailers do a great job preserving cash when they need to (and they did during the pandemic period). SG&A cuts were made but how much is sustainable is another question (the topic of our 12/11/20 note *RWR: SG&A – Where the Cuts Were Deepest (and Here to Stay)*. Similarly, capex was cut, but some might need a catchup (the topic of our 12/4/20 note *RWR: A COVID Capex Catch-up?)*. Tight inventory management has created near term tailwinds to margins, but these benefits may end when retailers increase inventory levels again. The big question now is what earnings power looks like as things reopen.

- **Who is left behind in the recovery?** We believe mall-based retailers such as M and SIG have significant struggles ahead as more share moves off-mall. Despite both of these companies having their own Ecom business, this is likely to be a drag on margins. We also believe LB's BBW business will not be able to sustain the big increase in sales it achieved in 2020 from selling soaps and sanitizers. Lastly, we do not believe OLLI will be able to lap the large increases achieved in 2020, and has already seen sales decelerate in 4Q.

Retailing: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Deckers	DECK	Buy	$300.19	$310	0.0%	3.3%	19.6x	4.8x	26.1%
Hoka represents hidden value and sales remain strong during pandemic; Ugg taking share with strength in core/non-core product; one of strongest balance sheets in retail									
Dollar Tree	DLTR	Buy	$112.85	$135	0.0%	19.6%	17.2x	2.9x	18.2%
More shots on goal at FD given COVID-19; DT+ concept potential LT comp driver; Discretionary taking more share of sales should continue to drive margins									
Ralph Lauren	RL	Buy	$99.50	$134	0.0%	34.7%	12.7x	2.3x	19.6%
Favorable inventory position and sell-thrus; Big expense opportunity; AUR strategy working; Connecting well with younger customers; Attractive opportunity in China long term									
Top Sells									
Macy's	M	Sell	$10.28	$4	0.0%	-61.1%	22.2x	0.6x	2.7%
Sales recovery still lagging in 3Q though good expense mgmt; Shift to Ecom a negative for margins; Levered balance sheet and mall exposure a bad combo right now									
L Brands	LB	Sell	$38.70	$35	0.0%	-9.6%	11.1x	72.8x	7.9%
BBW benefitting from near-term stock up of anti-bac, long-term EPS power unchanged; Mall exposure for BBW a concern; VS an impressive 3Q showing cost cuts working									
Ollie's	OLLI	Sell	$80.73	$78	0.0%	-3.4%	27.8x	3.9x	14.5%
Big slowdown in 4QTD; COVID-19 doesn't change long-term EPS power/tough comparisons in 2Q/3Q next year; Valuation rich. Longer term scalability of close-out biz a risk									

Source: Citi Research

Tobacco

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Companies mentioned: (MO.N; US$43.00; 1; 17 Dec 20; 16:00); (PM.N; US$85.67; 1; 17 Dec 20; 16:00); (PFE.N; US$38.03; 2; 17 Dec 20; 16:00); (ABI.BR; €58.76; 2; 17 Dec 20; 17:30)

The big question is whether multiples can rise, having reached 20-year lows in 2020

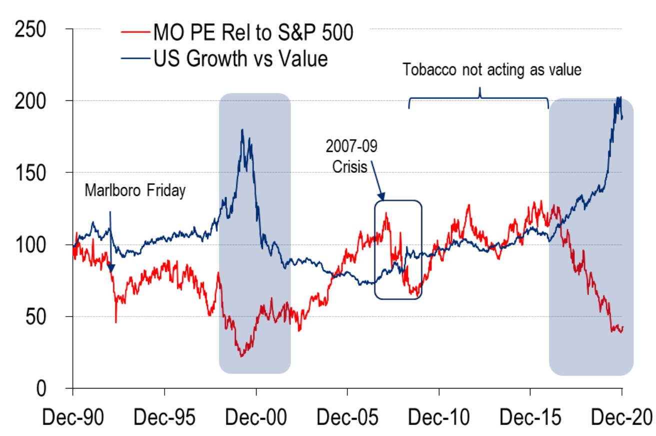
If the market rotates towards value, tobacco could perform extremely well. Our top pick is PM because we expect it to accelerate its transformation toward reduced risk products

- **In many ways, 2020 should have been an excellent year for tobacco stocks – **There were four factors that we would have expected to drive stocks higher: 1) 2020 resulted in excellent cigarette trends in the U.S., with volumes almost flat and pricing unusually strong. (Consumers had more opportunities to smoke because they stayed more at home; and there were fewer alternative ways to spend money.) 2) The threat from new entrants in reduced risk areas diminished. 3) Overall earnings visibility in tobacco was much better than in many sectors. And 4) interest rates were low.

- **However, the stocks fell to their lowest P/Es since 2000** --- In our view, there is a large gap between share prices and economic fundamentals. The central question for investors is whether this gap can close further.

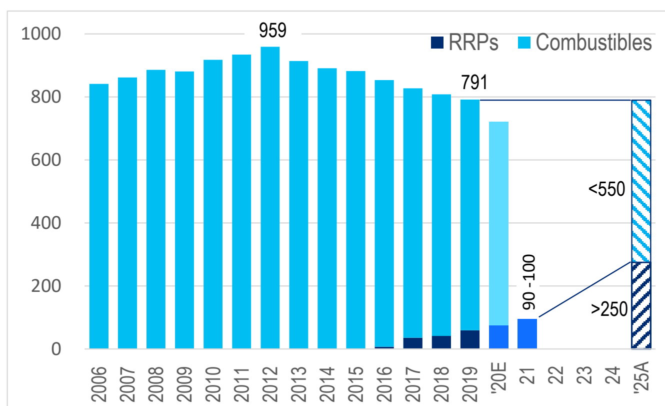
- **We believe rotation is the main driver** --- Most investors we speak to assume the main driver of tobacco's de-rating has been the growth of ESG investing. We agree that ESG is a factor, but we suspect rotation is more important. We say this because the last time tobacco was this cheap also happened to be last time tech and growth were so strong: in other words during the dot.com bubble. In both cases, the market was (and is) saying that it doesn't much care about short-term earnings visibility; rather it is focusing on the very long term. We believe that if the market's duration shortens, as it did between 2003 and 2016, then tobacco will rerate. In fact, since Pfizer announced that its vaccine was effective, the sector has already started to outperform.

Figure 26. Altria's P/E relative to the S&P, and tech booms



Source: DataStream, Citi Research

Figure 27. PM's annual volume, in billions of stick equivalents, including its "Aspiritation" for 2025



Note: In 2020, cigarette volumes are likely to be depressed because of COVID-19, so it is an unfair comparison. 2020E is Citi's estimate. 2025A is PM's Aspiration.
Source: Company Reports and Citi Research Estimates

- **PM is our top pick** — We expect PM will announce in early February that it will accelerate its transformation toward reduced risk products. It is on track to sell about 90-100B units of RRPs in 2021E, but it might target 250B in 2025. If it does, we think that might imply >6% organic sales growth. Furthermore, the move is likely to be increasingly margin accretive, as PM leverages the digital infrastructure it has created to engage with consumers. We also expect the company to launch large buybacks during the year.

- **For Altria the most important question is around its stake in ABI** — Altria (MO) has the right to sell its stake in ABI from October 2021. Given MO's P/E, it's easy to say that it should sell the stake, and use the proceeds to buy back. However, it may be hard to get a good price for its ABI's shares given (1) they are depressed currently because of COVID; (2) the sale of such a large stake may well hit the price further.
- **What about the fundamentals?** — COVID has boosted cigarette volumes in the U.S. and hurt volumes overseas. We don't see any reason to believe these effects are permanent and therefore they are likely to reverse as the pandemic eases. This is another factor that should help PM. Even if U.S. volumes weaken, however, we expect steady EBIT progression, thanks to strong price increases.
- **And the Biden Administration?** — If the incoming administration raises corporate income tax, that is likely to have a big impact. MO's tax rate fell 10 ppts and PM's fell 6 ppts in 2018, thanks to the Trump tax cut. We do NOT expect the incoming administration to impose harsh new regulations on tobacco, because there are so many other, more important items on the agenda. It is possible there could be increases in tobacco excise tax. If so that is likely to hurt volumes. Historically, however, the industry has been able to keep profit growing despite tax hikes.

Tobacco: Most Favored

			Price	Target	Yield	ETR	2021E		
	Ticker	Rating	(12/16/20)	Price	(%)	(%)	P/E	P/BV	ROE
Most favored									
PM	**PM.N**	**Buy**	**$85.6**	**$100**	**5.5%**	**22%**	**14.8x**	**-12x**	**na**
We expect accelerated growth of reduced risk products, and buy backs									
Altria	**MO.N**	**Buy**	**$43.1**	**$46**	**7.9%**	**15%**	**9.4x**	**10.6x**	**120%**
We think the stock is cheap. It may sell the stake in ABI, and use the proceeds to buy back.									

Source: Citi Research

Energy & Utilities

Exploration & Production

Remain Positive as Rally Has Legs

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Companies mentioned: (PXD.N; US$114.38; 1; 17 Dec 20; 16:00); (PDCE.O; US$19.62; 1; 17 Dec 20; 16:00); (XEC.N; US$39.88; 1; 17 Dec 20; 16:00); (EOG.N; US$52.15; 1; 17 Dec 20; 16:00); (OVV.N; US$15.06; 2H; 17 Dec 20; 16:00); (CLR.N; US$17.28; 2; 17 Dec 20; 16:00); (MGY.N; US$7.63; 2; 17 Dec 20; 16:00); (MRO.N; US$6.91; 2; 17 Dec 20; 16:00); (COP.N; US$41.97; 1; 17 Dec 20; 16:00); (CVX.N; US$88.41; 2; 17 Dec 20; 16:00); (XOM.N; US$43.48; 2; 17 Dec 20; 16:00)

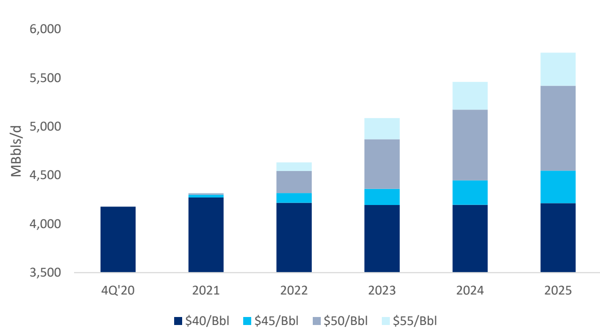
While trades around leverage to crude prices) are well digested by the market, we believe there will be performance differential across the E&Ps in 2021 based upon who can best deliver on the new E&P model. We see several key elements to this next phase including: a) who delevers most quickly and thereby resumes growth and cash return enhancement ahead of others b) where could FCF generation surprise, via further cost-out programs, service cost trends, or unexpected changes in efficiency/well productivity, and c) who could be beneficiaries of yield enhancement via M&A and greater scale.

- **Top Picks for 2021: PXD, PDCE, XEC, and EOG** — PXD's 2022/23 FCF yield appears underappreciated based upon deal synergies, modest growth and strong capital efficiency. PDCE screens among the most attractive FCF yields, with near-term debt targets and shareholder returns likely achievable in 1H21. XEC also has attractive FCF potential, and is one of the higher quality remaining SMID E&Ps in the Permian. For EOG, we believe new lease rounds on federal land are more at risk than drilling permits, which if accurate should benefit EOG while 2021 yield potential appears solid.

- **Macro Key Themes** — Key macro themes for Energy investors in 2021 include 1) the magnitude of recovery in oil & gas prices with Citi's Commodities team remaining bullish ($51 WTI and $3.3 HH forecast in 2021) while 2) clarity should improve around US key policies, including Federal land and tact toward Iran nuclear deal/sanctions. Investors should monitor incremental data points regarding 3) whether renewables enthusiasm is justified and 4) OPEC+ policy and cohesion post demand recovery.

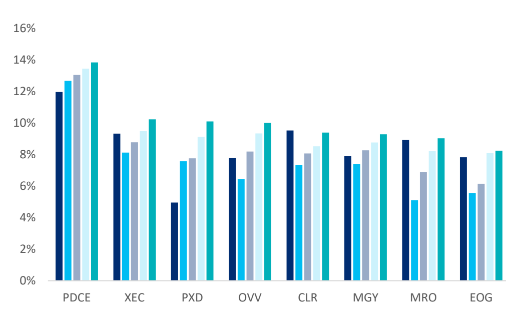
- **Micro Key Themes** — 2020 was clearly a year when macro themes dominated but we foresee rising importance to micro themes in 2021. This reflects the fact that the E&Ps are presenting new strategies with similar core pillars. Thus sustainably enhancing FCF/cash return prospects beyond current expectations appears likely to be the key theme in 2021. As such, key micro themes include: 1) who delevers most quickly and the sensitivity of this to crude (see our dispatch curve analysis) 2) where could FCF generation surprise (in either direction), via further cost-out programs, service cost trends, or unexpected changes in efficiency/well productivity, and 3) who could be beneficiaries of yield enhancement via M&A and greater scale.

Figure 28. Gross Domestic Crude Oil Production by Year and WTI Oil Price Assumption – E&P & Majors



Source: Citi Research

Figure 29. FCF to EV (Incl. of Interest Expense) - $50/Bbl WTI



Source: Citi Research

- **The E&P Value Proposition** — The E&Ps are currently yielding 6.7% at $45 and 8.4% at $50 WTI based on levered 2021 FCF (including interest) to EV, with the former in-line with what investors deem as fair per our recent survey (link). This suggests that the E&Ps are discounting ~$50 WTI. That said, we remain positive given views from our strategists that a) crude and gas have positive risk/reward, b) the value trade has further to run c) the dollar should continue to weaken and d) a belief that further yield enhancement is possible (i.e. more cost out and M&A). Moreover, we retain our preference for E&Ps over OFS given not only greater yield prospects but also a yield delta that expands more with higher crude prices.

- **How Does Shale React to Higher Prices?** — How rising commodity prices impact future US shale output has been a key question as the historical cash in/cash out analysis no longer applies in the era of capital discipline. As such, we undertook an analysis wherein we flexed our E&P models and sensitized the models with respect to each company's stated strategy. In aggregate, absent a large spike in prices above normalized levels, we expect 2021 domestic crude oil production amongst our E&Ps to be relatively flat versus the 2020 exit rate. Production growth including the majors (COP, CVX, XOM) is also expected to be relatively flat adjusting for recent acquisitions. Going forward, maintenance appears likely in the low $40s for the public E&Ps. However, a sustained $50+/Bbl price environment could generate low single digit oil growth by 2022 as leverage goals are achieved by a larger swath of companies, although growth should settle around ~5% per annum with EOG the outlier in setting medium term growth at 8-10% in a $50/Bbl world. Conversely, the Majors are expected to cautiously return to shale growth in 2021/2022 with a sustained $50/Bbl price as dividend coverage becomes robust. Domestic oil production growth for both XOM and CVX is forecast to accelerate to potentially 20%+ for both 2022/2023 before retreating to low double digit growth in the 2024/2025 period as production bases build. Thus, based on our company forecasts, overall potential 5 year oil production CAGRs for the E&Ps plus U.S. Majors are forecast at 1.7% at $45, 5.3% at $50 and 6.6% at $55.

E&P: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Pioneer Natural Resources	**PXD**	**Buy**	**$116.89**	**$130**	**1.9%**	**13.1%**	**31x**	**1.6x**	**4.7%**
Third highest FCF yield in 2022 with in group while bearing a low risk profile. Could be upside to deal synergies with PE									
PDC Energy	**PDCE**	**Buy**	**$19.37**	**$21**	**0%**	**8.4%**	**6.9x**	**0.6x**	**9.9%**
Attractive FCF potential and valuation versus peers, near-term debt target should be achieved during 1H21 and begin pivoting towards shareholder return									
Cimarex	**XEC**	**Buy**	**$40.22**	**$38**	**2.2%**	**-3.3%**	**9.8x**	**2.1x**	**23.5%**
High asset quality, strong balance sheet and FCF potential position well for an industry moving towards more disciplined reinvestment and shareholder return									
EOG	**EOG**	**Buy**	**$52.70**	**$69**	**2.8%**	**33.8%**	**18x**	**1.4x**	**8.1%**
Stock derating appears complete with Federal land risk appearing fully discounted. 2021 capex risk appears digeted while still delivering strong capital efficiency									

Source: Citi Research

Integrated Oil & Refining

A Response is Required

Balance Sheets, Self-Help, and Long-Term Business Model Resiliency Will Determine Success for the Equities

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- **Some Progress, New Problems** — The brutal downward spiral in oil equities – a feature since 2014 – has reached new depths in 2020. The problems remain broader than COVID's impacts on oil demand. Industry returns are anemic – in desperate need of much higher oil prices, but without an obvious pathway to get there. Citi forecasts a modest recovery to mid-50s oil in 2021. Simultaneously, changing perceptions on the Energy Transition's pace are testing the industry's CoE. While technology and policy are both at play in this shift, near-zero interest rates are the larger factor (i.e. future money holds the same value as today's).

- **Success in 2021** — All-in, this remains a challenging time for the industry. 2021 should bring some modest relief on the macro (oil demand), but the key thematics (poor returns, rising CoE) are unlikely to go away. We favour organic self-help stories with good balance sheets:

  - **ConocoPhillips**: We think history will look kindly on the timing of the acquisition of CXO by **COP**, with an economically resilient transaction offering several sources of value uplift in 2021 (increased self-help, ability to drive higher shareholder returns).

  - **Phillips 66**: Within the Downstream, **PSX**'s balance sheet strength and positive earnings contributions from non-refining segments continue to stand out. The business model holds some of the full IOCs' better defensive facets, but without Upstream risk. **PSX** looks best-positioned to resume growing returns to shareholders from organic cash flows within 2021.

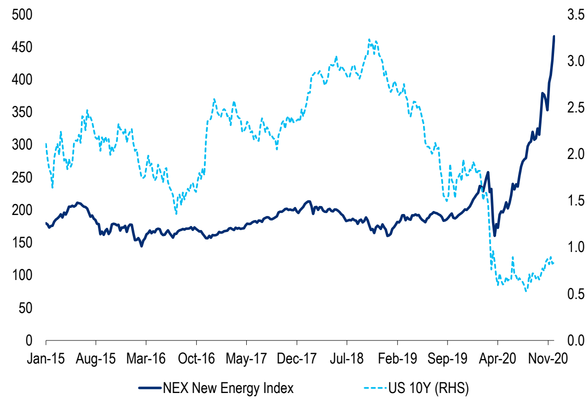
- **In Need of Greater Help —** In a mid-50s oil world we think the financial framework of ExxonMobil still looks problematic (similar to European peers BP and RDS), keeping in question the sustainability of XOM's dividend in 2021. More broadly, faced with market perceptions for a quicker pace on Energy Transition, **XOM** continues to dig-in its heels and argue for higher oil price – an increasingly anachronistic rebuttal to the challenges faced by the industry on business models resiliency. In the Downstream, problems of balance-sheet, scale, execution, and pure traditional refining earnings concentration will keep smaller refiners like **PBF** under pressure.

- **Bullish Canadian Heavy Oil —** The pandemic paused what was evolving into a successful ramp of WCS into the US refining system, taking share from LatAm barrels. With Brent set to move higher and egress not an issue until at least 2022 in our view, 2021 sets up for a workable Canadian oil price that should support ample CF generation from lowest cost in-situ assets (in our coverage, **CVE**).

Figure 30. Global IOCs Relative to MSCI World; 3Y Oil in Blue

Source: Citi Research, Bloomberg

Figure 31. Renewables Acceleration Driven by Cheap Money



Source: Citi Research, Bloomberg

Integrated Oil & Refining: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
ConocoPhillips	**COP**	**Buy**	**$41.97**	**$50.00**	**4.1%**	**23.2%**	**20.1x**	**1.4x**	**8.1%**
Strongest balance-sheet, and compelling self-help through CXO acquisition and share repurchases									
Phillips 66	**PSX**	**Buy**	**$67.17**	**$81.00**	**5.4%**	**26.2%**	**20.1x**	**1.6x**	**7.8%**
Strong balance-sheet and earnings diversification point to an earlier resumption in increasing returns to shareholders									
Top Sells									
PBF Energy	**PBF**	**Sell/High Risk**	**$6.92**	**$4.00**	**0.0%**	**-42.2%**	**-1.4x**	**0.7x**	**-41.1%**
High leverage and problems of scale and execution should continue to weigh on equity									

Source: Citi Research

Midstream & Energy Infrastructure

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Attractive Total Return

We believe several tailwinds could keep the recent Midstream and broader Energy rally going into 2021; among these, a continuation of the 'value rotation;' a relatively constructive commodity price outlook, and a sector that is offering an attractive total return (income + growth) proposition. Strategic Initiatives such as large-scale M&A (i.e. the 'Super MLP') may lead to consolidation in a fragmented midstream sector, and cash flow generation and capital allocation will remain key pillars of the Midstream investment thesis.

- **Macro** — We continue to believe the macro set-up for energy / midstream into 2021 remains favorable. While broader fund flow headwinds around an energy transition away from traditional hydrocarbons (which is not going unnoticed by Midstream management teams, by the way) certainly continue to exist, near-term dynamics around 1) commodity prices; 2) Citi's expectations of a potentially declining USD; and 3) perhaps most important - the ongoing value rotation, remain favorable. On oil prices, it is important to note that the forward curve – though now firmly in backwardation, has moved up by almost ~$8/bbl (front month) versus just one month ago.

- **M&A** — We have long been proponents of increased strategic initiatives in Midstream, which encompasses 1) non-core asset sales; 2) privatizations (one of our key thematic pillars); and 3) M&A activity (link). We believe there are simply too many 'cooks in the kitchen' each trying to defend market share at the detriment of shareholder returns. As top-line growth in our sector slows on the heels of more modest upstream development, we believe Midstream companies could realize dramatic synergies by combining forces. In fact, we believe some of the large-scale M&A activity we have witnessed on the Upstream side could well push its way through the hydrocarbon value chain and cement 2021 as a banner M&A year. In our opinion, companies with a strong equity currency are the more likely potential acquirers, though we must ask ourselves whether this equity price performance is a function of prudent capital management, and whether this in itself carries a certain amount of reflexivity. A dilutive transaction will likely be punished. In addition, constructive, friendly M&A will be the path to unlocking shareholder value. Hostile transactions haven't worked well in Midstream (thinking back to 2015…). Those hoping for large deal premiums may be disappointed and all-equity deals will be likely where both buyer & seller can participate in the potential upside. We also believe Midstream privatizations continue to make sense given favorable cash on cash returns even under conservative commodity price assumptions. That said, pushback on our thesis primarily revolves around LPs actually pushing back on additional (traditional) hydrocarbon exposure. In addition, a viable exit strategy via an IPO continues to remain challenged in the current capital markets environment.

- **Capital Allocation** — Midstream companies are (generally speaking) getting better at capital allocation (again, off a low base). A year ago, we estimated ~30% of companies would cover 2021 funding needs organically. Today, we estimate over 80% will do so in 2021. Dividend cuts help(ed), but we believe headway has been made in terms of reducing capex and operating costs as well. Post dividend cuts, high single-digit percentage yields continue to outshine other income-oriented investments. We currently model one additional cut in 2021 (OKE) but have previously noted PSXP & SHLX could eye lower payouts (link).

- **EBITDA** — Revisions to EBITDA estimates have also had quite a profound impact on share price performance. We note that since our last cash flow (link) report on June 24th, a majority of the share price moves can be explained by revisions to EBITDA. For example, a deeper look reveals that over the past six months or so, share price performance vs. 2021 EBITDA revisions drive an r-squared value of ~0.86.Intuitively this makes sense in an uncertain environment with lower growth expectation where it is becoming increasingly difficult to capitalize/ discount further-out cash flow growth. While a majority of the share price appreciation has accrued over the last 30 days on the heels of a much broader market 'value rotation,' we believe our regression shows the market has been rewarding those companies where cash flow expectations have improved the most (or become less draconian).

- **Estimates** — Our analysis shows avg. sector leverage will decline to ~4x by '22 from ~4.5x today. The book-ends are wide. Leverage is generally still too high. Opportunistic share repurchases can selectively add value, though our models continue to favor debt reduction. We are, on average, in-line with '21 consensus EBITDA est. and within ~2% of consensus capex (21/22). Over the last six month, 2021 EBITDA revisions have been primary drivers of share price performance. Investors clearly don't believe in long-dated sector growth.

- **ESG** —Even if many Midstream constituents may not be relative 'E' winners today, ESG strategies are shifting from an exclusionary approach (essentially ESG risk mitigation) to a more active model, which could point to a shift in terms of what it would mean for investor demand. Energy arguably screens best in the ESG investable universe as the perspective of 'impact investing' rises in prominence. We think investors willing to hew to a more stewardship / engagement based model should benefit from a more constructive role guiding corporate behavior and an advantaged position as fiduciaries. Investors increasingly look to 'build in' specific mechanisms to incent 'ESG-friendly' corporate behaviors and objectives. We would not be at all surprised to see companies across the oil & gas value chain look for opportunities to lower cost of credit with 'ESG' issuance i.e. containing stipulations holding management teams accountable to various ESG goals with minimal absolute risk to cost of credit.

Midstream & Energy Infrastructure: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E EV/EBITDA	2021E Leverage
Top Buys									
Enbridge Inc.	ENB	Buy	$42.41	$50.00	7.6%	25.5%	13.8x	11.6x	5.2x
ENB's attractive growth profile should make it stand out in an environment where 'no growth' is par for the course.									
Enterprise Products Partners LP	EPD	Buy	$21.01	$21.00	8.6%	8.5%	10.1x	9.2x	3.5x
EPD offers a conservative combination of growth and income, with one of the better balance sheets in the sector									
Energy Transfer LP	ET	Buy	$6.87	$9.00	8.9%	39.9%	5.2x	7.6x	4.8x
ET offers the most upside on a 12-month total return basis, and offers plenty of intrinsic value. Unlocking this value could take some time, however.									
TC Energy	TRP	Buy	$56.41	$72.00	5.7%	33.4%	13.4x	12.9x	6.3x
TRP has a current backlog of ~C$37bn of secured projects that should continue to drive earnings growth through 2023E & beyond									
The Williams Companies Inc.	WMB	Buy	$21.75	$26.00	7.3%	26.8%	14.8x	9.0x	3.9x
WMB should continue to exhibit EBITDA growth and positive free cash flow generation. We continue to like the contracted business model.									

Source: Citi Research

Utilities and Alt. Energy

Industry Transitioning in Post COVID-19 World

Shift to Value, Evolving ESG Metrics, Regulation, and M&A Likely to Determine Winners and Losers in 2021.

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- **Value Over Growth:** We believe that there will be a shift away from the higher P/E multiple utilities that have long dated growth stories toward the stocks that trade at lower multiples but have visible overhangs or risks. In the value camp, we are positive on California utilities. In our view, the California utilities are well positioned to outperform as PG&E is expected to get through its non-dilutive equity overhang (wildfire victims trust stock sale), and the California utility group is likely to further derisk future wildfire risks (AB1054, PSPS, and executive action) which is most meaningful for **EIX** and **PCG**. Similarly, we are becoming more positive on gas utilities (LDCs) on the valuation argument.

- **Evolving ESG Metrics – Generation Mix to Leverage to Energy Transition:** In oudr recent survey work with utility investors, ESG typically meant Environmental and few people cared about governance and social unless there was a recent negative event such as Ohio bribery accusation. In our view, the stock winners of the 2020 ESG trade, that have attracted in some cases 188 ESG funds, have benefited from their exposure to wind (offshore and onshore) and solar growth within their businesses in 2020. For 2021, the outlook for offshore wind permitting is likely to improve as Biden Administration staffs BOEM better and offshore oil & gas election related pull forward permitting is finished. While the outlook is improving for permitting, new oil major competition is entering the market and likely to drive down project level returns for companies such as **Eversource (ES)** (Global Offshore Wind - Change is in the Air). In our view, this business trend toward solar and wind will continue in 2021 but the stocks that are best positioned to work are the names levered to the buildout of hydrogen infrastructure and positioned well on carbon policies. The infrastructure buildout will likely consist of new power generation, and some new electric transmission and pipeline infrastructure. While the geographic location is unknown, the regions of the country that are best positioned to benefit are the Northeast, California and Texas.

- **Expect Active M&A Market to Continue in 2021:** In determining the winners and losers, the utility industry's ability to execute on value add M&A transactions is going to be a key differentiator. We expect an increased interest in using M&A to become ESG friendly which translates to midstream and gas utility sales, coal exits, solar and wind related acquisitions (gen, T&D), and investments to improve positioning to a hydrogen based economy. In addition, the industry continues to look at portfolio optimization decisions (asset sales) in place of equity raises where the asset is worth more to another party. In our view, the winners will be the companies that reposition their portfolio to attract capital most efficiently such as **DTE** (link) and **Sempra** (link) and have manageable execution risk while we are much more concerned about M&A strategies at PPL (tight timeline ahead of RIIO-2 in the UK to sell asset), CenterPoint (midstream and LDC sales), and NiSource (undetermined gas sale) given there is meaningful execution risk. .

- **COVID-19 & Regulatory Wildcards:** As we emerge from COVID-19 restrictions and load patterns, it will be interesting to see if load pattern return to pre-COVID patterns or we see a long term shift in residential, C&I, and industrial volumes. In addition, 2021 regulatory calendar is likely to be particularly busy with unusual test years for rate cases, population trends, and low ROEs. Lastly, state and national policies on renewables, carbon, electric vehicles and transportation fuels could impact the outlook for US utilities and the broader energy landscape. These has a potential to change utility and their regulator priorities and the outlooks for the utility stocks. States such as Michigan (meeting with regulators) are looking to have more pilot programs to adapt to energy transition. In general, west coast and Midwest utilities are better positioned on these trends.

- **2021 Equity Needs:** As the equity calendar drove stock performance in 2020, we keep an eye out for stock sales in 2021. Majority of companies in our coverage universe have announced plans to issue equity in in 2021. EIX has indicated $1B of equity needed in 2021 to fund damages for 2017/18 wildfires and mudslides. Con Ed has outlined $1.1B of equity needed over 2021/22. AEP has announced they anticipate to issue $1B of equity for north central wind acquisition by end of 2021 (Kentucky LDC sale may fill hole). PG&E still has a wildfire victim trust that is looking to exit in 2021 and plans to issue between $750-$1,250m of equity depending on the outcome of securitization proceedings.

Utility and Alt Energy Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Edison International	**EIX**	**Buy**	**$62.93**	**$67.00**	**4.1%**	**9.2%**	**13.4x**	**1.6x**	**10.5%**
Strong growth opportunity set due to renewable development in CA									
PG&E	**PCG**	**Buy**	**$12.11**	**$14.00**	**0.0%**	**14.8%**	**11.9**	**3.5**	**10.3%**
Strong growth opportunity set due to renewable development and solid leadership team									
DTE	**DTE**	**Buy**	**$123.52**	**$139.00**	**3.3%**	**14.4%**	**17.2**	**1.9**	**11.2%**
Manageable execution risk									

Source: Citi Research

Financials

Asset Managers, Retail Broker Dealers & Exchanges

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Companies mentioned: (KKR.N; US$39.70; 1; 21 Dec 20; 16:00); (BLK.N; US$698.83; 1; 21 Dec 20; 16:00); (FHI.N; US$28.90; 2; 21 Dec 20; 16:00); (AB.N; US$33.52; 1; 21 Dec 20; 16:00); (SCU.N; US$15.00; 1; 21 Dec 20; 16:00); (SCHW.N; US$51.75; 1; 21 Dec 20; 16:00); (CME.O; US$181.77; 1; 21 Dec 20; 16:00); (LPLA.O; US$103.16; 1; 21 Dec 20; 16:00); (APAM.N; US$49.91; 1; 21 Dec 20; 16:00); (CBOE.K; US$90.26; 1; 21 Dec 20; 00:00)

Retail Brokers Top Sector

Sector preference order: Retail Brokers followed by Alts, Exchanges/Market Structure and then Traditionals against cross currents of Growth to Value, Active/Passive, financial alchemy M&A, regulatory angst and inflation & integration.

- **Top Picks** — We breakdown our top picks for 2021 between large caps and SMID. Large caps: KKR (U.S. Focus List) in the Alts, BLK in Traditionals, SCHW in Retail Brokers and CME within Exchanges/Market Structure. SMID caps: LPLA (U.S. Focus List) in Retail Brokers, SCU in Alts, APAM in Traditionals and CBOE in Exchanges/Market Structure.

- **Retail Brokers** — Top Sub-Sector for '21 based on: **1)** NII drag at an inflection in '21; **2)** active year for FA movement with positive NNA impacts (Figure 1); **3)** favorable AUA mix shift on Advisory growth; **4)** stable-to-rising Client Cash; **5)** potential tactical M&A and further Independent channel consolidation; **6)** among deepest and broadest upside to current PTs; **7)** yield curve steepening generally favorable for multiple expansion; and, **8)** seemingly best combination of fundamental and valuation appeal across our coverage.

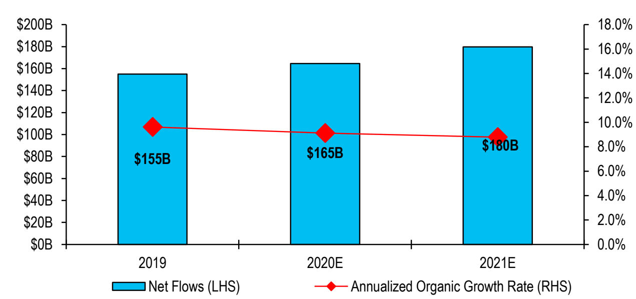
- **Alts** — Remain bullish given our view of: **1)** robust net capital raising (Figure 2); **2)** strong realizations outlook, bolstering DE and FCFs, given market levels and portfolio seasoning; **3)** steady deployment likely in '21; **4)** constructive platform economics reflecting further scaling; **5)** financial alchemy across portfolio companies, strategic level and Insurance; though, **6)** following strong re-valuation, we are incrementally price sensitive.

Figure 1. Expect '21 To Be An Active Year For FA Movement Illustrated By LPLA Organic Growth Estimates

NNA Annualized Organic Growth (%)	2019	2020E	2021E
Advisory	11.8%	12.8%	13.3%
Brokerage	0.1%	1.4%	9.4%
Overall	5.4%	6.8%	11.4%

Source: Company Reports and Citi Research

Figure 2. Within The Alts, We View '21 To Be Another Robust Year For Net Capital Raising



Source: Company Reports and Citi Research

- **Exchanges** — Positive-to-mixed with key themes: **1)** benchmark/proprietary Derivatives volumes broadly to continue to increase on pro-cyclicality with recovery; **2)** further integration of recent deals vs. additional sizeable acquisitions; **3)** continued healthy new product innovation/acceleration; **4)** slightly improved regulatory outlook with Biden transition/SEC turnover; **5)** capital management focused on dividend growth and debt repayment; and, **6)** valuations mixed-to-increasingly attractive on recovery outlooks and M&A integration.

- **Traditionals** — Our Neutral outlook reflects: **1)** Mixed fundamentals around relative performance, flows and fee rates; **2)** strong Y/Y FCF growth, bolstering EPS with ongoing repurchase, modest dividend hikes and tactical deals; **3)** more M&A, though fewer large scale, cost-led deals; **4)** underweight the Group is likely difficult given ongoing "event" risks; and, **5)** Growth to Value shift unlikely to impact Passive leadership.

- **Financial Alchemy** — We see potential for continued M&A activity across Alts, Traditionals and Retail Brokers with many management teams noting discussion activity remains high. Believe such deals could potentially take the form of: **1)** platform extension deals; **2)** more Insurance outsourcing between Alts and Annuity players; **3)** Distribution/Manufacturing tie-ups; and/or, **4)** franchise splits, where the parts are worth more than the whole. Against that Sector view, we see FHI, AB and SCU as potential sellers within our coverage.

- **Regulatory Reprise** — We believe the SEC's Regulation Best Interest is likely to remain the key Fiduciary Standard. However, we see risk of short-term choppiness around risk the DoL may look to bring back its previously vacated Fiduciary Standard. We would be buyers of any related weakness as we see several offsets: **1)** Industry has made several changes since the previous DoL iteration; **2)** continued shift to Advisory models; **3)** stepped up NNA and consolidation from rising implementation costs; and, **4)** we see deeper issues for U.S. Retail centric L/O Asset Managers. Other regulatory issues we are watchful of for 2021 include: FSOC oversight of Private Equity and Money Markets.

- **Search For Alpha And Retail Wildcards** — We continue to expect Alts to prevail as Alpha generators over Traditionals. Other sub-themes we are watchful of under the heading of "Retail Wildcards" include: **1)** ESG and flow/accretion impacts; **2)** Direct Indexing and threat to Traditionals; **3)** mixed view of non-transparent ETFs; and, **4)** Retail engagement following '20 strength.

- **Who is left behind in the recovery?** Neutral-rated Traditionals face the greatest downside risk in our view, following late '20 strong run, in part on broader Sector M&A. Should M&A premium fade and/or markets deteriorate, we believe these more fundamentally checkered names could face the biggest declines.

Asset Managers, Retail Brokers: Top Buys

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
KKR & Co.	KKR	Buy	$40.42	$53	1.4%	32.5%	18.9x	1.5x	15.6%
Strong NNA, favorable GA dynamics, Non-U.S. platform appreciation and further re-rating									
LPLA	LPLA	Buy	$102.77	$157	1.0%	53.7%	15.7x	5.9x	33.5%
Strong NNA, favorable mix shifts and further re-rating									
SCU	SCU	Buy	$14.52	$26.50	3.0%	85.5%	5.2x	9.4x	99.8%
Franchise inflection, fundamental re-rating and rising scarcity value									
BLK	BLK	Buy	$706.01	$800	2.2%	15.5%	19.6x	3.1x	16.2%
Above average NNA, multi-dimensional share gains, rising margins and steady capital return									
CME Group	CME	Buy	$184.94	$197	3.6%	10.1%	26.7x	2.4x	9.1%
Volume strength on recovery, building NEX narrative, easier comps post 1Q and attractive valuation looking out to '22									
SCHW	SCHW	Buy	$51.78	$54	1.5%	5.8%	22.0x	N/A	X.X%
NII stabilization, strong NNA, building LT EPS potential and Consensus upside									

Source: Citi Research, FactSet

Banks & Cards – U.S.

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Companies mentioned: (GS.N; US$242.13; 1; 18 Dec 20; 16:00); (STT.N; US$70.66; 1; 18 Dec 20; 16:00); (WFC.N; US$29.01; 2H; 18 Dec 20; 16:00); (FITB.O; US$26.63; 2; 18 Dec 20; 16:00); (BK.N; US$40.79; 2; 18 Dec 20; 16:00); (CFG.N; US$34.21; 2; 18 Dec 20; 16:00); (RF.N; US$15.26; 2; 18 Dec 20; 16:00); (KEY.N; US$15.42; 2; 18 Dec 20; 16:00); (MS.N; US$64.18; 2; 18 Dec 20; 16:00); (TFC.N; US$45.90; 2; 18 Dec 20; 16:00); (CMA.N; US$52.63; 2; 18 Dec 20; 16:00); (BAC.N; US$28.67; 2; 18 Dec 20; 16:00); (MTB.N; US$123.73; 2; 18 Dec 20; 16:00); (USB.N; US$44.86; 2; 18 Dec 20; 16:00); (JPM.N; US$119.08; 2; 18 Dec 20; 16:00); (PNC.N; US$144.91; 2; 18 Dec 20; 16:00); (NTRS.O; US$91.90; 2; 18 Dec 20; 16:00)

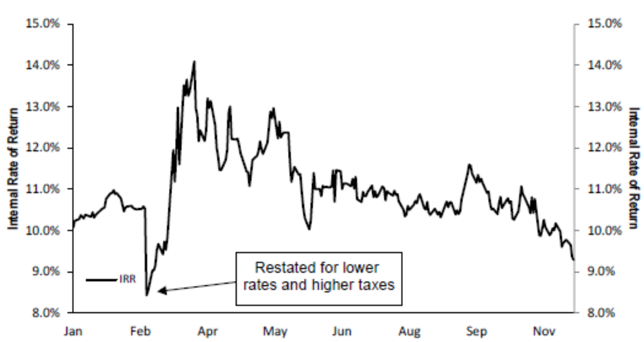
Stay Selective Amidst Low Rates and Credit Uncertainty

We remain selective as a "lower for longer" and credit cost uncertainty weighs on bank stock valuations; We see a positive skew, over time, as relief on any of these fronts would be a positive.

- **Banks have significantly underperformed the overall market…** — Despite optimism around the vaccine, banks have underperformed the broader market YTD in 2020. The BKX index is down 16% underperforming the S&P 500 Index (up 14%) as the market reflects positive vaccine news and the immense government support and stimulus amidst the stress of the global pandemic. While banks have rebounded off March lows, the significant underperformance reflects a combination of factors including the lower rate environment which is a source of meaningful pressure to bank' ROTCE (-200bps) as well as heightened credit risk which has resulted in bank valuation multiple contraction.

- **…although we see a positive skew** — We expect P/TBV multiples to be lower at this point in the cycle reflecting the lower return profiles of the banks. As such, we turn to our implied cost of equity model as a better gauge, which uses our near term and normalized return estimates and backs into the banks' implied cost of equity implied by the current stock price. The banks are trading at 9.3% cost of equity which is lower than our 10% benchmark we use to gauge the relative attractiveness of the group. That said, we see potential for the cost of equity at 9.3% for the bank group to improve relative to the market (with the market cost of equity at 7.6%). A near term positive catalyst could be the resumption of share buybacks, although this looks to be pushed out until sometime 2H21. In addition, since we are pricing in prolonged low rates, there is potential for future ROTCE revisions to skew to the upside (only caveat being that capital requirements are not increased) with potential catalyst of a steeper curve.

Figure 32. Currently the stocks are trading at a 9.3% cost of equity…



Source: Citi Research. Factset as of December 16, 2020.

Figure 33. …with our top picks of GS, STT and COF

		Market Implied	
Banks	Price	IRR	Beta
GS	238.84	12.4%	1.73
STT	75.84	10.4%	1.43
WFC	28.94	10.1%	1.38
FITB	27.26	9.6%	1.31
BK	40.78	9.5%	1.29
CFG	35.59	9.5%	1.29
RF	15.95	9.4%	1.28
KEY	15.96	9.4%	1.27
MS	63.91	9.3%	1.26
TFC	47.71	9.2%	1.25
CMA	52.63	9.1%	1.23
BAC	28.93	9.0%	1.22
MTB	126.15	8.9%	1.21
USB	44.98	8.8%	1.19
JPM	122.00	8.7%	1.18
PNC	141.43	8.7%	1.17
NTRS	94.63	8.1%	1.08
Median		**9.3%**	**1.26**

Source: Citi Research

- **…although risks remain to the group, with uncertainty high** — Negatives are historically the group has not done well over next six months when cost of equity is lower than 10%, but we also have not seen this overall market cost of equity this low in the past (we track it back to 1985). We also tend to assess the key risks for banks across three pillars: interest rate risk, credit risk and capital; with uncertainty across all three of these variables. As always, the primary risk for the banks is the macro environment and a severe slowdown in economic growth could exacerbate any rise in credit costs.

- **Interest rate outlook remains low which will pressure NII** — Should economic growth not materialize, we could find ourselves in a "lower for longer" rate scenario which would continue to pressure bank NII, weigh on earnings and returns and dampen valuations. We expect downward fixed rate asset repricing to drag on NII for the next several years. In addition, low rates proves to be a difficult one for banks to manage, with no direct expense offset to the lower revenue stream. Those less rate sensitive (brokers, cards) and banks (e.g. money centers) with more meaningful fee streams are likely better positioned; with regional banks to feel the most pressure.

- **Credit costs are a wildcard** —While the optimism around the vaccine has tempered expectations for overall loss content, there is still a great degree of uncertainty. The full ramification of economic shutdowns have been masked by government support, stimulus and forbearance such that ultimate loss content is difficult to quantify. The banks have set aside substantial loan loss reserves (equating to ~50% of the loss content in the Fed's stress test) and the prevailing thought is that reserves are sufficient and should bleed down over time, likely in 2021. That said, if economic stress causes credit costs to rise to unexpected levels, that would be a negative to near-term earnings, ROTCE and stock valuations, which would likely reflect a higher cost of equity.

- **Capital return could be pushed out amidst the economic uncertainty** — While banks are well above capital ratio minimums, buybacks are currently halted and dividends capped. There was hope that the halt may be lifted as early as 1Q21, although that timing is beginning to seem more unlikely as the Fed may, instead, choose to retain flexibility and keep capital return on hold until there is greater macro visibility. A green light from the Fed would be a positive for valuations, both for EPS and cost of equity as it would be interpreted as a positive signal regarding the economic and credit loss outlook.

- **We remain selective** — Our recommendations have remained selective and we have leaned towards those banks with less credit sensitivity including the trust banks (STT) and brokers (GS); as well as card names (COF) that have ROTCE more insulated from the low rate environment.

US Banks & Cards: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Goldman Sachs	**GS**	**Buy**	**$238.84**	**$325**	**2.1%**	**38%**	**9.1x**	**0.9x**	**10.9%**
Best value with lower credit risk, path to improved returns(13-15% over the cycle which would be among the best) through positive operating leverage, biz mix, capital return									
State Street	**STT**	**Buy**	**$75.84**	**$86**	**2.7%**	**16%**	**11.6x**	**1.1x**	**9.9%**
Best defensive play given minimal credit risk; see a path to improving returns, continued operating levarge, traction with CRD and meaningful beneficiary of share buyback									
Capital One Financial	**COF**	**Buy**	**$92.64**	**$90**	**0.8%**	**-2%**	**10.4x**	**0.7x**	**8.7%**
Attractive valuation with substantial loan loss reserves already built; see a path to improved returns with return in loan growth, buyback and improved operating efficiency									

Source: Citi Research

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Companies mentioned:(CB.N; US$153.41; 1; 17 Dec 20; 16:00); (RE.N; US$235.16; 1; 17 Dec 20; 16:00); (ALL.N; US$106.56; 1; 17 Dec 20; 16:00); (AON.N; US$211.30; 1; 17 Dec 20; 16:00); (WLTW.O; US$212.23; 1; 17 Dec 20; 16:00); (PRU.N; US$77.66; 2; 17 Dec 20; 16:00); (AMP.N; US$190.05; 1; 17 Dec 20; 16:00); (EQH.N; US$25.87; 1; 17 Dec 20; 16:00); (AFL.N; US$44.81; 3; 17 Dec 20; 16:00); (VOYA.N; US$57.26; 1; 17 Dec 20; 16:00)

Time to Mix Things Up

Our recent rating changes reflect our views that pricing power in commercial lines and reinsurance is sustainable and that risks embedded in life insurers' business models have declined.

- **Sector positioning for 2021** — We favor P&C insurers over life insurers. In P&C, we have moved away from our prior focus on sub-sectors in favor of more company-specific preferences. We have shifted our views to gain leverage to the commercial lines / reinsurance pricing cycles (through our Buys on CB and RE), and take advantage of differentiated opportunities in personal lines (ALL on below-peer valuation / optionality) and brokers (AON / WLTW on incremental upside from the pending merger). In life, we have shifted from our prior cautious view to a more neutral stance, based on recent improvements in the macro environment, particularly long-term interest rates (noting Citi's house view that the 10-year UST yield will end 2020 at 1.25%), as shown by our upgrade of PRU to Neutral. We are also positive on certain life insurance businesses with strong capital return potential, namely AMP, EQH, and VOYA.

- **Key themes in 2021** — In addition to macro developments and P&C pricing cycle dynamics, we expect key themes will include: 1) the impact of potential tax reform / regulatory changes, 2) capital deployment, and 3) in-force restructuring.

- **Commercial Lines Pricing** — We choose to play the hardening commercial lines pricing environment through our Buy on CB. The last prolonged hard market in commercial P&C was 2000-2003 (though pricing also rose more modestly in 2H:11-1H:14). Over this earlier period, commercial lines pricing increased by ~10- 20% annually, driving material positive EPS revisions. While the 2H:11-1H:14 price increases were more modest, in both instances, commercial lines stocks rose ~30-55%. In contrast, since the current price increases began, CB's stock has only risen ~5% or so (since YE 2017) – see Figure 34.

- **Life Insurance** — We recently moved to a neutral stance heading into 2021, based on recent improvements in the macro environment, particularly long-term interest rates (noting Citi's house view that the 10-year UST yield will end 2020 at 1.25%). In addition, the impact of credit deterioration / ratings migration has not yet been as significant as we previously expected, which resulted in some upside to our price targets. We expressed these views in our recent upgrade of PRU to Neutral (on improvements in macro and upside to our revised price target). Figure 35 shows the explanatory power the level of the 10-year UST has had on the life sector's relative P/E multiple. Even post the recent swings in stock prices and the 10-year UST yield, the sector valuation is roughly in-line with where it should be based on the historical relationship between these two variables. In other words, one can argue that further upside in the group could likely require further increases in interest rates, all else equal.

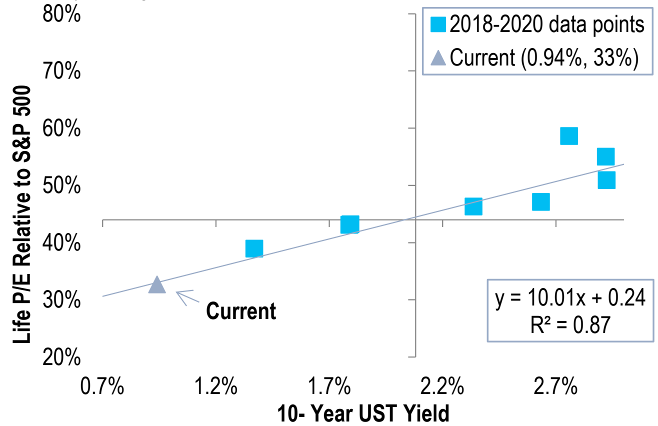
Figure 34. U.S. Commercial Lines – Summary Performance During Prior Hard Pricing Markets

	2000 - 2003	2H:11 - 1H:14	2018 - Present
Average Rate Increase	~15%	2-4%	5-6% (now 10%+)
Change in:			
Stock Price (End-to-End)	+ ~30%	+ ~55%	0-5%
Stock Price (To Peak)	+45-50%	+ ~55%	+10-15%
NTM Consensus EPS	+ ~100%	+45-50%	+10-15%
NTM P/E Multiple	(~30%)	+5-9%	(10-15%)
P/B (ex-AOCI) Multiple	+ ~20%	+ ~25%	(~15%)

Source: FactSet, CIAB, Company reports, Citi Research

Figure 35. U.S. Life – US 10-Year Yields vs. NTM Relative P/Es

Quarterly Average 1Q:18 to 3Q:20



Source: FactSet, Citi Research

- **Top picks** — Our top picks remain AON (in P&C) and AMP (in Life), and both stocks are on Citi's Focus List. For AON / WLTW, we expect that in 2021, investor focus will shift from concerns over regulatory approvals / divestitures to the deal's accretion and potential upside to revenue and expense synergy expectations once the transaction closes. For AMP, we expect a continued "build back" of its A&WM margin to 20%+ on improvements in advisor productivity and the ramp-up of the bank, as well as progress in AM net flows and strong capital return. Divestitures of insurance blocks are also a source of positive optionality.

- **Top Sell –** AFL is our top Sell-rated stock. We feel that AFL is at an inflection point, where AFL Japan is too large to show meaningful growth and AFL U.S. is too small to move the growth needle. We see limited earnings growth over the next few years with most of the company's EPS growth stemming from buybacks.

U.S. Insurance: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Co Name	**AON**	**Buy**	**$211.30**	**$255.00**	**0.9%**	**21.6%**	**19.9x**	**6.07x**	**31.3%**
We feel AON offers investors an attractive combination of defense in the current uncertain environment (given the company's resilient business model), followed by offense over the medium / long-term (as upside from the WLTW merger is considered / realized). Additionally, AON has leverage to rising insurance exposures (aided by commercial pricing momentum), an outlook for continued margin expansion and strong / consistent growth in EPS /FCF.									
Co Name	**AMP**	**Buy**	**$190.05**	**$222.00**	**2.2%**	**19.0%**	**10.3x**	**3.65x**	**38.2%**
We expect AMP's ongoing business mix shift toward asset accumulation segments should drive multiple expansion. In particular, we see continued A&WM margin upside over the next few years. We expect AMP will remain aggressive with capital return, which could accelerate with potential business dispositions. Lastly, we feel improved organic growth in Asset Management could be a positive catalyst for the stock in 2021 and beyond.									
Top Sells									
Co Name	**AFL**	**Sell**	**$44.81**	**$40.00**	**3.0%**	**-7.8%**	**9.3x**	**1.14x**	**12.9%**
We feel that AFL is at an inflection point, where AFL Japan is too large to show meaningful growth and AFL U.S. is too small to move the growth needle. We see limited earnings growth over the next few years with most of the company's EPS growth stemming from buybacks.									

Source: FactSet, Citi Research

SMID Financials

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Companies mentioned: (NAVI.O; US$9.42; 1; 17 Dec 20; 16:00); (NMIH.O; US$23.70; 1H; 17 Dec 20; 16:00); (RKT.N; US$22.40; 1; 17 Dec 20; 16:00)

Low Rates Supportive of Mortgage and Consumer Finance

With a base case for interest rates to remain low, we believe residential mortgage and consumer finance names will benefit. If the curve were to steepen then banks could surprise to the upside.

- **Prefer Consumer Finance to Banks** — Low rates and additional government stimulus likely should benefit consumer finance and mortgage names in our group. While credit risk remains, we think that reserves have been set at high enough levels that make releases more likely than builds for 2021. SMID Banks are challenged by the low rate environment and our outlook remains "lower for longer" leading us to be more neutral on the stocks.

- **Consumer Finance** — Lower interest rate should continue to be a boon for residential mortgage demand with elevated refinancing and purchase activity expected. The credit outlook improved for Consumer Finance companies as government stimulus and lender payment forbearance plans has limited delinquencies and losses thus far. While we still expect credit losses to rise before we reach more normalized environment in 2H21, we feel the risk to significant additional loan loss reserve builds decreased with more potential for reserve releases later in 2021. Additional potential stimulus near-term and/or after the Administration change should further protect credit quality, albeit somewhat limiting loan demand near-term. The bigger risk for 2021 appears to be rising interest rates, which would be more of a risk to mortgage names, but also make consumer lenders relative losers in favor of banks, in our view.

- **SMID Banks** — SMID banks face spread pressures as persistently low interest rates negatively impacts the reinvestment in investment portfolios and exposure to fixed rate assets that have yet to reset. The credit outlook has improved but modified loans to challenged sectors (hospitality, retail, restaurant, etc.) will likely remain stressed until vaccines are more roundly utilized begging the question of whether there will be additional mods or if losses will materialize. It feels to us like a fairly balanced risk/reward with us eyeing the group relatively neutral.

- **Yield Stocks** — Our high dividend yield pass-through non-bank financials include Business Development Companies (BDCs) and commercial mortgage REITs (CMREITs). Overall, the backdrop remains somewhat challenging on both leverage loans and commercial real estate lending.

  - BDC credit quality fared better through the pandemic thus far than we expected, partially aided by strong private equity sponsor support to portfolio lending companies. Loan modifications were given to many borrowers that came with support in the form of amended terms and documentation. The high level of portfolio company leverage entering this cycle has us concerned about potential higher severity of losses, but if that severity may be limited depending on how quickly the economy improves this year.

  - Commercial mortgage lending returned with some deal flow toward the end of 2020 that likely will continue into 2021. Quality loans are attracting capital actually suppressing loan spreads while areas like hospitality and retail are face more scrutiny with lenders not yet ready to jump in with fresh capital. We are generally avoiding those that have high exposures to hotel and retail CRE loans and favor those with lower mark-to-market credit risk on borrowing facilities (margin calls). That said, if the economy returns faster than expected the higher risk discounted CMREITs likely will outperform.

- **Valuation** — Consumer Finance stocks within our coverage trade at a discount to SMID banks despite higher expected return profiles. The consumer finance median 2021E P/E is 10.1x vs. 11.4x for our SMID banks and P/TB median multiple is 1.5x for consumer finance vs. 1.4x for our banks despite average 2020 ROTE of 22% for consumer finance vs. 11% for banks. Our yield stocks are being discounted due to potential credit risk valued at about 0.8x book value with median dividend yield of 9.3%.

- **Stock Picks** — Our top picks are:

  - **NAVI** – Navient remains on our US Focus List as we believe the portfolio is well positioned on credit and margin heading into recession. We continue to view credit risk as relatively low with seasoned legacy PEL, low-risk refi loans, and credit guaranteed (~97%) FFELP loans. We remain buyers of NAVI, which we still see strong upside using our sum-of-the-parts valuation.

  - **RKT** – Rocket Financial should continue to benefit from strong demand for residential mortgage refinance loans and elevated gain on sale margins (albeit decling in 2021). It also remains well positioned to benefit from a large cohort of millennial aged borrowers that will be first time homebuyers – partly pushed forward from pandemic-related need for space (working from home, etc.) that we expect to continue into 2021. RKT's leading brand, technology, and end-to-end digital platform should appeal to younger purchasers in our view.

  - **NMIH** – NMIH Holdings like RKT should benefit from first time home purchases in 2021. The lower persistency should abate in 2H21 leading to higher insurance in force. Claims reserves appear to be conservatively positioned and likely will benefit from continued rising home prices. Home prices are benefitting from a dearth of supply that does not appear to be likely to change course this year. It's also possible that government agencies could extend forbearances further until vaccines are more widely distributed bridging the gap to improved employment that likely also benefits potential paid claims.

SMID Financials: Top Buys

			Price	Target	Yield	ETR	2021E		
	Ticker	Rating	(12/17/20)	Price	(%)	(%)	P/E	P/BV	ROE
Top Buys									
Navient Corp	**NAVI**	**Buy**	**$9.42**	**$14.00**	**6.8%**	**55.4%**	**2.9x**	**0.8x**	**22.1%**
Portfolio well positioned on credit and margin heading into recession. Strong valuation upside using sum-of-the-parts valuation.									
Rocket Companies Inc.	**RKT**	**Buy**	**$22.40**	**$35.00**	**0.0%**	**56.3%**	**12.6x**	**7.0x**	**35.2%**
Strong demand for residential mortgage refi loans and millennial first time homebuyers; elevated gain on sale margin a plus.									
NMI Holdings	**NMIH**	**Buy/H**	**$23.70**	**$29.00**	**0.0%**	**22.4%**	**9.8x**	**1.5x**	**14.5%**
Benefit from first time purchases and low persistency to abate in 2H21 leading to higher insurance in force; Claims reserves positioned conservatively.									

Source: Citi Research

Health Care

Biotech -- Large Cap

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Companies mentioned: (VRTX.O; US$236.92; 1; 17 Dec 20; 16:00); (BIIB.O; US$250.24; 3; 17 Dec 20; 16:00); (GILD.O; US$59.07; 1; 17 Dec 20; 16:00); (AMGN.O; US$231.24; 1; 17 Dec 20; 16:00); (REGN.O; US$496.21; 2; 17 Dec 20; 16:00); (ALXN.O; US$157.93; 2; 17 Dec 20; 16:00); (BMRN.O; US$90.20; 2; 17 Dec 20; 16:00); (AZN.L; £75.42; 1; 17 Dec 20; 16:30)

Attractive Valuations but there's a reason…Time to be selective

Low growth justifies Biotech valuation discount and we think stock selection is important. We favor undervalued names that have 2021 catalysts – VRTX fits this bill and is our Top Pick. M&A could also return as companies try to solve near-term growth issues.

- **Valuations at all-time low and significantly discounted to broader market & historical ranges** — Large Cap Biotechs are currently trading at an average 2-year forward PE of ~13x, which trails pharma by 1-turn and is 4-turns below the start of 2019. Furthermore, Large Cap Biotech now lags the broad S&P500's 22x PE multiple by ~10-turns (vs LT historic average of ~4-turns).

- **However, growth outlook appears weak —** Consensus is projecting Large Cap Biotech to have a Rev and EPS CAGR of +5% for the 2020-23FY timeframe. This lags behind pharma's CAGR of +7% and makes FY2 PE of 13x bit rich. Even this 5% growth is questionable as consensus does not seem to be accounting for challenges very well. In particular, we think BIIB could have 2021 EPS at $20-$21/sh vs. consensus expectations of $25/sh. Similarly, consensus for GILD may have downside risk as well. Especially if Remdesivir sales go away in 2021.

- **Time to be selective – Our Large Cap Biotech Picks.** We favor undervalued Large Cap Biotechs with pipeline catalysts in 2021. VRTX remains our top-pick for its ex-pipeline valuation, AAT readout in 2Q21 and near-term growth potential. We think GILD could also become more attractive at some point in 2021 as Trodelvy could start to help provide growth in 2022/23. GILD needs to be looked at without Remdesivir though. AMGN is still interesting to us despite Omecamtiv's failure. Tezepelumab's success in asthma and progress from the KRAS program throughout 2021 could help solve AMGN's near-term pipeline issue. AMGN's growth potential in Asia is also underappreciated.

Figure 36. Large Cap Biotech – Citi Stock Rankings and Thoughts

Citi Ranking	Stock	Rating	Citi Target Price	Cons. 2020-23E Sales CAGR	Cons. 2020-23E EPS CAGR	Our Call
1	VRTX	Buy	$325	12%	11%	Top-pick. Beaten down name due to perceived lack of pipeline. We disagree and highlight multiple pipeline catalyst in 2021 including AAT data in 2Q21 and FSGS in 2021 could improve this perception.
2	GILD	Buy	$75	2%	3%	The company could start to look different starting 2021 as oncology biz could become the highlight. However, we see near term pressure on margins with oncology expansion. Story is looking good in medium to long-term though.
3	AMGN	Buy	$265	4%	6%	Near to mid term pressure on growth and general perception is that the company may need to do a medium size deal to overcome some near term pressures. Medium to long term outlook looks good with KRAS expansion and success with Tezepelumab. In addition, investment in early stage pipeline could start to get attention starting 2021-22.
4	REGN	Neutral	$635	10%	10%	Starting to look attractive after a significant correction in price. However, competitive pressures remain with Roche Faricimab data in near term. Lucentis biosimilar impact is a key unknown and could cap the upside. Dupi growth appears strong enough and expansion in COPD and other indications could be upside. Oncology strategy interesting and more data in 2021-22 timeframe could help investors assign more value.
5	BMRN	Neutral	$86	16%	NM	Beaten down name post Valrox CRL, which makes 1 year data in early 2021 from hemophilia trial the most important catalyst. Consistency and durability of those data would be key to watch. Uncertainty around first cycle approval of Vosoritide could cap the upside in the beginning of the year. We think long term story with gene therapy progress still looks good.
6	BIIB	Sell	$200	-5%	-9%	Most controversial name with Aducanumab PDUFA in March 7, 2021 key catalyst. We see low likelihood of approval due to negative panel. Before that we expect the guidance to be lower than consensus in January.
NA	ALXN	Neutral	$175	9%	10%	Acquired by AZN on Dec 12 2020

Source: Citi Research and FactSet.

- **Mature Large Cap Biotechs could try to solve near term growth issues with M&A ($5-$20B).** Elections and COVID slowed M&As in 2020 but we could see more in 2021. AMGN, BIIB and GILD need to try to solve their near-term growth problems. Low interest rates could also help drive M&A financing.

- **Oncology, I&I, rare disease and Neuro companies could be the hot targets for 2021.** In 2020, 9/11 deals (>$1B) were in the oncology, immune and inflammation and rare disease space. We expect companies in these to spaces to remain as hot acquisition targets in 2021. Neuro could also be another space for M&As.

Figure 37. Large Cap Biotech – Key Catalysts for 2021

Company	Key Catalysts for 2021	Date
ALXN	ALXN1840 Ph3 data in Wilson's disease	1H21
AMGN	KRAS lung data at WCLC	Jan 28 - 31, 2021
AMGN	Full TYK2 data from BMY	2021
AMGN	Full Tezepelumab asthma data	2021
BIIB	Aducanumab's FDA Decision	March 7, 2021
BMRN	Val-Rox Hemophilia Ph3 12-month data	Early 2021
BMRN	Vosoritide PDUFA	Aug 20, 2021
GILD	Futility outcome for GLPG-1690 in IPF	1Q21
GILD	Trodelvy's TROPiCS-02 (3L+ HR+/HER2- mBC) ORR and DoR readout	1H21
REGN	Roche data for Faricimab (ANG2/VEGF) in wAMD	1Q21
REGN	COPD data for Dupi	2021
VRTX	FSGS Data for VX-147	2021
VRTX	AAT data for VX-814	2Q21

Source: Citi Research and company reports.

Large Cap Biotech: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Vertex	**VRTX**	**Buy**	**$236.92**	**$325.00**	**0.0%**	**37.2%**	**21.2x**	**5.2x**	**23.9%**
Currently trading at "no-pipeline" levels despite having AAT and FSGS pipeline readouts in 2021.									
Top Sells									
Biogen	**BIIB**	**Sell**	**$250.24**	**$200.00**	**0.0%**	**-20.0%**	**12.2x**	**3.1x**	**24.6%**
Loss of Tecfidera IP and Adu's Ad-com makes it unlikely the Alzheimer's drug will be approved by the FDA.									

Source: Citi Research

Biotech – Small Cap

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(RETA.O; US$115.11; 1H; 17 Dec 20; 16:00); (KRTX.O; US$103.98; 1H; 17 Dec 20; 16:00); (EPZM.O; US$12.74; 1H; 17 Dec 20; 16:00); (SRPT.O; US$171.06; 1H; 17 Dec 20; 16:00); (ACAD.O; US$55.21; 1H; 17 Dec 20; 16:00); (MRK.N; US$79.82; 1; 17 Dec 20; 16:00); (CRTX.O; US$30.18; 3H; 17 Dec 20; 16:00); (MD.N; US$23.78; 2; 17 Dec 20; 16:00); (NGM.O; US$28.23; 1H; 17 Dec 20; 16:00); (ARVN.O; US$71.25; 1H; 17 Dec 20; 16:00)

Valuations Are Reaching New Heights – Here's Where We See Opportunities in 2021

Valuations are reaching increasingly high levels in SMid Biotech, with YTD gains for S&PBIO (~ +55%) ~4x higher than the S&P500 (~ +14%). Thus, investors will need to focus on managing risk in names where valuations have become extended while also identifying names where upside potential remains. To that end, we highlight several names where we see opportunities in 2021.

- **RETA; Buy / High Risk, TP $234, Yigal Nochomovitz** – Reata remains our Top Pick within our SMid Biotech coverage, and the recent pull-back in share price offers an attractive buying opportunity, in our view. Positive Year 2 CARDINAL data provide readthrough to Reata's ongoing Ph3 FALCON trial in ADPKD, and we expect investors will begin assigning more credit to the ADPKD opportunity in 2021. While we acknowledge the additional risk to omaveloxolone in Friedreich's ataxia, we note that investors do not need to believe Reata will be successful in developing omav in order to justify owning the stock at its current valuation. Removing omav from our model gives a $218/shr valuation, which is still meaningfully above where the stock is currently trading. See our 2021 Outlook for more details.

- **ARVN; Buy / High Risk, TP $123, Yigal Nochomovitz** – Arvinas is a preferred name within our SMid Biotech coverage. Initial ARV-471 data has the early makings of a best-in-class ER degrader and updated ARV-110 data open a development path into the larger 1L/2L mCRPC market. We see blockbuster potential for both drugs and model risk-adjusted peak US / EU revs of ~$1.3B / ~$500M for ARV-110 & ~$1.3B / ~$370M for ARV-471. We expect multiple data readouts in 2021 that should further define the market opportunity for both drugs. See our 2021 Outlook for more details.

- **KRTX; Buy / High Risk, TP $115, Mohit Bansal** – CNS name with de-risked asset (KarXT) and multi-billion dollar potential. Good management team running smart clinical trials. Healthy elderly volunteer data in 2Q21 could provide safety read-through in dementia related psychosis population and open up another $2B+ opportunity. Current valuation only gives credit to psychosis in Schizophrenia. After that the story would be all about execution, which could make it an M&A candidate.

- **EPZM; Buy / High Risk, TP $35, Mohit Bansal** – Oncology name with an approved product (Tazverik) on the market in $1B+ TAM. COVID impacted launch but our doc checks suggest a growing preference for Tazverik in 2nd-line+ FL. We think a couple of good quarters of launch could make the story look better and help investors come back to the name. Potential M&A candidate for 2021 if the company executes on the launch well for couple of quarters.

- **SRPT; Buy / High Risk, TP $215, Joel Beatty** – We believe the DMD gene therapy results from Study 102 (anticipated in Jan/Feb 2021) are likely to be good enough to support approval. We see $17 upside if the efficacy is strong (stat sig positive NSAA primary endpoint and strong dystrophin expression), and $73 downside if the efficacy completely misses. Even mediocre results could still add support for SRPT's large gene therapy pipeline. See our 2021 Outlook for more details.

- **NGM; Buy / High Risk, TP $28, Joel Beatty –** We see $10 upside / $10 downside for results from the ph2 ALPINE 2/3 trial of Aldafermin for NASH, which should help characterize the dose response relationship. An impressive internal developed early/mid stage pipeline (for liver and metabolic diseases, retinal diseases and cancer), along with a strikingly favorable collaboration with MRK could provide further upside. See our 2021 Outlook for more details.

- **ACAD; Buy / High Risk, TP $66, Neena Bitritto-Garg –** We continue to expect approval of Nuplazid (pimavanserin) in dementia-related psychosis (DRP), an over $3B peak sales opportunity, on or by the PDUFA date of April 3. We model $22/share for the base business (PDP plus cash), and $43/share for DRP, suggesting that the market is currently pricing in ~70% PoS for DRP with no value to the pipeline. We estimate shares could trade up to the low $60s on an approval decision depending on details of the label. We also expect the launch could meaningfully outperform expectations, prompting multiple upwards estimate revisions over the course of 2021 and beyond, based on results from our recent physician survey. See our 2021 Outlook for more details.

- **CRTX; Sell / High Risk, TP $20, Neena Bitritto-Garg –** We expect data from the ongoing GAIN Phase 2/3 study in December 2021 for atuzaginstat to be negative based on 1) poor mechanistic rationale, 2) limited previous data, 3) design of the GAIN study, 4) exceptionally low PoS in Alzheimer's overall, and 5) outcome of the recent interim analysis, which we believe suggests there was no meaningful early trend towards efficacy seen. If negative, shares could trade to cash ($5/share), which implies ~85% downside from current levels. See our 2021 Outlook for more details.

SMid Biotech: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Reata Pharmaceuticals	**RETA**	**Buy**	**$115.11**	**$234**	**n/a**	**103.3%**	**n/a**	**n/a**	**n/a**
Bardoxolone's de-risked profile and blockbuster potential should be of high interest to investors									
Arvinas	**ARVN**	**Buy**	**$71.25**	**$123**	**n/a**	**72.6%**	**n/a**	**n/a**	**n/a**
ARV-471 and ARV-110 have the makings of best-in-class drugs with blockbuster potential									
Karuna Therapeutics	**KRTX**	**Buy**	**$103.98**	**$115**	**n/a**	**10.6%**	**n/a**	**n/a**	**n/a**
Data for schizophrenia and dementia-related psychosis programs could de-risk large revenue potential from these indications									
Epizyme	**EPZM**	**Buy**	**$12.74**	**$35**	**n/a**	**174.7%**	**n/a**	**n/a**	**n/a**
A couple good quarters for EPZM's lymphoma drug, Tazverik, could put the company back on the M&A radar									
Sarepta Therapeutics	**SRPT**	**Buy**	**$171.06**	**$215**	**n/a**	**25.7%**	**n/a**	**n/a**	**n/a**
SRPT has the lead and resources to win the DMD gene therapy race, which should help pave a transformation into a leading gene therapy company									
NGM Biopharmaceuticals	**NGM**	**Buy**	**$28.23**	**$28**	**n/a**	**-0.8%**	**n/a**	**n/a**	**n/a**
Two strong NASH drugs in mid/late stage development just scratch the surface of the company's deep internally developed pipeline									
Acadia Pharmaceuticals	**ACAD**	**Buy**	**$55.21**	**$66**	**n/a**	**19.5%**	**n/a**	**n/a**	**n/a**
Top pick on potential approval and launch in DRP, an over $3B peak sales opportunity									
Top Sells									
Cortexyme	**CRTX**	**Sell**	**$30.18**	**$20**	**n/a**	**-33.7%**	**n/a**	**n/a**	**n/a**
Top sell call on low PoS for ongoing GAIN study and comps in Alzheimer's space									

Source: Citi Research

HC Facilities & Managed Care

Favor MCOs Over Providers

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Companies mentioned: (CI.N; US$202.63; 1; 17 Dec 20; 16:00); (CVS.N; US$69.59; 1; 17 Dec 20; 16:00); (ACHC.O; US$49.96; 1; 17 Dec 20; 16:00); (MD.N; US$23.78; 2; 17 Dec 20; 16:00); (PGNY.N; US$39.90; 1; 17 Dec 20; 16:00); (UHS.N; US$139.73; 1; 17 Dec 20; 16:00); (WBA.O; US$40.88; 2; 17 Dec 20; 16:00); (SGRY.O; US$28.67; 1H; 17 Dec 20; 16:00)

We have a generally favorable outlook for the MCO and HC facilities sector in 2021, with a bias toward managed care over providers. We see the potential for bifurcated performance with a more constructive view of MCOs early in the year, and more optimism around hospitals/providers later in the year as core utilization returns closer to normal or accelerates.

- **Citi View** — While we expect the fluid backdrop of COVID-19 to persist into 2021, we continue to hold a favorable view for managed care and healthcare facilities/providers into next year but with different considerations across subsectors. In this context, we are positive on **MCOs** into 2021 as we believe core trends could remain below norm vs pricing that likely assumed recovery + pent up demand + higher acuity. This should drive a healthy premium to cost spread (i.e. margin), and a pull-thru of upside that was not captured this year. This coupled with a more benign political/regulatory backdrop should bode well for the group. For the **hospitals/providers**, we are somewhat lukewarm as we consider core trends that may remain suppressed, particularly in the early part of the year, a tough acuity comp, and uncertainty around payor mix. That said, expectations/estimates appear fair, utilization should improve in 2H, and valuation remains reasonable. We have mixed views on the **retail pharmacies** with a continued bias for CVS over WBA as optimism around the vaccine opportunity, coupled with low expectations/valuation, is balanced by continued structural pressures within retail. For the **labs**, we acknowledge the argument for a tough comp and rollover of COVID testing at some point, but we remain optimistic into 2021 as we consider continued COVID testing, recovery in core, and industry dynamics (open network, PAMA, M&A) that should show through next year. Among the remaining names within our coverage (ACHC, MD, PGNY, SGRY) we have Buy ratings on each individual stock with the exception of MD (Neutral). ACHC is our SMID pick for 2021 as we consider the pandemic's impact on mental health, and the potential sale of its UK operations. Please see more detail on our 2021 outlook in our note here: Citi Healthcare - HC Facilities & Managed Care 2021 Outlook

- **Risks** — For the **MCOs**, some of the key risks include the potential for rising cost trends, pressure on commercial membership due to the economic consequences of COVID-19, and issues around risk coding in Medicare Advantage due to depressed Medicare utilization in 2020 impacting revenue/profitability for that end market. Within the **hospital/provider** space, risks range from core volumes to remain suppressed amid continued COVID-19 activity, a difficult acuity comp, and payor mix deterioration given the economic consequences of COVID-19. For the **labs**, the potential pressure on core volumes due to continued COVID-19 activity, and a difficult comp in 2021 given the likely rollover in COVID testing amid vaccine proliferation, serve as key risks. For the **retail pharmacies**, we continue to see reimbursement pressures, along with competitive challenges from omni-channel platforms, as risks to the group.

- **Catalysts** — Potential catalysts or upside levers for the **MCOs** include continued muted cost trends as the incremental hc costs that are a result of COVID-19 pale in comparison to lower overall hc utilization, continued growth within the government end markets (Medicare and Medicaid), and a relatively muted regulatory backdrop and lack of headline risk. On the **hospital/provider** side, quicker recovery from COVID-19 that pushes upside to volume, stability around payor mix, and/or strategic action supporting higher valuation would represent favorable catalysts. For the **labs**, volume growth and share gains driven by managed care, hospital partnerships, continued cost saving initiatives, M&A, and a consistent track record of returning capital to shareholders through buybacks that could provide upside. As it relates to the **retail pharmacies**, increasing script growth, market share gains given COVID-19's impact on smaller retailers and pharmacies, and a quicker recovery in consumer spending trends all could represent catalysts for the group.

- **Drivers** — Underlying utilization and cost trends along with execution within the Medicare & Medicaid end markets continue to be fundamental drivers of performance within the **MCOs**. Across the **hospitals/providers**, volume, pricing, and ultimately visibility on revenue trends and trajectory are important considerations and drivers for providers given uncertainly stemming from COVID-19 and apprehension around utilizing healthcare services that is likely to continue into 2021. Beyond revenue, drivers include the ability to adapt to potentially slower top-line by effectively managing costs to pull through EBITDA. For the **labs**, we see continued volume/revenue from COVID-19 testing (molecular and to some extent serology in context of vaccine distribution), open network access driving share to the national labs, and financial flexibility to execute on accretive M&A, as drivers of performance in 2021. Drivers for the **retail pharmacies** in 2021 include the potential disproportionate COVID-19 vaccine opportunity, the recovery in script growth and retail foot traffic, and diversification across omni-channel platforms mitigating retail pressure.

- **Top Picks** — CI is our top pick and on the Citi Focus List. We continue to view Cigna shares as grossly undervalued, and believe a dividend is inevitable given the company's sizeable cash flow, which in the current low interest rate environment will enhance shareholder value, appeal to a new investor base, and be a positive for the stock. For additional thoughts, see our recent note following management meetings (link to note). Outside of Cigna, our preferred names are UHS and ACHC (top SMID pick), as we see both potentially benefiting from the heightened need of mental health services as a result of COVID-19 in 2021.

- **Downside Risk Amid Recovery –** We identify Mednax (MD, Neutral rated) as the company within our coverage universe with the greatest downside risk amid the recovery from COVID-19. MD has divested its anesthesiology and radiology businesses in 2020 in an effort to focus on its core neonatal and women's and children's business. However, should birth trends, which help drive revenue generation for the company, remain suppressed or see incremental pressure due to the COVID-19 backdrop, we see it difficult for the new management team to execute on the accelerated future growth targets that the company has provided.

HC Facilities & Managed Care: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Cigna	**CI**	**Buy**	**$202.40**	**$273**	**0.0%**	**34.9%**	**10.2x**	**1.2x**	**13.5%**
CI executes a differentiated strategy, with leading cost trend and optionality through its integrated model that aligns with market demands of affordability and transparency.									
Universal Health Services	**UHS**	**Buy**	**$137.63**	**$162**	**0.0%**	**17.7%**	**13.8x**	**1.6x**	**12.0%**
UHS's positioning within acute and behavioral health should aid its recovery from COVID-19's impact on hc utilization, and has ample BS flexibility for capital deployment									
Acadia Healthcare	**ACHC**	**Buy**	**$48.38**	**$56**	**0.0%**	**15.8%**	**17.6x**	**1.5x**	**8.7%**
ACHC's pure-play behavioral health model could capture higher growth amid potential heightened need of behavioral services; valuation support thru U.K. asset sale									

Source: Citi Research

Health Care Technology

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Companies mentioned: (ONEM.O; US$39.80; 1H; 17 Dec 20; 16:00); (HCAT.O; US$42.08; 1; 17 Dec 20; 16:00); (INOV.O; US$19.33; 2; 17 Dec 20; 16:00); (TDOC.N; US$196.81; 1; 17 Dec 20; 16:00); (SLQT.N; US$23.39; 1; 17 Dec 20; 16:00); (PHR.N; US$57.49; 2; 17 Dec 20; 16:00); (PGNY.N; US$39.90; 1; 17 Dec 20; 16:00); (MPLN.N; US$9.36; 1H; 17 Dec 20; 16:00); (AAPL.O; US$128.70; 1; 17 Dec 20; 16:00); (FIT.N; US$7.23; 2H; 17 Dec 20; 16:00); (IRTC.O; US$239.15; 1; 17 Dec 20; 16:00); (TLND.O; US$38.74; 1H; 17 Dec 20; 16:00); (AMZN.O; US$3,236.08; 1; 17 Dec 20; 16:00)

The Digitization of Healthcare is Here to Stay

While 2020 was the year of payer-focused HCIT with the virtualization of care amid COVID-19, heading into 2021, we are most bullish on provider-facing HCIT, which should benefit from easy comps and an acceleration in the investment cycle

- **An Acceleration of the Provider HCIT Investment Cycle**— COVID-19 caught many providers flat-footed, with outmoded technology stacks and business models too reliant on FFS reimbursement. While provider investment in technology retrenched in 2020 as budgets were stretched (apart from telehealth), we think we will see an acceleration of the provider investment cycle in 2021. Health Tech companies focusing on interoperability by leveraging cloud infrastructure, APIs, and modular applications are set to benefit the most in our view. **Winners: HCAT, INOV.**

- **The Durability of Virtual Care** — The pandemic will fundamentally shift how care is delivered in the U.S., with virtual health becoming an important treatment modality across the care continuum. While utilization will certainly drop as COVID-19 concerns wane and as payers offer less generous reimbursement, we think that the shift to virtual care will be durable, as the pandemic has fundamentally changed payer, patient, and provider preferences. **Winners: TDOC and ONEM.**

- **Big Tech Getting Bigger in Healthcare**— We see Big Tech as most impactful in (1) the migration of healthcare data to the cloud, (2) providing the front-end user interface to shop for and access care/prescriptions, and (3) generic drug distribution (e.g. Amazon Pharmacy). We do not think Big Tech will get into the direct provision of clinical care given (1) the complexity of building a clinical network of care providers and (2) lack of patient trust. We do think it is likely, though, that consumer aggregators (e.g. Amazon and Apple) will partner with telehealth vendors to provide more seamless access to care.

- **Continued Capital Formation and M&A** — We do not expect the capital markets to slow any time soon for HCIT focused companies. In particular, we expect to see robust funding for DTC virtual health platforms (particularly in behavioral health), payments, and tech-enabled primary care. We expect to see continued consolidation in the virtual health space as we think the TDOC/LVGO transaction will spur a virtual health arms race as telehealth vendors seek to expand their capabilities into chronic care management.

- **Top Small-Cap Growth Pick: Health Catalyst (HCAT)** — HCAT is a powerful combination of technology, massive data assets, and (most importantly) domain specialists that can demonstrate near-term ROI to health systems. COVID-19 should accelerate the need for HCAT's tools, although near-term budget pressure impacted the sales cycle in 2020 (which will weigh on 2021 financials). We expect a warehousing effect in FY21 which will lead to accelerating growth in FY22 and beyond. We estimate HCAT will be able to maintain 20%+ revenue growth rates for the foreseeable future and will turn adj. EBITDA positive in FY22. Our $49 price target is based on an 8.5x EV/sales multiple on our 2022 sales estimate and is informed by our sum-of-the-parts analysis, which applies a 13x sales multiple to HCAT's tech revenue and a 2x multiple to its services revenue.

HCIT: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2022E EV/Revenue	2022E EV/EBITDA	2022E P/E
Top Buys									
Health Catalyst	**HCAT**	**Buy**	**$40.11**	**$49.00**	**0.0%**	**22.2%**	**6.9x**	**NM**	**NM**
Best analytics tools serving the health system market. Will benefit from increased investment in data-dependent analytics post-COVID-19.									
Teladoc Health	**TDOC**	**Buy**	**$187.07**	**$275.00**	**0.0%**	**47.0%**	**12.6x**	**NM**	**NM**
Largest global telehealth platform. Can treat the broadest set of clinical conditions across various modalities. Will benefit from continued virtualization of care.									
One Medical	**ONEM**	**Buy/H**	**$38.29**	**$42.00**	**0.0%**	**9.7%**	**9.3x**	**NM**	**NM**
By blending analog and virtual health, we strongly believe that ONEM will lead to better primary care engagement. Will benefit from increased investment in primary care									

Source: Citi Research, FactSet

Medical Technology

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A Whole New World – Looking to 2021 (or Should We Look Straight Through To 2022?)

In 2021, we will continue to focus on the recovery in elective procedures, as well as assess clinical data and regulatory milestones. Though we embark on a new paradigm in MedTech investing, company fundamentals and the strength of the product pipeline remain key drivers of growth.

- **2020 was quite the year, and as we look into 2021 we embark on a new paradigm in MedTech investing.** From a high-level view, we think, or maybe hope, that 2021 will largely be a year in two halves: in the 1H we expect the impact of the second wave of the pandemic, while in the 2H21 the benefit of vaccine access should bring about a return to "normal" healthcare utilization. In some ways we think we should look through to 2022...thus 2021 MedTech investing will be driven by the pace of elective procedure recovery, clinical data and regulatory milestones, as well as the ability to demonstrate operating leverage and balance sheet strength**.**

- **Two proprietary surveys provide additional color** on the impact of the second wave and the 2021 recovery: 1) in Ophthalmology, physicians reflect on the recovery in 2021, including a two year stack growth rate of 13.4% for cataract surgeries (above the historical low-single digit rate) and 10.6% for MIGS; and 2) in Spine, 93% of respondents expect some or significant impact from COVID-19 in the 4Q20, but they also expect volumes to normalize in 2021 compared to 2019.

- **As we look into 2021, there are a number of milestones we look forward to, including:**

  - **In Cardiology:** 1) at ACC 2021, data will be presented on Abbott's Amulet device for left atrial appendage (LAA) closure, which is expected to launch in the U.S. in 2021E; and 2) Medtronic's Renal Denervation (RDN) On-Med clinical data will be presented at Transcatheter Cardiovascular Therapeutics (TCT) meeting October 22-26, positioning the company's Synergy Spyral Catheter to receive FDA approval in CY2022E.

  - **In Neuromodulation, Nevro has two key clinical data sets at NANS 2021,** including painful diabetic neuropathy (PDN) data that will position the company for FDA approval in the 2H21E and non-surgical refractory back pain (NSRBP) data to support reimbursement;

  - **In Diabetes, 2021 will include several prominent product launches:** 1) In continuous glucose monitors (CGM), Dexcom's G7 CGM is expected to be launched in 2H21 in certain geographies and Abbott's Freestyle Libre 3 should ramp in OUS markets after receiving CE Mark approval in September 2020; and 2) in Insulin pumps, all three major market participants have key launches: 1) Insulet plans to launch the Omnipod 5 in 1H21E; 2) Tandem plans to launch its t:sport pump in 2H21E; and 3) Medtronic is likely to receive FDA approval of its MiniMed 780G in 2021E.

  - **In Robotics:** 1) J&J is launching its Velys Knee robotic system in 2021E; 2) Zimmer Biomet plans for expanded indications of its Rosa robotic system; 3) Medtronic is on track with its Hugo surgical robotic platform with CE Mark approval and plans to submit its IDE filing in CY1Q21; and 4) NuVasive plans to launch its Pulse navigation platform in 2H21E.

- **In Ophthalmology, we expect:** 1) the 2021E launch of Glaukos' iStent Infinite to treat refractory glaucoma; and 2) the continued roll out of The Cooper Companies' MiSight contact lens (FDA approved in November 2019), to treat myopia for adolescents

- **Top Picks include ZBH and Preferred names include ABT, BSX, and TNDM.** In looking at our coverage, we highlight three major themes:
  - **On the "right" side of COVID-19:** ABT has outperformed in 2020 rising 25% versus the S&P 500's 15%. Yet as we look into 2021, as COVID-19 diagnostic revenue should wane in the 2H21, elective procedures should accelerate. In addition, it should generate ~$8B in COVID-19 testing revenue over an 18 month period to reinvest in internal and external R&D.
  - **Elective procedure stocks, which should build momentum throughout 2021 and into 2022.** This includes Buy Rated BSX, MDT, SYK and ZBH. Our Top Pick ZBH should benefit not just from the recovery in orthopedic procedures, but from its own recovery, with the turnaround story in Phase 3 of the process.
  - **New product launches and/or clinical data in 2021.** We highlight DXCM, IRTC, NVRO, PODD and TNDM. Nevro enters 2021 with two major clinical data presentations at NANS in January that should set the foundation for entry into the peripheral diabetic neuropathy (PDN) and non-surgical back pain (NSRBP) markets. Insulet is in position to launch its OmniPod 5 system in the 1H21 and Tandem should continue leveraging the 2020 launch of its Control IQ system with the 2H21E launch of t:sport.

- **We maintain our Sell rating and $62 target price on ALC.** While Alcon's end markets are massive and the company has been introducing new products, we believe that there is more downside risk than upside, and remain Sell-rated due to valuation. We derive our PT of $62 by applying 26x-27x 2022E EPS.

MedTech: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Zimmer Biomet Hldgs	ZBH	Buy	$151.36	$180.00	0.6%	19.6%	18.8x	2.1x	12.8%
ZBH should benefit not only from the elective procedure recovery, but from its own recovery, with the turnaround story in Phase 3 of the process.									
Abbott Laboratories	ABT	Buy	$108.78	$130.00	1.5%	21.2%	26.6x	4.3x	22.6%
COVID-19 diagnostic revenue will be meaningful in 2021, which ABT will likely redeploy through internal and external R&, fueling the pipeline next year and beyond.									
Boston Scientific Corp	BSX	Buy	$35.39	$43.00	0.0%	21.5%	20.7x	3.0x	15.1%
Not only will BSX benefit from the elective procedure recovery, but its robust pipeline includes a number of products that are expected to be approved over the coming years.									
Tandem Diabetes Care Inc	TNDM	Buy	$89.41	$140.00	0.0%	56.6%	N/A	7.9x	2.5%
TNDM should continue leveraging its Control IQ technology with the 2H21 launch of new form factor t:sport insulin pump, and we prefer TNDM over PODD given its valuation.									
Top Sells									
Alcon Inc	ALC	Sell	$64.38	$62.00	0.0%	(3.3%)	34.0x	1.7x	4.7%
While the end markets are massive and ALC has been gaining share, there is more downside risk than upside risk, and we remain Sell-rated due to valuation.									

Source: Citi Research

Spec Pharma

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Companies mentioned: (BHC.N; US$21.12; 1; 17 Dec 20; 16:00); (ENDP.O; US$5.67; 1; 17 Dec 20; 16:00); (HZNP.O; US$69.31; 1; 17 Dec 20; 16:00); (TEVA.N; US$10.30; 2; 17 Dec 20; 16:00); (JNJ.N; US$153.62; 1; 17 Dec 20; 16:00)

Look for low litigation risk, M&A opportunities

In 2021, we favor companies that face low litigation risk and can afford M&A opportunities — Buy Horizon (HZNP), Buy Bausch (BHC).

- Litigation risk will continue to be a theme with opioid and price fixing trials for Spec Pharma companies, including Teva and Endo.
- We expect some M&A but size to be limited by high leverage and elevated legal risk. We anticipate the sector to favor a mix of cash and stock, as a result.
- Also, we forecast more shareholder activism than LBOs.

Figure 38. Opioids and Price Fixing Calendar (2021)

Date	Case	Event
Opioids		
February / March 2021	New York State AG	Trial may begin in February / March 2021 as per Judge Garguilo's estimate
19-Apr-21	California State AG	Trial is scheduled to begin
1-Jun-21	Arizona State AG	Trial is scheduled to begin
7-Jun-21	Insurance Fraud (New York)	Hearings of NY Dept. of Financial Services' insurance fraud lawsuits against Endo, Teva, Mallinckrodt, Allergan, and Johnson & Johnson
4-Oct-21	MDL 2804 Track 3	Bellwether trial is scheduled to begin
1-Nov-21	West Virginia mass opioid litigation	Trial is scheduled to begin
7-Dec-21	Maryland State AG	Trial is scheduled to begin
Price Fixing		
14-Jan-21	MDL 2724 (Generics Price Fixing MDL)	General status conference
2H21	Teva's criminal price fixing case (vs. DOJ)	The case's trial might begin in 2H21 (According to a document filed on 19-Oct-2020, the trial dates proposed by the US government and the defendants are 13-Sep 2021 and 9-May-2022, respectively)

Source: Citi Research, Legal documents

Buy HZNP: 2021E is a catalyst-rich year for Horizon

- We rate HZNP a Buy as we expect Horizon to continue to outperform led by high-growth drivers Tepezza and Krystexxa. The firm also has no exposure to opioids and price fixing risks, and has low leverage. Horizon has an attractive catalyst pathway in 2021E. We also think the stock overreacting to short-term Tepezza supply disruption provides a good entry point: Horizon Therapeutics (HZNP) - Stock overreacting to ST Tepezza supply disruption, we think
- Tepezza's 2021E sales progression is a key catalyst after the stock's weakness in 4Q20, which we attribute to investors' concerns on the sustainability of Tepezza's sales growth and more recently to supply disruption. We see potential Tepezza's chronic TED study read-out in 1Q22 as a meaningful catalyst. Assuming Tepezza's peak share in chronic TED rises to 10% (3% in our base case), Tepezza's peak sales would rise to $5.0bn (from $3.4bn in our base case). The Krystexxa MIRROR study read-out in 2Q21 is another key catalyst.
- Exception Horizon could use its offering proceeds for M&A, incl. development stage assets — Horizon announced in August a $0.9B public offering of ordinary shares, with proceeds to be used for its long-term M&A pipeline. In our view, a resulting net cash position and solid liquidity permit incremental bolt-on transactions, focusing on development stage assets. Horizon's acquisition strategy aims to deepen its presence in rare diseases in rheumatology,

nephrology, ophthalmology, endocrinology, entailing further build-out of its clinical stage pipeline. Ideally, we think Horizon would pursue an orphan drug company, which addresses a high unmet need and has passed the proof of concept phase.

Figure 39. Horizon's Catalysts in 2021E

Event	Timing	Our View
Tepezza's quarterly sales	Quarterly earnings (~ late Feb-2021)	We expect an update regarding Tepezza supply disruption and FY21 guidance. We anticipate a positive market reaction if Horizon is able to obtain more than one manufacturing slot per month and/or with increased manufacturing scale per lot. Management anticipates to return to an acceptable number of slot in 2Q21.
Results of Ph2b trial of IMVT-1401, a competitor to Tepezza	1H21	We believe that an efficacy signal that is comparable with Tepezza's (~70-80%) and lack of any safety signal, is needed for IMVT-1401 to have a competitive profile vs. Tepezza's. We note that the development of the subcutaneous version of Tepezza might mitigate the competitive impact and the potential benefit of IMVT-1401's broad mechanism of action remains unproven given the lack of study showing TSHR's direct role in thyroid eye diseases (TED).
Krystexxa MIRROR study read-out	2Q21	The validation of Krystexxa's immunomodulation strategy may increase the average vial per patient. Of note, prior case studies demonstrated Krystexxa + methotrexate's response rate of 79-100% (vs. ~40% for Krystexxa in its Phase 3 study).
Tepezza's chronic TED study read-out	1Q22 (primary completion date of Sep-29, 2021)	Tepezza was approved with a broad label, which includes both acute and chronic TED categories despite its past clinical trials only focused on the moderate-to-severe acute TED population. Tepezza's penetration in the chronic TED category may meaningfully improve if the chronic TED trial shows that Tepezza has similar efficacy as that in the active TED population. The trial's study design is similar to that of Tepezza's Phase 3 trial for active TED. The double-masked, placebo-controlled, 2:1 randomized (Tepezza:placebo) has percentage of proptosis responders at Week 24 as its primary endpoint. Further, the release of new case study reports of Tepezza in chronic TED may also help improving Tepezza's use in the chronic TED population.

Source: Citi Research, Company reports, clinicaltrials.gov

Buy BHC: Possible divestitures ahead of spinoff = key 2021 catalysts

- We rate BHC a Buy on the lack of opioid exposure, limited legal risk following the resolution of the most material legacy litigations, such as the $1.2B stock drop case), solid liquidity, and spin-off upside.
- We see two key catalysts for the stock in 2021: potential divestitures of its key assets and COVID-19 recovery. Divestitures of its high-multiple assets may lower Bausch's leverage, which may facilitate a faster spin-off. Management suggested that Solta could yield >15x in EV/EBITDA, while International Rx's peers are trading at 12-14x in EV/EBITDA.
- Further, a faster-than-expected COVID-19 recovery would allow faster net leverage reduction and accelerate the timeline of B+L IPO and spinoff. Bausch will likely release its 2021E guidance in February 2021.

Pair Trade: Overweight ENDP, Underweight TEVA

- ENDP trades at a discount vs. TEVA despite lower litigation risk and better operating & credit profile. Teva is more exposed to price fixing cases. Although we forecast better top-line growth at Teva, Endo has higher margin. On financial metrics, both firms have similar leverage, while Endo has better liquidity and Teva having high refinancing needs.

Spec Pharma: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Horizon Therapeutics	**HZNP**	**Buy**	**$76.69**	**$116.00**	**0.0%**	**51.3%**	**16.2**	**3.2**	**13.6%**
We expect HZNP to continue to outperform led by high-growth drivers Tepezza and Krystexxa and solid credit profile allowing incremental bolt-on transactions.									
Bausch Health	**BHC**	**Buy**	**$20.81**	**$26.00**	**0.0%**	**24.9%**	**4.6**	**15.4**	**334.8%**
We rate BHC a Buy on the lack of opioid exposure, limited legal risk following the resolution of the most material legacy litigations, solid liquidity, and spin-off upside.									
Endo International	**ENDP**	**Buy**	**$5.67**	**$7.00**	**0.0%**	**23.5%**	**2.9**	**-431.2**	**N/A**
Cellulite remains an opportunity. Opioid risk persists, but we think that the low settlements so far and their rationale may help with future negotiations.									

Source: Citi Research

Industrials

Aerospace & Defense

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Companies menitoned: (BA.N; US$221.24; 2; 17 Dec 20; 16:00); (BAH.N; US$89.04; 1; 17 Dec 20; 16:00); (CACI.N; US$243.36; 1; 17 Dec 20; 16:00); (GD.N; US$151.59; 1; 17 Dec 20; 16:00); (HII.N; US$170.47; 1; 17 Dec 20; 16:00); (LHX.N; US$185.71; 1; 17 Dec 20; 16:00); (LDOS.N; US$104.83; 1; 17 Dec 20; 16:00); (MRCY.O; US$84.32; 1; 17 Dec 20; 16:00); (NOC.N; US$300.68; 1; 17 Dec 20; 16:00); (RTX.N; US$70.64; 2; 17 Dec 20; 16:00); (SAIC.N; US$97.77; 1; 17 Dec 20; 16:00); (TXT.N; US$46.99; 2; 17 Dec 20; 16:00)

From reckoning to recovery to retrenchment

We prefer "higher-for-now" (Defense) vs. "lower-for-longer" (Aero) and view "GovTech" as well positioned thanks to cyber warfare & cost-savings trends

- **A&D narratives into 2021 —** A year ago we wrote that A&D offered attractive visibility thanks to growing cash flow per share based on large backlogs & capital allocation, even as sales growth decelerated. A year later, we still have big backlogs & cash growth opportunity. But aero has faced a generational reckoning at the hands of a pandemic, such that 2021 is all about recovery. And while the defense story's mostly unchanged, big deficits add concern of the impending retrenchment. On its face, that augurs aero over defense into 2021. But recent stock performance suggest aero already reflects a lot of recovery while defense might reflect too much retrenchment. So we still prefer Defense where relative valuations are at decade lows. And specifically "GovTech" where we expect sustainable growth, margin expansion & capital allocation to support HSD/LDD EBITDA growth & potential multiple expansion. GovTech has been our favored post-C/19 play since early March. We think this end-market is still proving out. Our ranked favorites: **CACI, SAIC, LDOS, BAH**.

- **Prefer "higher-for-now" vs. "lower-for-longer" –** We've suggested through 2H20 that Aero's lower-for-longer while Defense is higher-for-now. This impacts multiples as we try to figure out the "right multiple" to pay for an aero recovery vs. the likely defense slowdown. This narrative continues into 2021 and is a key question for stock picking: pay up for a depressed aero earnings stream set to grow…or get a deal on a robust defense earnings stream set to slow? *We're still leaning toward the latter.* Not only does the lower multiple offer more margin for error, but slowing earnings growth isn't inevitable if your portfolio's aligned with faster-growing parts of the market (**GovTech, MRCY**) or allows capital allocation flexibility (**LHX**).

- **GovTech re-rating potential –** GovTech last re-rated toward Defense Primes in 2018 & last traded at a premium during the wars. We could see that happen again as the government spending discussion shifts toward doing more with less, an argument that GovTech can make more easily than big hardware providers. So it's important for GovTech to position as cost-saving solutions amidst budget austerity. Plus, the addressable market is expanding as the nature of warfare shifts from bombs/bullets to bits/bytes. This can all manifest in more sustainable earnings growth which can in turn close the valuation gap and drive higher GovTech PTs (notably **CACI** +20% and **SAIC** +50%).

- **Aero recovery's a slog –** Traffic stats & industry commentary suggest the traffic recovery is stalling due to rising cases. On the flip side, vaccine progress permissions a recovery conversation which has driven a significant re-rating. To that end, 2021 will be about monitoring COVID caseloads, travel restrictions, airline forward booking commentary & traffic flows to determine the shape of the recovery. At this point, it's hard to see a significant uptick until 2H21 although 2Q will surely have an easy comp in terms of traffic (although airlines might still be in cash conservation mode). MAX orders are good for sentiment, but they're inevitable as you need them to support sustainable higher production rats & they don't do much for near-term numbers. That leaves us stuck with Neutrals in our aero coverage. The recovery is filled with uncertainties & challenges, with COVID having long-term impacts on travel habits, business models, operations, financials, risk management, capital allocation decisions & we'd argue multiples. For instance, we think BA is on the "wrong side" of the 2010s when FCF yields were in the HSD due to minimal cash returns to shareholders & demanding investments (new products, big ramps, balance sheet). Sure an equity issuance could them back to pre-grounding leverage, but we're still only seeing low-20s normalized FCF PS. **RTX is our favorite Neutral** thanks to its intact balance sheet & sustained cash returns supported by its large defense business. However, valuation is not particularly compelling at this point. Our next aero expert event is Wednesday Dec 16 (Click here to add to calendar).

- **Defense debates –** As we've previously written, Biden doesn't have to be that bad, especially with split government. Nevertheless, the stocks have de-rated to multi-year lows on a relative basis (**Error! Reference source not found.**). **HII's** a laggard & r elatively cheap while we expect the Navy to get a lot attention in 2021. Trump's last ditch shipbuilding plan isn't going to happen, but there's support of naval investments. **GD's** another "cheap defense" laggard which should also benefit from Navy attention. But from a narrative perspective, both could encounter some choppy waters as the new administration talks down the big Trump numbers. We're also nervous about **NOC's GBSD program** which is adding 200-300 bps of growth in 2021. We consider it the weakest leg of the nuclear triad & could therefore be viewed as a source of funds amidst building pressure to save big $s. We're not saying it's going to be cancelled; but any debate could be a sentiment headwind similar to the early 2010s. On the flip side, NOC's adding dry powder & enjoys good backlog growth.

- **Bizjet's bouncing around –** Good news: bizjet's not as bad as commercial. Bad news: commercial's a low bar. At this point we're weighing the potential of structurally more bizjet use (health/safety, lack of routes) against economic realities. You get more juice out of the SMID-cabin market (Neutral-rated TXT) which cut more in 2020 so has a nicer bounce in 2021 vs. large-cabin (Buy-rated GD) which has a tougher comp in 2021. Plus, smaller plane values have held up better and represent easier entry points for new customers. Join us Dec 18 for our next quarterly bizjet panel (reach out for registration info).

Aerospace & Defense: Top Buys

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
CACI	**CACI**	**Buy**	**$243.36**	**$285**	**0%**	**17.1%**	**19.3x**	**2.0x**	**12.8%**
Simultaneous sales & margin growth supported by targeted M&A. Mission-aligned technology aligned w/ post-C/19 world									
L3Harris Technologies	**LHX**	**Buy**	**$185.71**	**$235**	**1.83%**	**28.6%**	**16.1x**	**2.0x**	**6.1%**
Integration benefits, sustainable sales + capital deployment supports double-digit FCF per share growth									
SAIC	**SAIC**	**Buy**	**$97.77**	**$108**	**1.5%**	**12.0%**	**17.2x**	**3.6x**	**15.4%**
Sales, margin & cash growth pick-up supports path to sustainable $550m of FCF = DD yield. Govl T modernization aligned w/ post-C/19 world									
Leidos	**LDOS**	**Buy**	**$104.83**	**$115**	**1.29%**	**11.1%**	**17.8x**	**4.1x**	**17.3%**
2021 acceleration + margin expansion from mix. GovIT & 15-20% health exposure aligned w/ post-C/19 world									
Booz Allen Hamilton	**BAH**	**Buy**	**$89.04**	**$90**	**1.37%**	**2.6%**	**28.2x**	**11.1x**	**63.0%**
Consistent growth, margin + capital deployment flexibility. Technology portfolio & 10-15% health exposure aligned to post-C/19 world									
Mercury Systems	**MRCY**	**Buy**	**$84.32**	**$100**	**0%**	**18.6%**	**36.6x**	**3.2x**	**6.4%**
Above-avg growth & margin w/ M&A capacity. Unique defense electronics business model fits evolving industry needs (supports long-term growth)									

Source: Citi Research

Airlines

Traffic Down, But Valuations Up

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Companies mentioned: (SAVE.N; US$26.57; 1; 17 Dec 20; 16:00); (DAL.N; US$41.11; 1; 17 Dec 20; 16:00); (AAL.O; US$16.80; 3; 17 Dec 20; 16:00);

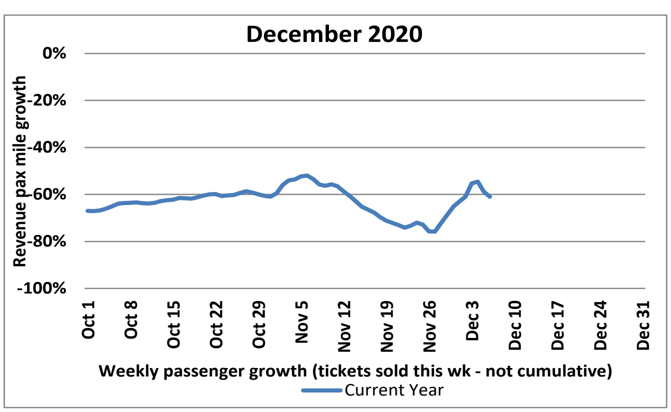
Ultra-low-cost-carriers look well positioned, with leisure and visiting friends and relatives (VFR) traffic continuing to grind higher. Meanwhile, network carriers might have to pivot towards leisure/VFR as business travel takes longer to recover.

- **Vaccine rollouts support uneven recovery** — A recent US Defense Department study showed just 44 suspected cases of on-board transmission, relative to a billion pandemic-era enplanements. This good record, along with the gradual rollout of COVID-19 vaccines, should continue encouraging personal travel. This positive backdrop looks supportive of Buy-rated ULCC Spirit Airlines. On the other hand, business travel's potential recovery looks slow, as white collar employees are unlikely first in line to be vaccinated, many may resist the vaccine and corporations reassess their travel budgets.

- **Near-term remains weak** — Following a Thanksgiving boom, Citi's recent Airlines Alpha work points to near-term demand weakness, as rising infection rates appear to have blunted end-of-year holiday travel demand. Going forward, leisure and visiting friends and relatives (VFR) travel should continue their gradual but uneven grind higher. On the other hand, business travel probably faces a much slower recovery.

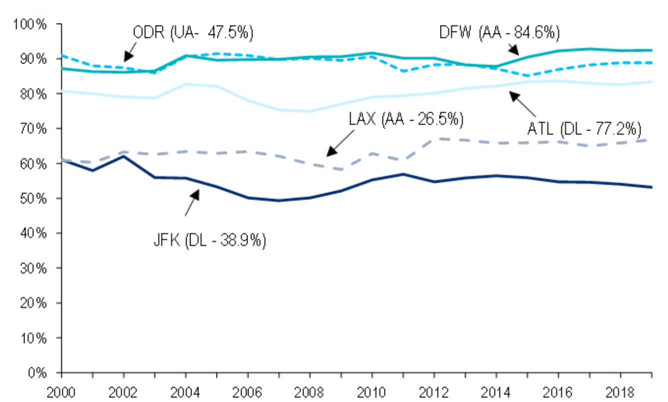
- **Delta best positioned network airline** — With airline business models in the Americas gradually converging over the past two decades, network airlines could at least somewhat pivot towards personal travel. This could include partnerships outside of hub-and-spoke systems, such as Sell-rated American Airlines' agreement with JetBlue (not rated), or some modest de-emphasis of business class offerings. Moreover, strong market share positions could help carriers defend pricing. Buy-rated Delta's dominance at Atlanta's Hartsfield Airport, the country's busiest airport, could support that carrier's passenger unit revenue (passenger revenue per available seat mile or PRASM), versus its peers.

Figure 40. December bookings dipped as infections spiked



Source: Citi Research ARC, IATA, Diio Mi, Neither ARC nor IATA assisted in the creation of this report

Figure 41. Delta Looks Strong In Atlanta, vs. competitors at other hubs



Source: Diio Mi and Citi Research

- **A long-term impairment to business travel?** — Business travel is not finished. This segment should gradually ramp up again, as the pandemic subsides. The growing availability of vaccines, further evidence that on-board transmission rates are actually quite low and potentially better economic growth could put business travel on track for a modest recovery, starting in 2H'21E. Still, not all companies will rush to put their employees on planes, many employees might not want to travel and/or might resist taking vaccines, while corporate budget and risk management teams might narrow down the categories of business travel that they deem essential.

- **Political considerations look mixed** — Potential policy support from the Biden administration for environmental, scientific and pro trade policies could be a mixed bag for the airlines. On one level, the government's effort to mend fences with traditional allies in Europe and elsewhere, along with more uniform, predictable policy pronouncements from Washington could help global airlines to re-establish at least some international long-haul flying. On trans-Atlantic corridors, Delta looks best positioned, while Buy-rated United Airlines looks strongest on Trans-Pacific. On a longer-term basis, airilnes could also see higher taxation and/or incentives to acquire fuel-efficient planes, as part of broader environmental efforts. However, the latter initiatives seem unlikely in 2021E, considering the economy's convalescence.

- **American Airlines could lag-** With 1Q'20 ND/LTM EBITDA of 7.5x, excluding pension liabilities, American Airlines' financial leverage was already very high, even before COVID-19 had morphed into a pandemic. Moving forward, American could incur costs in its pivot towards more leisure/VFR passenger flow, partially because it had the thinnest pre-pandemic margin for error among the majors.

Airlines: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Delta Airlines	**DAL.N**	**Buy**	**$41.11**	**$48.00**	**0%**	**16.8%**	**19.4x**	**4.8x**	**31.9%**
Strong unit revenue and balance sheet profile; has done by far the most to avoid diluting its equity holders									
Spirit Airlines	**SAVE.N**	**Buy**	**$26.57**	**$26.50**	**0%**	**0%**	**33.6x**	**1.4x**	**3.6%**
The carrier that should be happiest, post-pandemic, continuing to do what it has been doing.									
Top Sells									
American Airlines	**AAL.N**	**Sell**	**$16.80**	**$15.00**	**0%**	**-10.7%**	**NA**	**NA**	**NA**
The highest financial leverage in the group, with the lowest margin for operational error.									

Source: Citi Research

Autos & Mobility -- U.S.

Still Bullish Into 2021, But Selectivity Required

As the industry recovers from the 2020 downturn while accelerating its transition to EV/Car of the Future, we believe a number of compelling investment opportunities exist heading into 2021

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Companies mentioned: (AXL.N; US$7.78; 1H; 17 Dec 20; 16:00); (APTV.N; US$124.89; 1; 17 Dec 20; 16:00); (GM.N; US$42.03; 1H; 17 Dec 20; 16:00); (FSR.N; US$16.66; 1H; 17 Dec 20; 16:00); (LYFT.O; US$49.47; 1; 17 Dec 20; 16:00); (UBER.N; US$50.63; 1; 17 Dec 20; 16:00); (MGA.N; US$64.85; 1; 17 Dec 20; 16:00); (TSLA.O; US$655.90; 3H; 17 Dec 20; 16:00)

- **Why We Became More Bullish on Auto Stocks in 2020** — Few sectors are as closely scrutinized during economic downturns as Autos. With some exceptions, last decade's recovery did little to shake the memories of 2008-09, leaving bulls & bears debating what industry price discipline, FCF generation and balance sheets might look like upon the next downturn. The events of 2008-09 also resulted in a consensus view that the U.S. SAAR wouldn't reach & sustain a 17 million unit pace. The end result was that despite a strong 2010-2020 recovery, a meaningful expansion of Pickup Truck demand & the emergence of *EV/Car of the Future* trends, only a handful of auto stocks managed to re-rate higher. We continue to believe the industry's performance through the current downturn will likely settle many prior bull/bear debates, shaping equity multiples for years to come. Though the current environment is still characterized by uncertainty, we believe the auto industry has weathered the downturn far better than many expected. First, we saw limited balance sheet distress thanks to fortified liquidity positions and access to capital. Second, price/mix actually strengthened throughout the downturn, driven by the U.S. inventory de-stock caused by Q2 production shutdowns and stronger retail demand. Third, on the topic of retail demand, we continue to see a path to a structurally higher SAAR (~18 million units) driven partially by de-urbanization trends observed in our vehicle density survey. Fourth, similar to what we observed in H2 2009, we saw evidence in H2 2020 that companies were emerging from the downturn with structurally higher EPS power—as incremental margins exceeded decrementals in some cases. Lastly, as discussed further below, the acceleration of investments into *EV/Car of the Future* trends should benefit select companies.

- **Remain Bullish but Selective into 2021** — From a cyclical perspective, the setup into 2021 still reminds us of the setup post 2009. First, we expect U.S. dealer inventory to enter 2021 at far below normal levels. Second, as mentioned, we continue to see a path towards an ~18 million SAAR—with recent months' sales trends supporting our thesis. Though we're not modeling such SAAR upside in 2021, the backdrop of stronger demand & low inventory should yield a favorable price/mix outcome—benefiting automakers and suppliers alike. Recall that post the 2009 downturn, it took about ~2 years for U.S. dealer inventory to normalize, and that was under a very slow demand recovery. From a global auto production perspective, third-party production forecasts also seem somewhat conservative to us, reminding us of the post-2009 setup when similar forecasts implied that it would take years to return to pre-downturn levels. Taken together, we see a favorable setup on the volume and price/mix portions of the earnings bridge—particularly in North America and even more particularly in end-markets like Pickup Trucks. Below the top-line, the cost side of the equation does appear mixed, with tailwinds coming from 2020 restructuring actions but headwinds emerging from commodity/freight costs. Taken together, our selectivity process favors companies most exposed to North America + Pickup Trucks, and where a good track record of cost management exists.

- **EV/Car of the Future Trends Accelerating**— 2020 saw a significant acceleration in *EV/Car of the Future* trends, and we expect a continuation of this in 2021. We continue to view this secular theme as not being about one particularly technology, but rather a broader shift towards vehicle platforms that offer fundamentally lower operating cost/mile + higher revenue/mile—ultimately culminating in entirely new business models for automakers and mobility platforms. Though there will likely be winners & losers throughout the journey (requiring a disciplined investment selectivity process), it is also important to recognize that the TAM is expanding meaningfully—so we look for stocks where there is a clear disconnect on this front.

- **Rideshare: Recovery + Higher Earnings Power + Looming Rideshare 2.0**— Despite a very difficult environment for rideshare throughout 2020, we've remained bullish on the shares of Uber and Lyft. Our view has been predicated on both companies reducing their breakeven levels throughout the downturn, and in Uber's case, a significant growth acceleration in the Delivery business. Heading into 2021, we continue to see a favorable setup mainly owing to an expected recovery in ride volume post-vaccine, per our survey work. We also believe 2021 will be important in the journey towards what we call Rideshare 2.0—whereby we expect the far lower AV-EV cost/mile to unlock a substantially higher rideshare TAM with better platform economics. We thought the recent Lyft-Motional announcement was important in that regard, and we see scope for Uber to take similar strategic actions in 2021. We do not think that any of the long-term benefits of Rideshare 2.0 are currently embedded in Uber and Lyft shares.

Figure 42. EV/Car of the Future—Quick Guide

	Car of the Past	EV/Car of the Future
Operating Cost/Mile	$0.50	$0.14
Performance		+
User Experience		+
Safety		+
Regulatory / Envrionmental		+
New Revenue Streams		+
New Business Models		+
Upfront Cost		Improving
Importance of Brand	-------SAME-------	
Importance of Design	-------SAME-------	
Importance of Quality/Service	-------SAME-------	

Source: Citi Research

Figure 43. EV/Car of the Future—Quick Guide

	Automakers	Suppliers
Opportunities	- New revenue streams - New high-margin biz models - Structurally higher margins - Share gains - New or revived brands	- More content - Automaker need for speed lends greater supplier reliance - Software margins
Risks	- New competition - For ICE players, a potential tipping point whereby ICE demand declines - Execution, need for speed	- OEM insourcing - Program management - For ICE players, a potential tipping point whereby ICE demand declines
Stock Approach	Disciplined bottom-up analytical approach to evaluate defensive & offensive attributes. Consider automakers who exhibit both	Generally favor ADAS/AV and electronics suppliers with the least ICE exposure

Source: Citi Research

- **Auto Stocks: Risk/Reward Selectivity Process**— All-told, we remain constructive on U.S. Autos albeit with a selective approach. GM remains our Top Pick (1H) with a clearer path towards our >$100 LT upside potential path (Pickup Trucks + EV accretion + AV leadership + expanding TAM). We view GM as having the biggest gap between perception and reality in our coverage. We're also Buy-rated (1H) on Fisker Inc., which fits well within our *EV/Car of the Future* thesis. Our supplier Buy-rated stocks include Magna, Aptiv, Axle (1H). Heading into 2021, we remain Sell (3H) rated on Tesla. The thesis there is simple—we believe current valuations reflect expectations (~20mln units by ~2030, L4 RoboTaxi leadership) that are either simply too high (with recent datapoints not providing support to those outcomes) or that are available to other companies trading at a fraction of Tesla's valuation. While Tesla executed very well throughout 2020 and does sport key advantages in the *EV/Car of the Future* race, we see better risk/reward opportunities elsewhere at these valuations.

U.S. Autos: Top Buys and Sells

	Ticker	Rating	Price (7/7/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
General Motors	**GM**	**Buy/High Risk**	**$42.03**	**$60**	**-**	**+43%**	**7.1x**	**-**	**-**
Arguably the best positioned Global Automaker & Mobility provider—Pickup Trucks, no Europe, EV tech & accretion potential, Cruise AV. Valuation reflects little of this.									
Top Sells									
Tesla	**TSLA**	**Sell/High Risk**	**$655.9**	**$137**	**-**	**-79%**	**168.4x**	**-**	**--**
Execution has clearly improved, but prevailing expectations (20mln units by ~2030, L4 RoboTaxi network) simply too high and not supported by recent datapoints									

Source: Citi Research

Engineering & Construction

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Companies mentioned: (ACM.N; US$47.78; 1; 18 Dec 20; 16:00); (MTZ.N; US$66.08; 1; 18 Dec 20; 16:00); (J.N; US$106.58; 1; 18 Dec 20; 16:00); (KBR.N; US$29.47; 1; 18 Dec 20; 16:00); (FLR.N; US$16.37; 2; 18 Dec 20; 16:00)

The Road to Recovery should continue in 2021

Biden presidency could benefit end markets such as Infrastructure (ACM and J), Renewables, Communication (MTZ), and Water/Environmental (ACM and J); Capital Deployment a prominent theme in '21.

- Despite the sector's recent run, we continue to see select pockets of opportunity in E&Cs as ramping availability of vaccines/easing COVID overhang, generally healthy end market visibility, ongoing "self-help" initiatives, and an incoming Biden AdminIstration could support further re-rating of the sector heading into '21. Relative valuation to the S&P, while close to pre-COVID levels, still looks attractive (0.70x vs 10yr avg of 0.86x). While current rising infections remain a watch item, we think project activity/demand trends across our end markets could continue to improve as global economies gradually re-open and the recovery could accelerate as the global population is inoculated over the next few months. Capital deployment through M&A and share repurchases could continue to ramp-up across most of our coverage given relatively robust balance sheets and healthy cash generation. Our top picks are ACM, KBR, and J.

- **COVID Overhang Could Linger But End Markets Relatively Resilient** — Utilities and Communications remain our preferred end markets heading into FY21 supported by megatrend tailwinds such as grid modernization (aging infrastructure + fire/storm hardening) and renewables (growing adoption of clean energy/Electric Vehicle) and the eventual 5G build out (favoring MTZ). Infrastructure could still see some tailwinds in 2021, despite lower likelihood of a large infrastrucutre bill under a narrowly divided Congress, as bipartisan interests could support a replacement of the FAST Act. While state/local government budget deficits remain elevated, negotiations for a ~$900bn stimulus package appear to be gaining traction, which if passed, could be an incremental tailwind to the sector (benefitting ACM and J). Government Services could stay relatively resilient despite muted expectations around the defense budget. Rising oil prices (Brent over $50/bbl) + abating COVID headwinds could improve demand trends around fuel consumption (more flights + miles driven) and support a gradual pick-up in Energy end markets.

- **Change in Administration is Good For E&Cs (mostly)** — The incoming Biden administration benefits several E&C end markets over the next few years given a likely focus on infrastructure (ACM and J); renewables/alternative energy (grid modernization investments to enable renewables/EV); and 5G and faster broadband access in rural parts of the country (benefits MTZ); building/modernization of US water infrastructure (bodes well for both ACM and J). On the flip side, we think Energy end markets could see relatively more stringent environmental regulations and a faster shift toward renewables/clean energy (negative for FLR and MTZ).

- **Capital Deployment Could Be Supportive of Growth** — Healthy balance sheets coming out of the Pandemic coupled with lower for longer interest rates positions our E&Cs to deploy capital through strategic M&A and/or share repurchases. We have already started to see companies deploy their capital deployment playbook – J took a 65% ownership stake in PA consulting; ACM recently authorized $1bn in share repurchases (in addition to $300mn repurchase announced for FY1Q21); MTZ has publically talked about an active pipeline of M&A opportunities; KBR acquired Centauri (and could buy back stock in the future).

Figure 44. Relative Valuation still attractive

Source: Citi Research; FactSet

Figure 45. E&C balance sheets remain healthy

Ticker	Net Debt	FY21 EBITDA	Net Debt/ EBITDA
ACM	$377	$810	0.5x
KBR*	$1,076	$537	2.0x
J	$815	$1,131	0.7x
MTZ	$1,065	$748	1.4x
FLR	-$374	$433	NM

Source: Citi Research; Note: Does not include acquisitions that are still not complete; KBR net debt is pro-forma

- **Top Pick: ACM** — ACM has ratcheted-up self-activism by accelerating the pace of its strategic plans – taking-out cost and buying back shares ($1bn repurchase authorized). ACM is simplifying its portfolio/operating structure and transforming to a pure-play professional service player. Potential stimulus/bigger FAST Act replacement could further support already robust backlog.

- **Top Pick: KBR** — KBR's ongoing portfolio transformation to a government service provider (~80% exposure to GS in FY21 vs. ~70% in FY20) along with the exit of fixed price Energy-related EPC work should further reduce the cyclicality of KBR's earnings. Still relatively healthy B/S post Centauri acquisition (~2.5x net leverage per KBR) coupled with solid cash generation could support additional (tuck-in) M&A and/or share repurchases over the course of '21.

- **Top Pick: J** — J's end markets offer a good mix of resiliency and growth – Govt. Services could stay relatively resilient in the near-term and could grow LSD-MSD in the LT. Infrastructure spending could accelerate given potential bi-partisan support. Execution remains solid and J continues to strategically deploy capital (ownership stake in PA consulting), which we think could continue given still relatively healthy b/s (pro-forma leverage ~2x) and improving cash profile.

- **Who Is Lagging In The Recovery? FLR** — Given energy-related large project activity might not recover until 2022 or later, bookings could stay relatively muted in '21. LNG Canada remains a "watch-item" in late '21/early '22 as the company reaches on-site erection - potential execution noise could weigh on shares.

Engineering & Construction: Top Buys

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
AECOM	ACM	Buy	$47.92	$61.0	0.0%	27.3%	18.1x	1.9x	9.5%
Cost-outs and share buybacks should support profitability and any incremental infrastructure spend (potential stimulus + FAST Act replacement) could drive further upside.									
KBR	KBR	Buy	$28.51	$30.0	1.4%	6.6%	14.3x	2.1x	14.2%
Ongoing portfolio transition toward government service player/de-emphasis of energy exposure should support multiple re-rating toward GS peers over time.									
Jacobs	J	Buy	$107.00	$125.0	0.7%	17.5%	18.8x	2.1x	9.7%
Resiliency in GS and potential for higher infrastructure spending could support earnings growth and a relatively heathy B/S could support value accretive capital deployment.									

Source: Citi Research

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Companies mentioned: (MLM.N; US$276.35; 1; 18 Dec 20; 16:00); (VMC.N; US$145.22; 1; 18 Dec 20; 16:00); (FOR.N; US$20.77; 1H; 18 Dec 20; 16:00); (DHI.N; US$73.23; 1; 18 Dec 20; 16:00); (EXP.N; US$100.01; 1; 18 Dec 20; 16:00); (OC.N; US$76.91; 2; 18 Dec 20; 16:00); (TOL.N; US$46.25; 2; 18 Dec 20; 16:00)

Homebuilding & Building Products

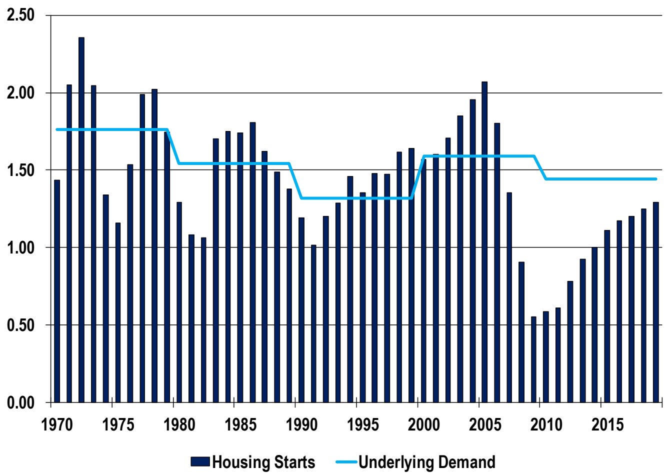
Ample Runway for Builders in ’21 (and Beyond)

Heading into 2021 US housing activity is seeing a sharp V-shaped recovery. With capacity constraints coming into focus, we prefer Builders with production capacity to meet current demand, as well as expected sustained demand growth in 2022+.

- **Builders: Secular drivers intact despite rate concerns** — Homebuilders outperformed in 2020 as COVID-19 drove consumer spending to the home. That said, our Homebuilder coverage has traded with greater volatility in 4Q ’20 driven by a combination of: 1) year-end profit-taking following strong 3Q earnings, 2) concerns around rising rates resulting from a vaccine (sharpest stock declines over the past 3 months have coincided with increases in treasury rates and positive vaccine data), and 3) industry data (new home sales, starts, etc.) shifting from blowing past expectations (in April-August) to being more in-line/modestly above cons (September-November). While we expect Homebuilding stocks to be sensitive to near-term investor sentiment on rates, our long-term positive view isn’t particularly driven by lockdown fears or vaccine optimism. The main drivers of our Buy thesis largely preceded or are independent of COVID-19: 1) Underbuilt housing stock preceded the pandemic (housing inventories remain at historic lows following a decade of underbuilding; fig. 1); 2) Millennial demographic shift (higher than average birth rates during the ’45-’60 period as well as the ’85-’95 period are now translating into Millennials entering the market for the first time and Boomers retiring and potentially downsizing); 3) De-urbanization began before the pandemic (COVID-19 has accelerated de-urbanization and Sun Belt migration though the trend can be traced at least back to the 2017 Tax Cuts & Jobs Act, which capped SALT deductions); 4) We ultimately don’t see a path to a rapid increase in rates in ’21 (while we recognize some upside risk to rates from a vaccine, Citi’s Economics team has detailed why they may remain low throughout ‘21).

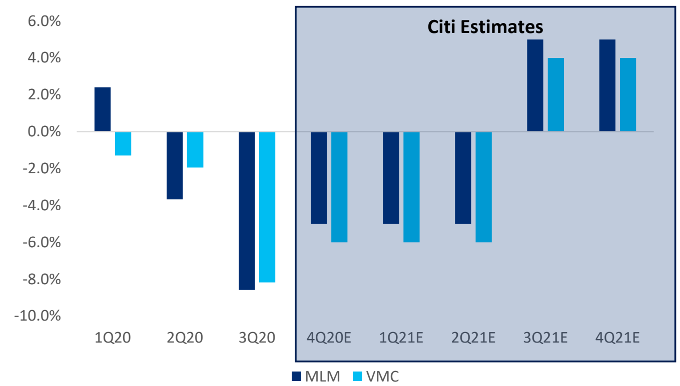
- **Building Products: Expect an “air pocket” through 1H ‘21** — While we expect improvement in underlying economic conditions, long infrastructure backlogs in the industry mean that Construction Materials will see a more U-shaped recovery pattern (vs Builders’ V-shape), and likely experience a demand “air pocket” in 1H ’21 (Figure 2). We expect a return to Y/Y growth in 2H ’21 on easier comps and improving economic activity. Despite softer vols through 1H, we expect gross margins to hold up thanks to price resilience and lower hydrocarbon costs. Further, bellwether producers MLM & VMC discussed an expected timeline for a FAST Act replacement (by mid to late ’21), which should support further demand growth in 2022. Infrastructure is broadly viewed as commanding bipartisan support and we view two proposed bills as likely forming the starting point of negotiations: the $287B, 5-year senate EPW Committee bill introduced in 2019 (est. ~28% increase from FAST Act levels) and the more recent House INVEST in America Act (includes $319B for highways over 5 years, est. ~42% increase).

Figure 46. Annual Level of Housing Starts



Source: Citi Research, FEA, Census Bureau

Figure 47. Citi Aggregates Vol Growth Ests.



Source: Citi Research, Company Reports

- **Capacity constrained names could lag** – Neutral-rated OC, though exposed to strength in US residential construction and repair & remodel activity, saw Roofing volumes meaningfully underperform the industry due to capacity limitations, and expects Insulation volume to do the same in the near-term. On the Builder side, TOL, like other builders, has seen strong sales growth, though capacity constraints have led the company to not only raise prices, but also place certain communities on allocation (limited lot releases).

Homebuilding & Building Products: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Forestar	**FOR**	**Buy/H**	**$20.00**	**$26.00**	**0.0%**	**30.0%**	**11.5x**	**1.0x**	**9.2%**
Attractive vehicle for exposure to a post-Coronavirus recovery in housing; “built-in” pipeline of demand from majority owner DHI									
D. R. Horton	**DHI**	**Buy**	**$73.47**	**$85.00**	**1.1%**	**16.8%**	**9.4x**	**1.8x**	**21.9%**
Exposure to faster growing categories such as entry-level & first-time buyers along with industry leading absorption pace & inventory turns									
Eagle Materials	**EXP**	**Buy**	**$100.04**	**$110.00**	**0.0%**	**10.0%**	**15.5x**	**3.3x**	**26.8%**
Wallboard to benefit from strong resi; Cement geographic footprint seeing more resilient demand vs peers									

Source: Citi Research

Machinery

Further Room to Run in 2021

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Companies mentioned: (AGCO.N; US$99.80; 1; 17 Dec 20; 16:00); (ALSN.N; US$42.96; 2; 17 Dec 20; 16:00); (CMI.N; US$223.43; 1; 17 Dec 20; 16:00); (OSK.N; US$86.28; 1; 17 Dec 20; 16:00); (PCAR.O; US$85.77; 1; 17 Dec 20; 16:00); (CAT.N; US$179.17; 1; 17 Dec 20; 16:00); (TKR.N; US$76.23; 1; 17 Dec 20; 16:00); (TEX.N; US$36.03; 1; 17 Dec 20; 16:00)

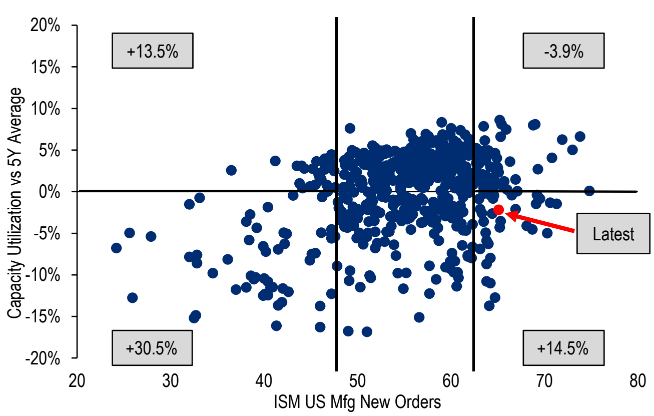
Alternative power sources and renewable energy are an increasing focus in the sector globally, and we expect it to continue / accelerate under a Biden Administration. CMI appears well-positioned most notably with its hydrogen investments and TKR has stepped-up its renewables focus whereas CAT, ALSN and PCAR are names that could see some multiple compression should traditional energy slow.

- **Room to Run** — The 67.9 October ISM New Order print may or may not mark the peak of this cycle but either way we would not interpret it as a signal that the best is behind for Machinery stocks. We find the combination of new orders and US factory capacity utilization has been a helpful predictor of equity returns. The current macro is similar to the bottom right quadrant in the left chart below and in similar environments our Machinery index posted +14% avg. returns in the NTM.

- **Non-Res Question Mark** — Despite disruptions from COVID, non-res spending held-in relatively well in 2020 due in part to the long-duration of construction projects. With non-res starts projected to decline by ~20% in 2020, the road gets a lot tougher in 2021 & 2022 as yr-end backlogs are set to decline for the first time in a decade. We acknowledge a bearish non-res view may be consensus but the duration of the headwind from 2020's starts may be under-appreciated.

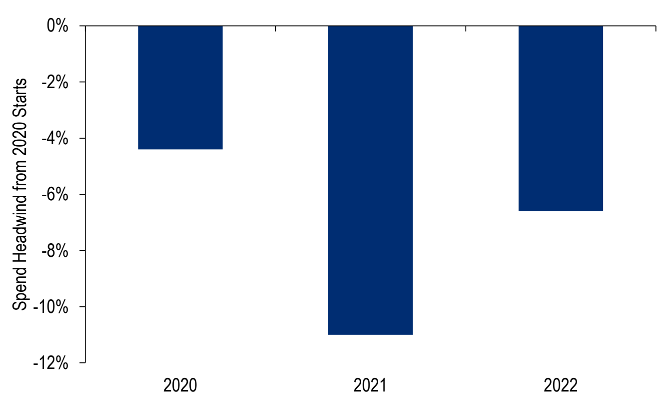
- **Puts & Takes in Other End Markets** — The number of industrial sectors that are declining on a year/year basis has likely peaked and the sharp bounce-back in durable goods orders further supports this. Across these various end markets, we see significant upside in the energy patch as Citi is forecasting a doubling in the NA rig count from the 3Q20 bottom by the end of 2021. Conversely, we see risk to roadbuilding and other muni-exposed markets with recent checks noting major funding gaps at the state / local level with COVID-19 impacting finances. State / local support is a key watch item in proposed federal stimulus plans.

Figure 48. Capacity Utilization Below Avg. / ISM New Orders Well Above Average; Machinery Historically Posted +14% Returns Over NTM



Source: Federal Reserve, ISM, Haver, Factset, Citi Research

Figure 49. FY20 Non-Res Construction Starts Have a Pronounced Impact on 2021 and 2022 Spend



Source: Citi Research

- **Access Equipment Outlook** — We see OSK and TEX (both Buy-rated) as beneficiaries of an attractive mult-year growth outlook for aerial demand in North America. Recent industry data points reinforce our view that utilization rates have stabilized at a faster than expected pace and should support higher investment. Even with risk in non-res, we see a multi-year, replacement-driven upcycle.

- **Ag Equipment Outlook** — Dealers in NA have become increasingly positive in recent months and are more optimistic on the outlook for 2021. A sharp increase in row crop prices has contributed to a pick-up in quoting activity and Citi's Commodity Strategists see further upside to row crop prices over the next year. Ag equipment inventories are also low (both new and used), further supporting a constructive outlook for the OEMs in 2021. We are Buy-rated on AGCO.

- **Commercial Vehicles Outlook** — We are cognizant of the "peak cycle" narrative that has weighed on TL multiples but would argue that it is too early in the order cycle to discount a peak for the most-exposed Machinery stocks. We are closely watching spot rates which have been a key lead indicator for us and they remain supportive of ongoing investment in our view. Dealer inventories have been reduced and factory lead times have started to extend, pointing to a constructive backdrop for the OEMs in 2021. We are Buy-rated on PCAR and CMI.

- **Watch the Supply Chains** — Across many of our OEMs, we are hearing of COVID-related supply chain issues that may threaten the ability to ramp-up. In some cases suppliers have struggled to ramp-up production after letting go / furloughing employees. A vast majority of supply managers in Midwest states, home base for many Machinery suppliers, are reporting labor shortages. Trade reports also suggest that certain steel grades are coming in to increasingly short supply. The supply chains for Machinery companies bear watching into 2021.

- **Managing through Energy Transition** — We expect energy transition will remain an ongoing risk for machinery companies exposed to traditional energy markets. We would highlight ALSN and CAT for their direct exposure to energy production. We would also highlight PCAR for its exposure to diesel commercial vehicles but note it is partnering on zero carbon vehicles.

Machnery: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Cummins	**CMI**	**Buy**	**$223.43**	**$260**	**2.4%**	**18.7%**	**20x**	**4.18x**	**20.48%**
We see favorable NA cycle timing and further upside potential in Aftermarket/Parts leaves room to run for CMI.									
OshKosh	**OSK**	**Buy**	**$86.28**	**$100**	**1.5%**	**17.4%**	**18x**	**1.88x**	**11.91%**
We believe OSK has meaningful potential upside in Access driven by a multi-year rental replacement cycle, and margin benefits from internal initatives.									
Terex	**TEX**	**Buy**	**$36.03**	**$45**	**0.0%**	**24.8%**	**21x**	**2.74x**	**1.47%**
TEX large rental customers aggressively pushed out capex in 2020 driving fleet ages to cycle highs and we see meaningful upside to industry shipments starting in 2021.									

Source: Citi Research

Multi-Industry

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Companies mentioned: (DOV.N; US$123.76; 1; 17 Dec 20; 16:00); (EMR.N; US$81.16; 1; 17 Dec 20; 16:00); (FTV.N; US$69.33; 1; 17 Dec 20; 16:00); (ROK.N; US$247.19; 1; 17 Dec 20; 16:00); (APG.N; US$17.85; 1; 17 Dec 20; 16:00); (VRT.N; US$19.28; 1H; 17 Dec 20; 16:00); (VNT.N; US$33.50; 1; 17 Dec 20; 16:00); (GE.N; US$10.88; 1; 17 Dec 20; 16:00); (TT.N; US$140.97; 1; 17 Dec 20; 16:00); (PNR.N; US$52.77; 1; 17 Dec 20; 16:00); (CFX.N; US$36.99; 3; 17 Dec 20; 16:00); (HON.N; US$211.94; 1; 17 Dec 20; 16:00); (GTES.N; US$13.26; 1; 17 Dec 20; 16:00)

Industrial Recovery Has Room To Run

Broad-based industrial recovery should continue to gain traction as economic activity accelerates with widening vaccine distribution; we prefer balanced/diversified exposure and see runway for some “pandemic beneficiaries” to sustain better-than-expected growth.

- **Recovery Gathering Momentum** — Expansionary PMIs, favorable credit conditions, and potential re-stock/pent-up demand are a positive backdrop that, despite potential near-term COVID-19 related hiccups should support good recovery in most industrial end markets in 2021. We prefer companies with a balanced/diversified mix of end market/cyclical exposure + self-help (DOV, HON, EMR, FTV); select “early cycle” names (ROK, GTES); and emerging L-T growers (APG, VRT, VNT). Secular HVAC themes remain intact and coupled w/cyclical upside in transport refrigeration should support TT. Finally, GE has run off recent lows, but multi-year FCF improvement runway and improving visibility to Aero recovery in 2021 could drive shares higher.

- **Broad Strength Emerging** — Aside from concerns relative to potential incremental weakness in non-resi/HVAC, most Multis' end markets should continue to recover. A combination of cyclical recovery in markets such as Aerospace and Energy as well as emerging secular tailwinds in areas such as automation, datacenters, IoT and HVAC should continue to gain traction. We favor relatively balanced early/later cycle exposure and overall, we view Multis as largely positioned for relatively sustainable recovery over the course of 2021, albeit with some potential choppiness as COVID infections – and related counter-measures – fluctuate globally.

- **Don’t Pigeonhole “Early” vs. “Late” Cycle** — Prior “pandemic laggards” such as energy exposed EMR and aero exposed GE are poised for incremental gains, but we also think that simply rotating away from perceived “pandemic winners” is an overly simplified approach that risks missing out on what could be more sustainable emerging trends for recent “winners” such as ROK and PNR. We think the pandemic has strengthened/accelerated trends that were already underway pre-pandemic and should support better-than expected growth on a relatively sustained basis in certain end markets over the next 12-24 months. Factory/warehouse automation; de-urbanization/residential improvement; and life sciences investment are areas that have all seen pandemic related tailwinds but that we think could see persistent growth even in a post-pandemic environment. Below, we highlight more details on Top Picks EMR, DOV, and GE.

- **EMR To Benefit From Cyclical Recovery + Cost Out** — EMR remains well positioned in automation end markets and is also levered to what we view as sustainable tailwinds in residential related investment through the Consumer & Residential Solutions business that accounts for ~35% of revenue. Automation Solutions appears to be turning the corner with recent improvement in trailing 3-months orders and aggressive corporate restructuring continues with an expected ~$200mn+ in restructuring actions anticipated in FY21 that will come on top of ~$400mn in restructuring spend in FY19-FY20. EMR’s strong balance sheet and active capital allocation should also continue and be supportive of EPS growth.

- **DOV’s Solid Execution Still Has Room To Run** — We view DOV as well positioned into 2021 as DOV's portfolio of niche businesses and ongoing cost out opportunities create a favorable outlook for the stock. We believe that DOV's mix of short cycle and longer cycle end markets could support a return to growth as recent strength in end markets such as food retail, marking & coding and biopharma should endure. DOV should also be able to continue its $50mn of annual cost reduction with further runway in IT footprint and back office reduction. Finally, DOV is also well positioned for capital allocation opportunities into 2021 as good balance sheet flexibility and FCF generation should support potentially accelerating capital deployment in a recovering economics environment.

- **GE Turnaround Gaining Momentum in '21** — Pandemic-related aerospace headwinds have been a material headwind in 2020 but we think represent a delay, not a derailment of GE's multi-year turnaround efforts. While a significant down-cycle in commercial aviation (and to a much lesser extent, some headwinds in portions of GE's Healthcare business) weighs on near-term results, we think GE has continued to focus on managing what is within its own control and with a continued focus toward driving significantly improved FCF performance over the coming years. Our sense is that GE is focused on materially lowering its cost base in 2020 such that, profitability and more importantly cash generation, should see sustainable multi-year improvement from both a 2020 cyclical low (we model -$1.2bn) and vs. recent pre-pandemic levels ($2.3bn in 2019). Finally, recent balance sheet/financial developments and a regulatory settlement we think continue to reduce liabilities that should ultimately support shareholder value accretion.

- **Who is left behind in the recovery?** Sell-rated CFX we think remains at risk in the near-term of lingering pressure/headwinds in its MedTech segment as elective surgeries are delayed given rising COVID infections/hospitalizations. We note too that rising input costs are a watch item across much of our coverage and for CFX in particular, could weigh on margin performance in its FabTech business.

Diversified Industrials: Top Buys and Sells

			Price	Target	Yield	ETR	2021E		
	Ticker	Rating	(12/17/20)	Price	(%)	(%)	P/E	P/BV	ROE
Top Buys									
Emerson Electric	**EMR**	**Buy**	**$81.16**	**$93.00**	**1.8%**	**17.1%**	**23.5x**	**5.9x**	**22.1%**
Recovering end markets, lareg-scale cost out activity, and continued solid cash generation should support multi-year EPS growth runway.									
Dover Corporation	**DOV**	**Buy**	**$123.76**	**$145.00**	**1.6%**	**18.8%**	**20.3x**	**5.6x**	**23.2%**
Continued strong execution, resilient niche end markets and good FCF position DOV well to for consistent y/y EPS growth in an economic recovery.									
General Electric Company	**GE**	**Buy**	**$10.88**	**$14.00**	**0.4%**	**29.0%**	**31.5x**	**2.6x**	**8.6%**
Multi-year turnaround gaining traction as operational focus continues to increase and should drive significantly improving FCF over the next several years.									
Top Sells									
Colfax Corporation	**CFX**	**Sell**	**$36.99**	**$35.00**	**N/A**	**-5.4%**	**18.9x**	**1.1x**	**3.9%**
Slower to recover elective surgeries (given rising COVID instances) could weigh on MedTech in the near-term; potential price vs. cost headwinds in Fabrication Technology.									

Source: Citi Research

Transportation

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Companies mentioned: (FDX.N; US$292.26; 1; 17 Dec 20; 16:00); (XPO.N; US$119.18; 1; 17 Dec 20; 16:00); (SB.N; US$1.16; 3H; 17 Dec 20; 16:00); (NSC.N; US$230.69; 1; 17 Dec 20; 16:00); (UNP.N; US$202.20; 1; 17 Dec 20; 16:00); (ARCB.O; US$42.57; 1; 17 Dec 20; 16:00); (CHRW.O; US$92.29; 1; 17 Dec 20; 16:00); (CMRE.N; US$7.93; 1; 17 Dec 20; 16:00); (EURN.N; US$8.24; 1; 17 Dec 20; 16:00); (KSU.N; US$196.62; 1; 17 Dec 20; 16:00); (HMLP.N; US$14.01; 3; 17 Dec 20; 16:00)

Riding the Freight Transportation Cycle

We believe the potential for a reflation of global trade, a recovery in US industrial activity, and continued strength in US ecommerce sales (and overall consumer activity) should provide a positive fundamental backdrop for freight transportation stocks in 2021. That said, at this point in the cycle we prefer the "new" PSR rail stories, the LTL carriers, asset light logistics/brokers, and the parcel carriers (specifically FedEx), while we believe select shipping stocks have the greatest downside risk.

- **Freight Volume Growth Improving Following COVID-related Downturn** — Volumes declined across most areas of the freight transportation market in 2020. Class 1 rail volumes declined 8% YoY year-to-date through early-December, with coal and intermodal contributing the most to the decline on an absolute basis. Trucking volume decreased 4% YoY year-to-date through October, based on the ATA's seasonally adjusted for-hire truck tonnage index, driven by declines in industrial-related tonnage while retail-related tonnage (particularly for "essential goods") has performed better and benefitted the large public TLs. Within airfreight, total air cargo revenue ton miles for U.S. carriers increased 4% YoY through September, driven by strength in domestic markets (+12% YoY). Despite the overall softness of freight volumes YTD, we note that the current volume growth trend is positive, with Class 1 carloads up 3% YoY in November, air cargo RTMs for U.S. carriers up 16% YoY in September, and trucking volume growth mixed but still better than April-May lows. In 2021 we expect the publicly-traded Class 1 rails to post ~MSD-HSD YoY volume growth, our covered Asset-based LTL carriers to post 7% YoY tonnage growth on average, and also believe that parcel carriers are positioned to grow volumes.

- **Outlook for Rails in 2021** — Going into 2021 we believe the Class 1 rails are well positioned to benefit from an improving fundamental backdrop, and as volume recovers we do not expect resources to return at the same pace, which (coupled with pricing/yield tailwinds due to strong TL contract rates and mix flipping positive after 1Q) we believe can help the group produce ~50-80% incremental margins for the year and 20% EPS growth on average. We expect the US rails to outperform the Canadian rails from an EPS growth perspective in 2021-2022 and continue to prefer the "new" PSR stories (Kansas City Southern, Norfolk Southern, and Union Pacific), as we believe they have relatively larger OR improvement potential. We rank KCS at the top of the rail group given that we believe it has the most upside to consensus in 2021 (we are 6% higher) and has the potential to generate a mid-50% OR and ~$12 in EPS by 2023.

- **Outlook for Parcel/Airfreight in 2021** — The COVID-19 pandemic created a structural change in supply/demand for parcel delivery by filling carriers' networks and unlocking operating leverage and pricing power (as evidenced by peak surcharges and recent contract renewals). We believe 10% price increases are possible in Ground/Domestic in 2021 and ultimately we believe tight capacity has helped flip ecommerce from a headwind to a tailwind in ground, as higher pricing can reduce the negative headwinds associated with lower residential delivery density. Ecommerce is a strong theme across the parcel delivery industry and our top pick is Buy-rated FedEx, where we believe the stars are aligning. We believe FedEx will benefit from a reflation of global trade that will help unlock Express earnings power (also benefitting from vaccine short-term and TNT longer-term), and ultimately we believe the multi-year bull case for FedEx is $500.

- **Outlook for Trucking/Logistics in 2021** — We believe the maturing trucking cycle favors LTL stocks, and we are Buy-rated on XPO Logistics and ArcBest. XPO is our top pick as its leverage to an improving LTL cycle should drive strong overall 2021 EBITDA growth and its potential spin-off can act as a catalyst (our SOTP valuation yields ~$140-150/share). We also believe the maturing freight cycle supports fundamentals for asset light logistics companies, and in our opinion Buy-rated C.H. Robinson is well positioned to benefit from this dynamic given that strong TL fundamentals can support NAST net revenue growth in 2021, which coupled with opex management vs. 2018 (previous peak) can generate $5 in 2021 EPS (18% above consensus). Alternatively, we recently downgraded the TL group as we believe the market is likely to factor in a 2021 peak until proven wrong, and incremental data points are likely to be challenging.

- **Outlook for Shipping in 2021** — Our 2021 outlook is mixed across shipping. For container shipping, we are largely positive on the fundamental outlook, as inventory levels are likely to remain low well into 2021 and ultimately we expect containership demand growth of 9.5% to modestly exceed supply growth of 8.7%. Buy-rated Costamare is our top pick in this space. For tankers, VLCC rates were very strong in 1H20 as contango-driven storage (reducing the active tanker fleet in 1H20) provided a tailwind, but rates have sinced moved lower, and if the market were to improve from current levels we believe the best play in this space is Buy-rated Euronav. We are less constructive on dry bulk and LNG shipping, based on less supportive backdrops.

- **Select Shipping Stocks Have Greatest Downside Risk** – We believe Sell-rated Hoegh LNG Partners and Safe Bulkers have the greatest downside risk in 2021. Our bearish outlook for Hoegh LNG Partners is based on our outlook for a challenging LNG shipping market and the view that market rates for FSRUs are below the rate at which the company's parent is chartering one of Hoegh LNG Partner's vessels, putting future cash flows at risk (our valuation assumes 50% probability of 50% div. reduction). Our bearish outlook for Safe Bulkers is based on our view that the dry bulk market is particularly susceptible to the impacts of the ongoing COVID-19 outbreak, which we believe will lead to a slow recovery in rates and asset values, resulting in significant risk given that Safe Bulkers trades at a substantial premium to our NAV/share estimate.

Transportation: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
FedEx Corp.	FDX	Buy	$292.26	$365	0.9%	25.8%	15.6x	3.5x	24.2%
Ecommerce has flipped to a tailwind in Ground, capacity can remain tight (sustaining pricing), reflation of global trade/B2B/vaccine/TNT drives Express, and $500 bull case.									
Kansas City Southern	KSU	Buy	$196.62	$220	0.9%	12.8%	21.9x	4.5x	20.2%
We believe successful PSR execution could yield $12 in 2023 earnings power, which at a 20x multiple can yield multi-year upside to $240.									
XPO Logistics	XPO	Buy	$119.18	$138	0.0%	15.8%	32.2x	3.1x	12.3%
Leverage to an improving LTL cycle supports strong overall 2021 EBITDA growth and it has a potential spin-off catalyst (our SOTP valuation yields ~$140-150/share).									
Top Sells									
Höegh LNG Partners	HMLP	Sell	$14.01	$10	12.6%	-16.1%	9.5x	1.0x	10.4%
Outlook for a challenging LNG/FSRU shipping market puts future cash flows at risk (valuation assumes 50% probability of 50% distribution reduction).									
Safe Bulkers	SB	Sell/High Risk	$1.16	$0.45	0.0%	-61.2%	-30.7x	0.2x	-0.7%
The dry bulk market is particularly susceptible to the impacts of the ongoing COVID-19 outbreak, which we believe will lead to a slow recovery in rates and asset values.									

Source: Citi Research; Note: 2021 estimates for FedEx are based on Fiscal Year 2021 (ended May 31st).

Materials

Chemicals & Ag

Industrial Recovery to Lift Chemicals into 2021

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Companies mentioned: (FMC.N; US$115.62; 1; 17 Dec 20; 16:00); (LIN.N; US$256.63; 1; 17 Dec 20; 16:00); (PPG.N; US$144.29; 1; 17 Dec 20; 16:00); (NTR.N; US$48.45; 1; 17 Dec 20; 16:00); (ECL.N; US$220.61; 2; 17 Dec 20; 16:00); (IFF.N; US$113.58; 2; 17 Dec 20; 16:00); (PQG.N; US$12.82; 2; 17 Dec 20; 16:00); (TSE.N; US$47.84; 2; 17 Dec 20; 16:00); (CTVA.N; US$39.68; 1; 17 Dec 20; 16:00)

Broadly, Chemical companies seem to be navigating the fresh round of COVID-19 lockdowns well, as the industrial recovery is powering through late in 2020. The Ag outlook is very bright into 2021, supported by rising grain prices and demand from China, which should set up a strong volume year for the industry. Our Top Picks in the sector are FMC, LIN, and PPG in that order.

- **Our Take** — We think key themes heading into 2021 for Chemicals & Ag include: 1) A robust year in Ag given rising US commodity prices, import demand from China, and continued government support; 2) An inflection in the lithium industry as improving demand relative to constrained capacity bode well for volumes and prices; and 3) A roughly flattish year for US producer integrated PE margins as rising feedstock costs should be balanced by a ramp back to pre-COVID-19 demand levels.

- **Ag: Strong Momentum Heading into 2021** — The Ag outlook has markedly improved from expectations earlier in 2020. Ultimately, we believe the momentum in Ag has support and is disconnected from the economic recovery. We expect 2021 Ag input (fertilizers, seed, and crop chemicals) volumes to benefit from higher farm incomes, as farmers are more willing to invest in their crops with higher commodity prices. In fact, NTR recently commented that its lab network has received a record number of soil samples from farmers for analysis, which is a very discretionary expenditure. Increased Ag import demand from China should also drive US volumes. China corn imports are expected to be 16.5mmt this year vs. 7.6mmt last year, as domestic corn prices are ~$10/bu. US government payments should remain supportive in 2021, but are likely to fall from highs of ~$37B this year. Next year, our Ag experts think government payments may fall to ~$13-22B, which is still above the 5-year historical average. We continue to prefer FMC and CTVA in Ag for their new product pipelines, which should translate to growth even if the Ag market is weak. Fertilizer prices remain more of a question mark than volumes in 2021, but there seems to be more upside than downside potential in pricing across NPK. The key watch point in fertilizers will be US phosphate (DAP) prices after duty rates are applied to Moroccan and Russian producers. We believe US DAP prices could settle slightly lower from current levels as trade flows are fully sorted out, but downside is limited.

- **Lithium: EV Demand to Clear Inventory Overhang** — Global EV sales have been very strong despite the lingering impacts of COVID-19, which should drive 2021 lithium volumes. Year-to-date through November, China NEV sales are up ~4% Y/Y and Europe NEV sales are up over 120%, and have picked up momentum since 1Q/2Q lows. Lithium inventory levels have started to decline with the improved demand after the industry started 2020 with 5 months excess inventory. Lithium hydroxide supply seems to be tightening fastest given rebounding battery and cathode demand, and we expect lithium carbonate supply tightness to follow. Some companies initially believed COVID-19 pushed back the EV/lithium demand curve by at least 1 year; however, the curve seems to have only steepened with new battery capacity announcements and environmental regulations. Ultimately, we anticipate 2021 to be a year when lithium volumes turn, and 2022 to be a year when pricing begins to inflect, setting the stage for a strong cycle in 2023+. In 2021, we will be paying close attention to lithium capacity expansions, as many companies are currently struggling to finance projects given depressed spot prices. The US remains a watch point and has potential to surprise to the upside if new green policies related to EVs are enacted under President-elect Biden.

- **Ethylene & PE: Higher Feedstock Cost to Balance Improving Volumes** — PE has been one of the bright spots within Chemicals during COVID-19: IHS expects total NAM PE demand to rise 3% this year. We expect PE volumes to remain fairly resilient in 2021 too, as economies rebound and some of the more positive impacts of the pandemic linger on the plastics industry (work-from-home, medical packaging, takeout, etc.). We expect the mid-2020 momentum in PE prices to slow in 2021 after 19c of price hikes from June to September. The PE market seems to have normalized after weather-related supply outages, as prices remained flat M/M in October and November. IHS currently forecasts NAM HDPE prices to fall to 50c in 1Q21 and average 52c in 2021, down from a recent high of 57c in November. Ethylene volumes should also benefit from rebounding GDP growth rates, but questions remain on feedstock costs. Citi's Commodities team expects US natural gas prices to average $3.30/mmbtu in 2021, up from $2.10/mmbtu average in 2020E. US ethane prices are likely to rise in tandem with natural gas, which could pressure ethylene margins for ethane-based producers. However, higher oil prices should somewhat balance out higher natural gas prices given chemical prices tend to rise with oil. Our Commodities team expects Brent oil to average $54/bbl in 2021 from $43/bbl this year. So, US-based producers should retain their cost advantage in 2021 (~$100/t), but it is unlikely to return to 2019 levels (~$300/t). Given these factors, we generally expect 2021 integrated PE margins to be flat to slightly up Y/Y.

- **Who is left behind in the recovery?** Among our Chemicals coverage, ECL and IFF seem to have been left behind in the 2H20 recovery due to their varying exposure to hospitality, restaurants, and travel. Both companies are historically seen as stable and relatively resilient in the event of a downturn; however, the stocks have lagged in 2020 and we expect that to continue into 2021 as the pace of the recovery remains uncertain. ECL expects challenges related to COVID-19 to linger in 1H21, and even with a vaccine, the lodging industry could take years to recover compared to restaurant demand. IFF has experienced significant headwinds in its Fine Fragrance and Food Service businesses, which will likely remain pressured into 1H21. IFF also has not provided FY guidance, citing an uncertain operating environment, which could be making potential investors uneasy.

Chemicals & Ag: Top Buys and Least Preferred

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
FMC Corp	FMC	Buy	$114.37	$127.00	1.7%	12.7%	15.8x	4.2x	28.3%
Proven execution through Ag cycles; diversification should provide stability and R&D pipeline to drive growth.									
Linde PLC	LIN	Buy	$250.13	$284.00	1.6%	15.2%	27.1x	2.9x	6.6%
Defensive portfolio with self-help levers (cost cutting and synergies); strong opportunity for pricing growth.									
PPG Industries	PPG	Buy	$142.89	$156.00	1.5%	10.7%	20.7x	8.3x	29.1%
Favorable raw material trends, plus optionality regarding activist investor involvement.									
Least Preferred									
PQ Group Hldgs	PQG	Neutral	$14.11	$12.50	0.0%	-11.4%	12.7x	1.0x	7.5%
Stable refining and materials business, offset by weakness in Performance Chemicals business.									
Trinseo	TSE	Neutral	$45.05	$37.00	3.2%	-14.7%	14.5x	3.3x	21.7%
Styrene fundamentals weaken as supply growth of ~5% outpaces demand growth of ~2% through 2021.									
Ecolab Inc	ECL	Neutral	$220.01	$197.00	1.1%	-9.3%	41.6x	9.7x	23.7%
Slower growth in Institutional business, but portfolio less cyclical with Upstream Energy divestment.									

Source: Citi Research

Metals & Mining

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Companies mentioned: (FM.TO; C$21.78; 1H; 17 Dec 20; 16:00); (FCX.N; US$24.72; 2; 17 Dec 20; 16:00); (X.N; US$18.56; 2H; 17 Dec 20; 16:00); (CLF.N; US$13.92; 2H; 17 Dec 20; 16:00); (SCCO.N; US$62.91; 3; 17 Dec 20; 16:00); (NEM.N; US$61.64; 1; 17 Dec 20; 16:00); (VALE.N; US$17.23; 1; 17 Dec 20; 16:00); (GOLD.N; US$23.59; 2; 17 Dec 20; 16:00); (RIO.L; £56.54; 1; 18 Dec 20; 16:30); (STLD.O; US$37.59; 1; 17 Dec 20; 16:00); (TECKb.TO; C$23.30; 2; 17 Dec 20; 16:00); (RS.N; US$119.76; 2; 17 Dec 20; 16:00); (AA.N; US$22.18; 2; 17 Dec 20; 16:00); (HCC.N; US$19.99; 2H; 17 Dec 20; 16:00); (NUE.N; US$55.45; 1; 17 Dec 20; 16:00); (CMC.N; US$20.49; 2; 17 Dec 20; 16:00); (EAF.N; US$9.07; 2; 17 Dec 20; 16:00); (AAL.L; £24.24; 1; 18 Dec 20; 16:30); (BHP.AX; A$43.15; 2; 18 Dec 20; 16:00); (GLEN.L; £2.42; 1; 18 Dec 20; 16:30)

Miners To Prosper Amidst Global Reflation Trade

Key structural trends in metals & mining include electrification (winners: copper, nickel, lithium) and de-carbonization (winners: copper, mini mill steel, losers: coal, integrated steel)

- **2021** — Citi's global commodity team is constructive on 2021 seeing a continuation of the global reflation trade driven by economic expansion, Central Bank and a weaker USD. Our top picks amongst the equities are Vale (iron ore), First Quantum (copper), Newmont (gold) and Steel Dynamics (steel) where we see the best combination of growth, dividends and value.

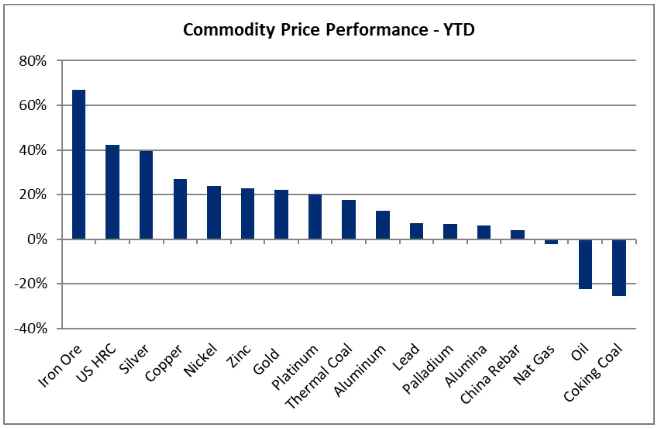
- **Iron Ore** — Iron ore is expected to remain at elevated levels with Citi forecasting \$115/t in 2021 and \$90/t in 2022. These projections are based on ~1% y/y growth of Chinese steel demand and a ~6% y/y rebound in ex-China steel demand in 2021. Growth in supply remains a challenge with Australians running close to capacity (& with potentially more restrictions in the Pilbara) and Vale struggling to rebuild post-Brumadinho. Simandou now seem certain to arrive but not until 2026-27.

- **Copper** — Copper is forecast at \$7,500/t in 2021 and \$8,000/t in 2022. The 2020 rally has mostly been driven by speculators building long positions close to record highs. But physical supply-demand is expected to tighten in 2021 (50kt surplus). The long-term outlook remains good with supply constraints and demand from electrification & de-carbonization.

- **Gold** — Citi expects gold prices to revert above \$2,000/oz in 2021 before unwinding in 2022, as the Fed monetary policy stays accommodative at the ZLB and potential debt monetization translates into FX debasement risk. Forecasts are \$1,900/oz in 2021 and \$1,700/oz in 2020.

- **Steel** — 2021 will be a transformational year in the US steel sector marked by further consolidation (CLF, MT-USA) and an important transition of flat-rolled market share to new EAF capacity. 2021 steel demand is expected to grow by +10% YoY (-4% vs pre-COVID 2019). All key segment should improve, with the exception of construction which we model 3% weaker based on key leading indicators. US flat rolled steel prices are expected to peak around \$900/st during 1Q21 driven by continued supply deficits with imports required to balance the market. We forecast prices at import parity \$700-750/st in 2Q-3Q, and falling sub-\$600 in 4Q as new capacity starts to displace imports and/or higher cost domestic.

Figure 1. Commodity Price Performance (YTD, USD)



Source: Citi Research

Figure 2. China Steel S/D

	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E
China Real Demand	847	862	806	827	852	894	939	997	1,010	1,031	1,046
	5.4%	*1.8%*	*-6.5%*	*2.6%*	*3.0%*	*5.0%*	*4.9%*	*6.2%*	*1.3%*	*2.0%*	*1.5%*
Net Exports	48	79	100	96	62	56	52	35	50	50	50
	14.5%	*64.4%*	*25.5%*	*-3.9%*	*-34.9%*	*-9.5%*	*-7.7%*	*-32.8%*	*42.9%*	*0.0%*	*0.0%*
Inventory	86	81	77	74	68	66	68	85	80	75	68
Inventory Builds	13	-6	-4	-3	-6	-2	2	17	-5	-5	-7
Induction Furnace	32	37	42	47	0	0	0	0	0	0	0
Other Unreported	77	82	64	66	65	21	0	0	0	0	0
NBS Crude Steel Output	799	817	796	807	843	928	993	1,049	1,055	1,076	1,089
Citi Crude Steel Output	**908**	**936**	**902**	**920**	**908**	**949**	**993**	**1,049**	**1,055**	**1,076**	**1,089**
	7.4%	***3.1%***	***-3.6%***	***2.0%***	***-1.3%***	***4.5%***	***4.6%***	***5.7%***	***0.6%***	***1.9%***	***1.2%***
Demand Breakdown											
Real Estate	356	351	317	325	334	365	398	422	418	426	430
Infrastructure	87	93	98	102	106	109	113	123	130	134	139
Machinery	161	160	141	145	153	160	166	181	187	191	195
Transportation	68	74	75	80	82	83	83	84	87	89	90
Others	175	183	175	175	176	177	179	186	188	190	191
Growth											
Real Estate	*10.8%*	*-1.5%*	*-9.6%*	*2.4%*	*3.0%*	*9.0%*	*9.1%*	*6.1%*	*-0.8%*	*1.8%*	*1.0%*
Infrastructure	*8.2%*	*7.1%*	*5.0%*	*4.9%*	*3.8%*	*2.5%*	*4.0%*	*9.0%*	*5.0%*	*3.8%*	*3.5%*
Machinery	*5.5%*	*-0.3%*	*-12.0%*	*2.5%*	*6.0%*	*4.5%*	*3.5%*	*9.2%*	*3.4%*	*2.1%*	*2.0%*
Transportation	*-5.6%*	*9.0%*	*0.7%*	*7.3%*	*2.5%*	*1.1%*	*-0.9%*	*2.3%*	*2.6%*	*2.2%*	*2.0%*
Others	*-1.1%*	*5.0%*	*-4.4%*	*-0.1%*	*0.2%*	*1.0%*	*1.1%*	*3.9%*	*1.2%*	*1.1%*	*0.3%*
Total	*5.4%*	*1.8%*	*-6.5%*	*2.6%*	*3.0%*	*5.0%*	*4.9%*	*6.2%*	*1.3%*	*2.0%*	*1.5%*

Source: Citi Research

Figure 3. Copper S/D

kt	2019	2020f	2021f	2022f	2023f	2024f	2025f
Mine Production	**20,927**	**20,453**	**21,142**	**21,745**	**22,347**	**22,704**	**23,120**
% Change	*0.7%*	*-2.3%*	*3.4%*	*2.9%*	*2.8%*	*1.6%*	*1.8%*
Including Total Disr. Allowance (%)		*2.0%*	*6.1%*	*6.5%*	*7.4%*	*7.7%*	*8.1%*
Refined Production	**23,840**	**23,356**	**24,044**	**24,561**	**25,181**	**26,038**	**26,261**
% Change	*2.3%*	*-2.0%*	*2.9%*	*2.2%*	*2.5%*	*3.4%*	*0.9%*
Refined Consumption	**23,824**	**23,046**	**23,991**	**24,780**	**25,449**	**25,921**	**26,314**
% Change	*1.5%*	*-3.3%*	*4.1%*	*3.3%*	*2.7%*	*1.9%*	*1.5%*
Surplus/Deficit	**16**	**309**	**52**	**-220**	**-268**	**117**	**-53**
Price (US$/lb)	2.7	2.8	3.4	3.6	3.6	3.4	3.3
Price (US$/t)	6,010	6,129	7,500	8,000	8,000	7,500	7,200

Source: Citi Research

- **Who is left behind in the recovery?** The biggest downside risk on prices is in the US steel sector with the price currently making multi-year highs and well above normalized. Based on valuation, we are relative negative on Southern Copper given significantly higher FCF yields elsewhere.

Metals & Mining: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
First Quantum	**FM.TO**	**Buy/H**	**$38.33**	**$44.00**	**0.0%**	**24.0%**	**11.7**	**1.5**	**4.3%**
De-levering copper									
Steel Dynamics	**STLD**	**Buy**	**$38.33**	**$44.00**	**2.7%**	**19.6%**	**10.9**	**1.8**	**12.7%**
Growth & upcoming FCF									
Newmont	**NEM**	**Buy**	**C$21.78**	**C$27.00**	**1.9%**	**15.9%**	**23.5**	**2.1**	**4.3%**
Tier 1 gold assets combined with capital returns									
Top Sells									
Southern Copper	**SCCO**	**Sell**	**$62.91**	**$58.00**	**2.4%**	**-5.9%**	**19.1**	**5.9%**	**33.0%**
The highest multiples in global copper									

Source: Citi Research

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Companies mentioned: (UFS.N; US$32.20; 1; 18 Dec 20; 16:00); (CCK.N; US$96.29; 1; 18 Dec 20; 16:00); (PKG.N; US$134.86; 2; 18 Dec 20; 16:00); (PTVE.O; US$16.75; 1; 18 Dec 20; 16:00); (AVY.N; US$152.96; 2; 18 Dec 20; 16:00); (SLGN.O; US$36.56; 1; 18 Dec 20; 16:00); (BERY.N; US$54.07; 1; 18 Dec 20; 16:00); (AMCR.N; US$11.66; 1; 18 Dec 20; 16:00); (2689.HK; HK$10.66; 1; 21 Dec 20; 16:10); (SMDS.L; £3.81; 1; 18 Dec 20; 16:30);; (SKG.L; £35.06; 1; 18 Dec 20; 16:30)

Paper & Packaging

Still Runway for Rotation & Recovery

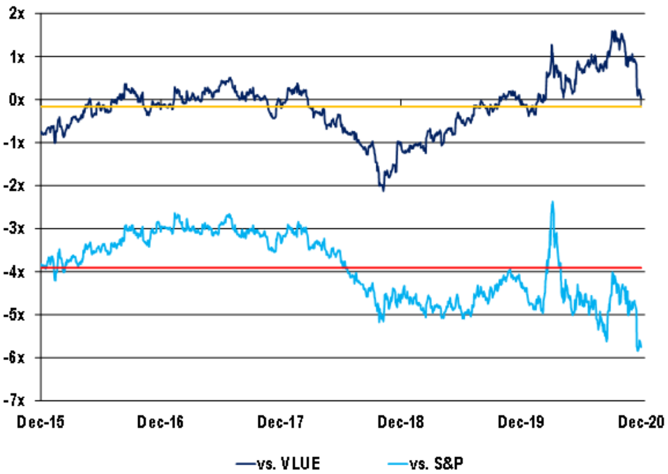
Heading into 2021, we prefer Value stocks that have potential to grow through a cyclical recovery and/or reopening of the economy as a vaccine & potential stimulus package jumpstart the broader economy.

- **What happened?** – Paper & Packaging stocks underperformed in 2020 as Paper offset in-line performance from Packaging. However, since the vaccine announcement after the election, has outperformed Packaging and the S&P 500 as value/cyclical stocks have come into favor. Looking at valuation (Containerboard stocks are trading near an all-time low vs. S&P on NTM EBITDA) we think there's still runway for further outperformance in 2021.

- **UFS is most likely takeout target in P&P** — While it's not our base case, we do see a meaningful possibility UFS could be acquired by either an international containerboard producer looking to gain a foothold in the US (as we have seen with Nine Dragons, Smurfit Kappa, DS Smith, BioPappel, etc.) or a NA producer looking to expand their footprint. Leading containerboard producer PKG has ~$1B in cash, a clean balance sheet (~1.3x net debt-to-EBITDA), and had a very positive experience acquiring white paper producer Boise in 2013. Since the acquisition, PKG has generated >$1.1B in Paper EBITDA, and the presence of the uncoated freesheet business never really seemed to dilute PKG's multiple. UFS's 4 mill conversion candidates could provide needed board for PKG's box plant system, and a wealth of optimization opportunities for the company's vaunted engineering team. UFS also owns the Personal Care business which is currently under strategic review; if another Paper producer were to acquire UFS that business would very likely be sold, in our view.

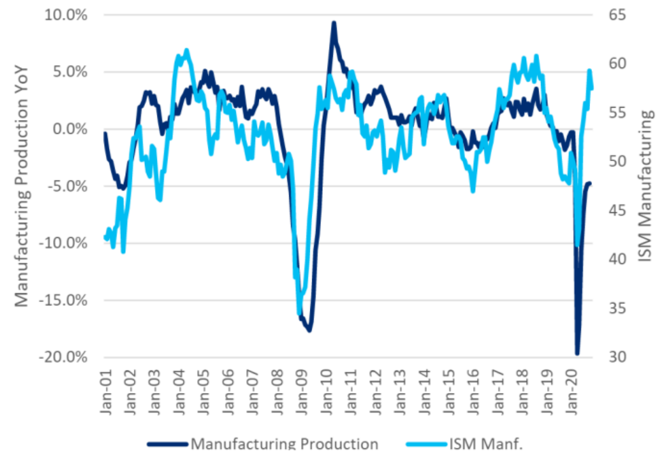
Packaging: Prefer names with cyclical exposure – Although Packaging is usually noted for its defensive qualities, we prefer names that are levered to a macro recovery such as CCK. We expect the stock to outperform as Transit Packaging benefits from increased business sentiment which has hampered the high margin equipment business; pending portfolio moves (reported talks of selling European Food) can serve as another catalyst. We also prefer BERY on deleveraging, macro recovery in Europe & attractive valuation vs. plastic packaging peers. Buy-rated PTVE, whose largest segment, Foodservice (~38% of EBITDA), was hit hard in 2Q '20 (EBITDA -70% Y/Y) as COVID-19 shuttered many customer venues. As consumers gradually return to dine-out & on-the-go buying, PTVE will benefit as Foodservice derives nearly ~80% of revenue from the restaurant industry. The segment is also positioned to benefit from delivery, as take-out uses more single-use packaging than dine-in.

Figure 50. Cap Weighted Containerboard Index vs. S&P 500 & VLUE (NTM EBITDA multiple)



Source: Citi Research, FactSet

Figure 51. ISM Manufacturing vs. Manufacturing Production



Source: Citi Research

- **After a dry spell (2018-19) and a drought (2020), M&A could accelerate in 2021** – Following a flurry of deal activity in 2016-17 (20+ major deals in each year) Paper & Packaging M&A slowed down in 2018-19 (10-15 deals), and then essentially froze when the pandemic hit. We think deal activity could accelerate in 2021, and view CCK as most likely to benefit from portfolio transformation (potential divestiture of Food and/or Transit), while AMCR, AVY & SLGN are well positioned for bolt-ons. Interest in US containerboard assets by non-US producers remains an interesting possibility.

- **Defensive names could underperform** – Stocks that are not going to see a cyclical recovery or secular growth, but are typically valued due to their defensive qualities could underperform. These companies will face challenging comps in 1H as they lap consumer stockpiling in March & April. In the event of rising rates following a vaccine or potential stimulus package, we would expect "bond proxy" stocks to underperform.

Paper & Packaging: Top Buys

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Crown Holdings	CCK	Buy	$97.29	$103	0%	5.9%	15.6x	6.9x	29.2%
Exposure to cyclical & secular growth; possible portfolio moves in 1H									
Berry Global	BERY	Buy	$54.19	$66	0%	21.8%	9.9x	3.5x	30.1%
Attractive debt-to-equity transfer from delveraging									
Domtar	UFS	Buy	$31.00	$37.00	0%	19.4%	17.0x	0.8x	-4.4%
Possible takeout target; conversion into containerboard									

Source: Citi Research

Real Estate Investment Trusts

Real Estate Investment Trusts (REITs)

You're The One That I Want – REIT Stocks Well Positioned to Recover in 2021

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Data Centers / Towers

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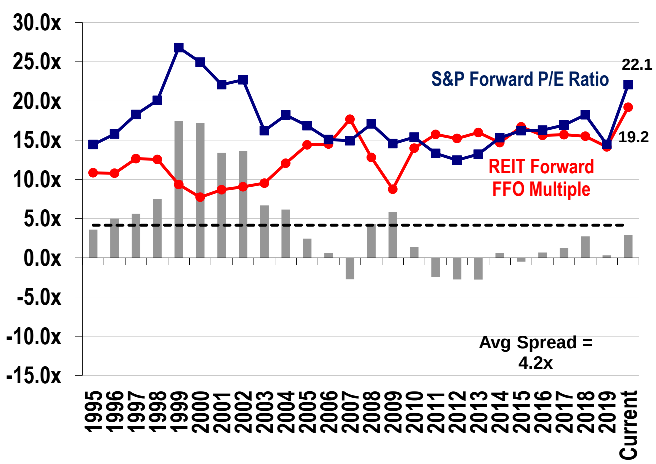
As landlords to the broader economy, REIT stocks should to be able to recover lost ground and relative underperformance vs the broad market as the world moves past the current pandemic and begins a new growth cycle. While it is likely the current impact of the pandemic, with increasing restrictions and lockdowns, could negatively impact near-term results and increase trading volatility, we believe investors are looking through current operating weakness and calibrating to future results and the longer-term property sector impacts from the pandemic as we discuss below.

- **Break On Through (To The Other Side)** — Our positive bias on the REIT sector is supported by the economic recovery, attractive valuation to equities and fixed income alternatives (see below), improving fundamentals off of a weak 2020, significant private capital on the sidelines, a continued low interest rate environment, wide access to well-priced capital across the capital stack, and offering above-average dividend yields. Our 2021 REIT & Lodging outlook is set at a +5% to +15% total return with bias to the upside, supported by the sector's going in dividend yield, earnings and cash flow growth over the next several years, and the potential for multiple expansion.

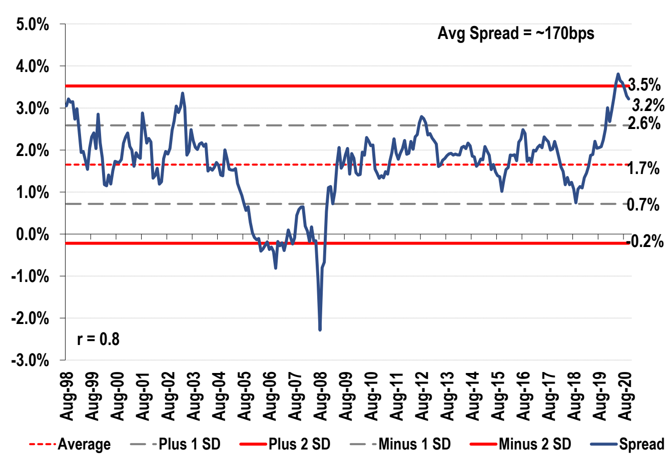
- **Key Risks** — The key risks in our call relate to macro variables – the most significant of which is the COVID-19 pandemic where we could see a slower-than-expected vaccine rollout and a lack of effectiveness controlling the virus, which could lead to a deeper economic trough and hence landlord cash flows and asset values. In addition, political uncertainty, regulatory impacts, and deficit concerns remain key risks.

Figure 52. The S&P 500 P/E Multiple is Trading Above the REIT Forward FFO Multiple …



Source: Citi Research, FactSet, Based on one year forward multiples (12/10/20)

Figure 53. ...While REIT Implied Cap Rates Are Much Wider to Corporate Bond Yields than History



Source: Citi Research, FactSet and YieldBook (12/10/20)

- **Potential For Dividend Upside and Earnings Recovery** — While REIT dividends are below historical averages as a number of companies within the more impacted sector's reduced or suspended their dividends, we see the prospect of reinstated dividends in 2021 which could help spur additional income growth and returns. Payout ratios remain below historical averages – providing the opportunity for dividends to grow alongside cash flow. On the earnings growth front, we estimate AFFO expected to decrease ~1% in 2020 (excluding the lodging REITs), earnings are expected to recover in 2021 with AFFO growth of ~5.5% and then grow another ~8% in 2022. This growth is being driven by a recovery in operating fundamentals, external growth activities, re-financing of capital, and the retention of free cash flow. Investment activity is expected to continue to pick up next year, and combined with prolonged reduced interest rates, help support our total return outlook

- **Portfolio Positioning** — We list below **Citi's REIT model portfolio**, including the aggregate of our individual stock portfolio weights by sector, each sector's index weight, the difference between the two, recent changes in positioning we made with our outlook, the rationale behind our positioning, and the focus stocks – both overweights and underweights.

Figure 54. Citi's REIT Model Portfolio – Sector Weights, Key Stocks, and Sector Commentary

Sector	Position	Model Portfolio Weight	Index Weight	OW/UW (bps)	Recent Change (bps)	Commentary	Key O/Ws	Key U/Ws
Industrial	O/W	19.3	13.4	**587**	**(75)**	We continue to like industrial driven by solid demand drivers, contained supply, and good fundamental trends. We favor large caps with good balance sheets.	**DRE**, **PLD**, REXR	EGP, PSB, STAG
Manufactured Homes	O/W	5.2	2.7	**248**	**70**	Steady cash flow growth balanced by COVID and macro economic risks.	**ELS**, **SUI**	
Single Family	O/W	5.0	2.7	**234**	**(155)**	Strong operating results driven by near term demand and longer term demographic trends. Accretive external growth through both acquisitions and development.	**INVH,** AMH	
Data Centers	O/W	14.0	12.2	**175**	**(105)**	Increasing interest in hybrid cloud architectures can support continued IT outsourcing directly and indirectly. We prefer data center firms with retail and campus data center strategies.	**EQIX*, COR*, DLR***	CONE*
Self Storage	O/W	8.3	6.8	**160**	**0**	Maintain modest overweight, given historical outperformance in softer economic climate, robust recovery in recent operating trends, and likely attrition in supply pipeline longer-term.	**LSI,** CUBE	NSA
Towers	O/W	0.9	0.0	**93**	**(77)**	The tower business model remains well positioned to grow from ongoing investments from its carrier customers, while domestic tower supply remains generally restrained.	**AMT*, SBAC***	
Medical Office Buildings	O/W	2.3	1.6	**74**	**(80)**	Steady same store cash growth driven by a desire to deliver healthcare in lower cost and acuity settings.	**HTA**, HR	DOC
Apartments	O/W	11.7	11.6	**10**	**200**	Operating results diverging between urban/coastal vs. Sunbelt. Long term positive demand drivers and a needs based business.	EQR, MAA, UDR	AVB, CPT, ESS, IRT
Lodging	O/W	4.0	4.0	**0**	**183**	Continued tough operating environment near term, but anticipate multiyear recovery as effective vaccines are distributed. Moved to marketweight from underweight.	RHP, **HST, HLT, MAR**	DRH, PK, PEB, SHO
Shopping Centers	O/W	4.5	4.5	**0**	**129**	Moved up to M/W as we favor open-air / essential retail and capital positioning of strips in this enivronment, and see more upside in valuations through the recovery	**KIM**, REG, BRX	AKR, SITC, FRT, KRG, ROIC, RPAI, WRI
Billboards	U/W	0.5	1.1	**(59)**	**16**	During periods of economic weakness, ad spending is typically first items to be cut and last to recover as consumer spending rebounds.	**OUT***	LAMR*
Student Housing	U/W	0.0	0.7	**(65)**	**0**	Impact of COVID will be felt across higher education, but ACC's Tier 1 universities are relatively well positioned.		ACC
Net Lease	U/W	10.2	11.0	**(78)**	**(20)**	U/W retail net lease given tenant fallout risk, but O/W key names given favorable cost of capital. Positive on Gaming REITs and gov. office landlord DEA given cash flow safety.	**ADC**, O, **DEA**, **MGP**, **VICI**	NNN, **EPR**, EPRT, WPC
Office	U/W	9.0	10.2	**(126)**	**(65)**	We are positive and Buy-rated on life science (ARE) and west coast large-tenant landlords HPP and KRC. Overweight large-cap BXP. We are positive on OFC given defense focus.	**ARE**, BXP, **HPP**, **KRC**, **OFC**	DEI, ESRT, SLG, VNO, **BDN**, HIW, CLI
Malls & Outlets	U/W	0.0	3.9	**(387)**	**0**	U/W given given near term concerns around rent payment, tenant fallout, co-tenancy triggers, liquidity risk, and more permanent impairment to NOI		**MAC**, SKT
Diversified Healthcare	U/W	5.2	10.2	**(502)**	**(21)**	We favor life science vs. senior housing and skilled nursing given COVID disruption. We expect occupancy to slowly be rebuilt in SH and SNF post COVID driven by positive demographics.	WELL, OHI	PEAK, VTR
Diversified/Speciality	U/W	0.0	2.0	**(201)**	**N/A**	No coverage		

*Bold indicates Buy or Sell ratings. OUT and LAMR Covered by Jason Bazinet. COR, CONE, DLR, and EQIX co-covered with Mike Rollins. AMT, SBAC, and CCI are covered by Mike Rollins; Weightings reflect model portfolio compared to weighting of USRT

Source: Citi Research

Property Sector Positioning

- As shown in the chart above, from a portfolio positioning standpoint, after adding a number of value stocks to our REIT & Lodging portfolio in early October, we recently added further weight to a number of value sectors and raised **Shopping Centers**, **Lodging** and **Multifamily** all to market or modest overweights. We remain underweight companies within the traditional **Office**, **Senior Housing** and **Mall** sectors at this juncture. While we used some of the gains in the sector "winners" this year to fund the additional value investments, we do remain **overweight** a number of stocks in sectors that we believe will continue to have positive trends in 2021, including **Industrial, Manufactured Housing, Single Family, Life Science, Gaming, Data Centers, Self Storage** and **Medical Office Building REITs**. We fully acknowledge the larger valuation premia being applied to invest in the sectors, but we have considerable confidence in the fundamental internal growth trajectories regardless of how COVID-19 plays out. In addition, these sectors will likely continue to have both strong internal growth, as well as opportunities for external growth from a very favorable cost of capital, and benefit from a robust private market. Lastly, while we continue to use an equity REIT benchmark for our portfolio which excludes **Towers** and **Timber**, we have positive outlooks on both sectors, and those looking at an All REITs Index could add the **Tower** and **Timber REITs** as additions.

– **Indstrial (Sector Model Weight 19.3% / Index Weight 13.4%):** We remain positive on the industrial space with our preference in large caps **PLD** and **DRE** (both Buy rated), which should benefit from continued demand and growth within the logistics and distribution space driven by ecommerce expansion as well as supply chain transformation across industries. We also have an overweight position in smaller cap **REXR** (Neutral rated), which we believe benefits from a niche single-market focus in supply constrained Southern California, though we do worry about their exposure to smaller format tenants as well as an outsized impact from the COVID-19 crisis. We see less positive catalysts and find it more difficult to be constructive on the other industrial REITs we cover, and as such have Neutral ratings on **EGP**, **PSB**, and **STAG**.

– **Residential (21.9% Model Weight / 17.6% Index Weight):** We expect the residential sector to outperform and are overweight in our model portfolio. Within the sector, we are overweight manufactured housing, single-family rentals, and apartments, and underweight student housing. Our largest overweight sector is manufactured housing – where we are Buy rated both **ELS** and **SUI**. Our second largest overweight is within single-family rentals, where we are Buy rated **INVH** and overweight Neutral rated **AMH**. We recentlu moved to an overweight position in apartments by adding exposure through coastal focused REIT **EQR**. We are also overweight **MAA** and **UDR**. We are underweight Neutral-rated student housing REIT **ACC**.

– **Gaming (4.6% Model Weight / 2.5% Index Weight):** We remain overweight gaming REITs in our model portfolio, with positions in **MGP** and **VICI**, both of which trade at attractive multiples of AFFO relative to traditional triple net REITs with above average and well-covered dividends.

– **Data Centers (14.0% Model Weight / 12.2% Index Weight):** We remain overweight the data center sector in our REIT model portfolio as we expect the sector to post a positive 12-month return from the combination of favorable demand prospects entering into 2021, stable development yields, low interest rates, and room for further consolidation. We maintain our Buy ratings on **EQIX**, **COR** and **DLR**. We are Neutral on **CONE**. For data center firms that fall outside of REIT qualification, we have a Buy rating on **SWCH**.

– **Self-Storage (8.4% Model Weight / 6.8% Index Weight): ** We remain overweight self-storage in our model portfolio. Recent business updates suggest above-average occupancy levels persist, which, coupled with a pickup in rate increases for existing customers, should drive continued operating improvement into 1Q21, after which the group faces easier year-over-year comparisons and likely improving SSNOI trends. While the pace of deliveries is expected to slow, new competition will remain a headwind and asking rates likely to remain aggressive in order to attract inbound customers. We believe transaction activity will continue to be on the rise with a downward bias in cap rates – a positive for underlying NAVs but could make for more challenging external growth opportunities.

– **Strip Centers (4.5% Model Weight / 4.5% Index Weight):** We recently increased our weight in strip center REITs to a market weight position, as we favor open-air / essential retail and the capital positioning of strips in this environment, and see more upside in valuations through the recovery. That said, we do expect a tough 1H21 before things start to improve, and remain cautious of the outstanding risks around rent collections, tenant fallout, and market rent declines. Capex needs are also rising, and rent basis will play an important role in determining which REITs can still make money through releasing. We focus our picks on the strips we view as best positioned to bounce back from this period of disruption given well-located portfolios, high necessity-based tenant exposure and grocery concentration, backed by strong balance sheets and liquidity to reinvest in the portfolio and still realize upside. We concentrate our overweight positions in Buy-rated **KIM** and Neutral-rated **REG** and **BRX**, which we view as well positioned to outperform in this environment. We recently established a new weight in BRX given the attractive below market rent basis in the portfolio's older assets, and ability to capture more of that rent upside with increased tenant turnover next year. We are Neutral rated on all other names (**AKR**, **FRT**, **KRG**, **ROIC**, **RPAI**, **SITC**, **WRI**), with no weight in our model portfolio.

- **Lodging (4.0% Model Weight / 4.0% Index Weight):** We are market weight lodging in our model portfolio with Buy ratings on **HLT, HST,** and **MAR**, and Neutral on the balance of our lodging coverage. We hold overweight position in shares of **HST** and **RHP** in our model portfolio, as well as out-of-index positions in HLT and MAR.

- **Net Lease (10.2% Model Weight / 11.0% Index Weight):** While we remain underweight net lease REITs overall, we do favor the retail centric and the gaming focused net lease REITs, which we believe will continue to benefit from more stable operating fundamentals and rent collection, and also benefit from a low rate environment providing an attractive cost of capital for accretive external growth initiatives. Our underweight in the sector is partially driven by less enthusiasm for a few of the diversified net lease names, and for not having coverage of a few larger net lease stocks. We view retail net lease REITs as better positioned vs. traditional retail given lighter at-risk tenant exposure (though theatres remain a concern), stronger capital positioning, and better growth trajectories, and see less downside risk from a cost / capex perspective given the net lease model. We have focused our overweight positions in Buy-rated **ADC** and Neutral-rated **O** given capital strength, cost of capital advantages vs. peers, and large acquisition pipelines. We are underweight Neutral-rated **EPRT**, **NTST**, and **NNN**. We remain underweight Sell-rated **EPR** given high exposure to experiential real estate.

- **Office (9.0% Model Weight / 10.2% Index Weight):** We expect the office sector to underperform and are underweight in our model portfolio. We are overweight Buy-rated **ARE**, **HPP**, **KRC**, **DEA** and **OFC**. We are overweight Neutral-rated **BXP** and underweight Neutral-rated **CLI**, **DEI**, **ESRT**, **SLG**, **VNO**, and **HIW**. We are underweight Sell-rated **BDN**. Within office, we remain positive on West Coast players given the additional demand from TAMI tenants and underlying value. In addition, we are positive on life science REIT **ARE** given the continued surge in life science demand. We are also positive on **DEA** and **OFC** as both have a strong tenant base and differentiated investment strategy compared to peers.

- **Malls & Outlets (0.0% Model Weight / 3.9% Index Weight):** We remain underweight the mall and outlet REITs given our continued belief that the sector will be disproportionately impacted by the pandemic and will see prolonged pressure on shares given near-term concerns around rent payment, tenant fallout, co-tenancy triggers, liquidity risk, and more permanent impairment to NOI. Longer term, we believe it will take time for the sector to recover amid behavioral changes around shopping and an acceleration of structural changes already impacting brick and mortar retail. We are Sell-rated Macerich (**MAC**) and Neutral-rated Tanger (**SKT**), with no mall/outlet positions in our model portfolio.

– **Healthcare (7.5% Model Weight / 11.8% Index Weight):** We are underweight the healthcare REIT sector. Within the sector, we prefer the medical office building and life science focused REITs vs. senior housing and skilled nursing focused REITs. Within medical office, we prefer Buy-rated **HTA** and Neutral-rated **HR**. In addition, we are overweight Buy-rated **ARE**, which while classified as office, predominantly owns life science assets. We continue to be more cautious on a relative basis on senior housing and skilled nursing focused REITs given the disruption caused by COVID-19. Our overweight positions are in Neutral-rated **WELL** and **OHI**.

REITs and Lodging: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/FFO	2021E P/NAV	2021E Implied Cap Rate
Top Buys									
Agree Realty	ADC	Buy	$66.86	$76.00	3.7%	17.1%	19.0x	31.3%	4.9%
We favor ADC's low exposure to at-risk tenants alongside the company's pre-funded balance sheet and cost of capital advantage which enables a strong acquisition pipeline.									
Alexandria	ARE	Buy	$177.63	$196.50	2.4%	13.0%	22.9x	14.2%	4.2%
We continue to be attracted to ARE's quality assets, cluster markets, management team, balance sheet and life science fundamentals - despite elevated relative valuation.									
Easterly Gov. Properties	DEA	Buy	$22.72	$26.00	4.6%	19.0%	17.6x	14.1%	5.5%
DEA benefits from a focus on GSA leases and tenants, consistent cash flow generation with very little collection risk, and external growth pipeline.									
Equity Lifestyle	ELS	Buy	$62.51	$70.00	2.2%	14.2%	27.1x	24.7%	3.8%
ELS is well positioned to grow internally driven by a positive demand/supply backdrop and externally through both acquisitions and expansion opportunities.									
Hilton Worldwide	HLT	Buy	$104.41	$130.00	0.0%	24.5%	N/A	N/A	N/A
Net unit growth should drive faster recovery to prior peak EBITDA, potential to reinstate capital return program at higher leverage levels.									
Healthcare Trust of America	HTA	Buy	$27.23	$29.00	4.7%	11.2%	15.3x	-4.9%	5.7%
HTA is well positioned to grow internally given a high quality portfolio and externally given a well-positioned balance sheet. Valuation is discounted on a relative basis.									
Invitation Homes	INVH	Buy	$29.19	$34.00	2.1%	18.5%	21.5x	9.2%	4.7%
INVH will benefit from strong internal growth resulting in higher core operating margins as well as accretive external growth opportunities mostly through acquisitions.									
Kimco Realty	KIM	Buy	$14.98	$16.50	4.3%	12.8%	11.6x	-8.6%	7.3%
We favor KIM's well-capitalized balance sheet, access to low-cost capital, and upside potential in below market expirations and external growth opportunities.									
Corporate Office Properties	OFC	Buy	$26.70	$30.00	4.1%	16.5%	12.2x	-11.3%	7.6%
We like OFC's defensive characteristics and attractive growth for 2021 of 3-6% per share growth which is likely above office peers and protected from earnings downside.									
Prologis	PLD	Buy	$99.85	$115.00	2.3%	17.5%	26.1x	14.4%	3.9%
We favor PLD's balance sheet strength and stable FCF to weather further potential pandemic-related disruption and believe PLD will benefit from sector tailwinds.									
VICI Properties	VICI	Buy	$26.05	$28.50	5.2%	14.6%	14.0x	5.6%	7.2%
Anticipate full collection of rent payments, embedded growth pipeline and multiple external growth opportunities									
Top Sells									
Brandywine Realty	BDN	Sell	$12.12	$10.50	6.3%	-7.1%	8.2x	-25.0%	7.9%
We are sell rated BDN given continued concerns from leasing and development execution as well as the lack of partner capital at Broadmoor and Schuylkill Yards.									
EPR Properties	EPR	Sell/H	$33.64	$25.00	0.0%	-25.7%	14.3x	16.0%	7.5%
EPR's exposure to experiential real estate, which has seen a significant impact from COVID-19 on re-opening plans and rent collectability, remains a concern.									
Macerich	MAC	Sell/H	$11.03	$9.50	5.4%	-8.4%	5.0x	16.5%	7.8%
We are concerned with MAC's heightened balance sheet risk, on top of the challenging retail operating environment, which will put further pressure on already high leverage and capex needs.									

Source: Citi Research

Companies mentioned: (DRE.N; US$39.24; 1; 18 Dec 20; 16:00); (PLD.N; US$98.07; 1; 18 Dec 20; 16:00); (REXR.N; US$47.91; 2; 18 Dec 20; 16:00); (EGP.N; US$136.31; 2; 18 Dec 20; 16:00); (PSB.N; US$130.21; 2; 18 Dec 20; 16:00); (ELS.N; US$61.07; 1; 18 Dec 20; 16:00); (SUI.N; US$146.65; 1; 18 Dec 20; 16:00); (AMH.N; US$29.13; 2; 18 Dec 20; 16:00); (DLR.N; US$134.02; 1; 18 Dec 20; 16:00); (CONE.O; US$70.38; 2; 18 Dec 20; 16:00); (LSI.N; US$116.55; 1; 18 Dec 20; 16:00); (NSA.N; US$34.96; 2; 18 Dec 20; 16:00); (AMT.N; US$221.52; 1; 18 Dec 20; 16:00); (SBAC.O; US$276.93; 1; 18 Dec 20; 16:00); (HTA.N; US$27.34; 1; 18 Dec 20; 16:00); (HR.N; US$29.60; 2; 18 Dec 20; 16:00); (DOC.N; US$17.97; 2; 18 Dec 20; 16:00); (EQR.N; US$57.65; 2; 18 Dec 20; 16:00); (MAA.N; US$124.04; 2; 18 Dec 20; 16:00); (UDR.N; US$37.01; 2; 18 Dec 20; 16:00); (AVB.N; US$158.44; 2; 18 Dec 20; 16:00); (CPT.N; US$96.48; 2; 18 Dec 20; 16:00); (ESS.N; US$234.37; 2; 18 Dec 20; 16:00); (IRT.N; US$13.29; 2; 18 Dec 20; 16:00); (RHP.N; US$61.47; 2; 18 Dec 20; 16:00); (HLT.N; US$104.61; 1; 18 Dec 20; 16:00); (STAG.N; US$30.43; 2; 18 Dec 20; 16:00); (INVH.N; US$28.38; 1; 18 Dec 20; 16:00); (EQIX.O; US$709.73; 1; 18 Dec 20; 16:00); (CUBE.N; US$33.18; 2; 18 Dec 20; 16:00); (HST.O; US$14.09; 1; 18 Dec 20; 16:00); (MAR.O; US$128.82; 1; 18 Dec 20; 16:00); (DRH.N; US$8.14; 2; 18 Dec 20; 16:00); (PK.N; US$17.04; 2; 18 Dec 20; 16:00); (PEB.N; US$18.36; 2; 18 Dec 20; 16:00); (SHO.N; US$10.89; 2; 18 Dec 20; 16:00); (COR.N; US$122.26; 1; 18 Dec 20; 16:00); (VTR.N; US$50.83; 2H; 18 Dec 20; 16:00); (AKR.N; US$14.68; 2; 18 Dec 20; 16:00); (FRT.N; US$88.31; 2; 18 Dec 20; 16:00); (RPAI.N; US$8.60; 2H; 18 Dec 20; 16:00); (WRI.N; US$21.45; 2; 18 Dec 20; 16:00); (OUT.N; US$19.99; 1; 18 Dec 20; 16:00); (ACC.N; US$42.19; 2H; 18 Dec 20; 16:00); (ADC.N; US$63.99; 1; 18 Dec 20; 16:00); (O.N; US$59.52; 2; 18 Dec 20; 16:00); (DEA.N; US$21.79; 1; 18 Dec 20; 16:00); (HPP.N; US$24.18; 1; 18 Dec 20; 16:00); (KRC.N; US$56.53; 1; 18 Dec 20; 16:00); (OFC.N; US$25.79; 1; 18 Dec 20; 16:00); (DEI.N; US$29.60; 2; 18 Dec 20; 16:00); (SLG.N; US$58.11; 2; 18 Dec 20; 16:00); (VNO.N; US$36.71; 2H; 18 Dec 20; 16:00); (BDN.N; US$11.77; 3; 18 Dec 20; 16:00); (HIW.N; US$39.12; 2; 18 Dec 20; 16:00); (CLI.N; US$12.71; 2; 18 Dec 20; 16:00); (MAC.N; US$10.51; 3H; 18 Dec 20; 16:00); (SKT.N; US$10.53; 2H; 18 Dec 20; 16:00); (OHI.N; US$37.28; 2H; 18 Dec 20; 16:00); (VTR.N; US$50.83; 2H; 18 Dec 20; 16:00); (COR.N; US$122.26; 1; 18 Dec 20; 16:00)

Technology

Data / Analytics + Vertical Software

Keeping a bias towards secular growth but with emphasis on 2021 recovery tailwinds

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Companies mentioned: (AYX.N; US$127.86; 1H; 17 Dec 20; 16:00); (ANSS.O; US$346.63; 2; 17 Dec 20; 16:00); (CLDR.N; US$12.92; 2H; 17 Dec 20; 16:00); (ESTC.N; US$147.53; 1H; 17 Dec 20; 16:00); (GWRE.N; US$126.03; 2; 17 Dec 20; 16:00); (MSTR.O; US$297.80; 3H; 17 Dec 20; 16:00); (MDB.O; US$372.85; 1H; 17 Dec 20; 16:00); (PLTR.N; US$27.23; 2H; 17 Dec 20; 16:00); (PTC.O; US$118.47; 2; 17 Dec 20; 16:00); (SNOW.N; US$325.54; 2H; 17 Dec 20; 16:00); (TLND.O; US$38.74; 1H; 17 Dec 20; 16:00); (TDC.N; US$22.88; 1; 17 Dec 20; 16:00); (VEEV.N; US$279.89; 1; 17 Dec 20; 16:00)

While we think 2021 could see more volatility as scarcity of growth premium diminishes, we prefer to stick with secular winners, which have 2021 company specific or clear "bounce back" catalysts. In data / analytics we see several key themes including cloud analytics and the continued rise of the citizen data scientist/ developer. Vertical software faces its own digitization tailwinds, but we see more distinction between industries.

- **Focus on secular trends + company specifics that favor a 2021 bounce back –** As COVID headwinds begin to diminish in 2021, and more impacted / cyclical sectors begin to recover, we expect there could be increased volatility across software as the growth premium begins to diminish. We believe a playbook that continues to focus on secular growth "winners", with a bias towards names that have company specific or clear "bounce back" catalysts in 2021 makes the most sense. We see clearest signs of secular growth with catalysts ahead at MDB and ESTC, which are among our top picks.

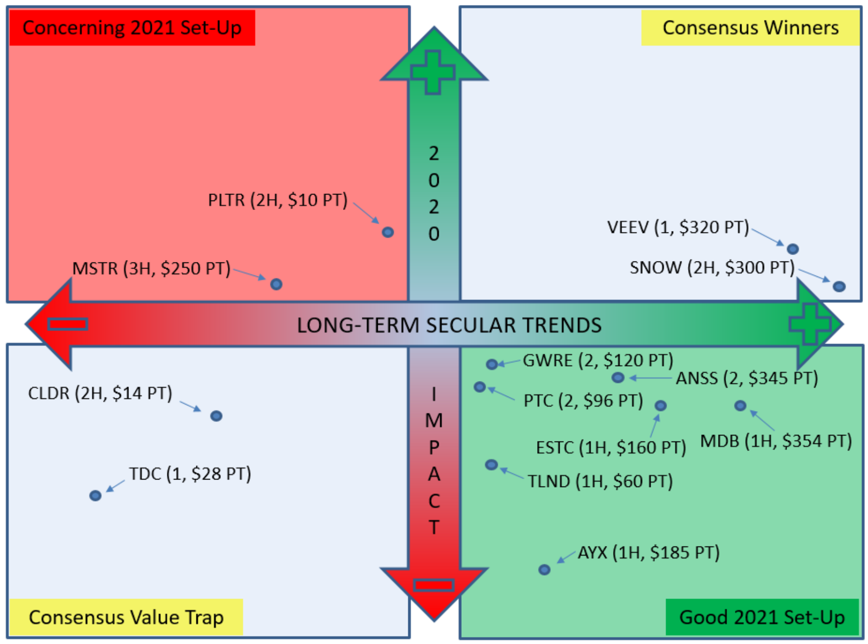
- **Return of BI / analytics spend?** In prior downturns, spending on Business Intelligence (BI) and analytics has been one of the first budgets to be cut or deprioritized entering a downturn, but often is quickly restored in recoveries. We saw similar deprioritization trends as the Pandemic began to take hold with budgets shifting to WFH areas such as video conferencing, remote access and increased security spend. As the grip of Pandemic eases, we expect that BI/ analytics spend could return, which could help accelerate growth at companies like AYX, TDC, SNOW, TLND and MSTR.

- **Cloud analytics a top theme; Winners / losers less clear–** The embrace of remote work in 2020 has accelerated the adoption of public cloud, even in areas where this was considered "years away" including cloud analytics. We've seen software companies have to adapt more quickly to this trend and prioritize engineering resources to better support increased cloud demand. While we believe investors may see the theme of cloud analytics as relatively obvious, we think there is significantly less consensus on the positioning of data / analytics companies that have both public cloud and on-premise businesses. We see debate around public cloud positioning across sector wide and believe public cloud positioning could be under appreciated at ESTC and TLND in particular.

- **Citizen data scientist + developer to move back into focus? -** In addition to higher levels of spend in data / analytics, we also see themes around the democratization of analytics or the citizen data scientist on the rise in 2021. This is driven by the increased prioritization of data / analytics by organizations, as well as focus by vendors on making tools/software that appeal to business users. At a high level, we continue to see line of business deployed analytics as one of the faster growing areas of the market as it empowers business people to make better data-driven decisions vs. IT-led analytics which can be time consuming and lack the proper context.

- **Sticking with vertical names where we see customers' highest willingness to digitize –** In Vertical software, we see the broad theme of digitization as a catalyst, in 2021 and beyond as COVID has accelerated the need to digitize key business processes. At the same time, we think the timing/ benefit of digitization is more of a mixed bag given the broad range of industries (life sciences, insurance, manufacturing etc.). We see the strongest digitization tailwinds in life sciences/bio pharma where our top Vertical name VEEV plays. We do see recovery tailwinds ahead for PTC/ANSS in industrials/manufacturing but worry the key growth drivers around digital twin/IoT is still years away. In insurance (GWRE), we see cloud digitization as a long-term tailwind but with long sales cycles, and conservative customer base we don't see inflection in 2021.

Figure 1. Our Coverage Quadrant on Long-term Secular Trends and COVID-19 Impacts.



Source: Citi Research

- **2021 Risks?** — Certainly valuation stands out as a risk, with absolute and relative valuations for the sector at peaks. We believe volatility and valuation correction could hit the hardest among names that see decelerating growth. We see outsized risks among a select few companies where there were potential 2020 one time "benefits" that could be a headwind next year (MSTR, PLTR).

Data / Analytics & Vertical Software: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E EV/Sales	2021E EV/FCF	2021E ROE
Top Buys									
MongoDB	MDB	Buy/H	$372.85	$354	NM	-5.1%	36.0x	NM	NM
We believe MDB can reaccelerate growth with record Atlas net adds + improving expansions. Long-term growth looks durable with large TAM, growing developer traction.									
Veeva	VEEV	Buy	$279.89	$320	NM	14.3%	25.7x	68.1x	12%
Should benefit from continued digitization tailwinds in biopharma driving sustained 30%+ Vault Growth. Recovery in OSL + monetization of Engage catalysts.									
Elastic	ESTC	Buy/H	$147.53	$160	NM	8.5%	21.0x	NM	NM
High growth (30-40%) looks sustainable with diversifying growth (search, security + observability), ramping cloud traction, and large expansion/ large deal opportunity.									
Top Sells									
MicroStrategy	MSTR	Sell/H	$297.80	$250	NM	-16.1	6.2x	44.7x	11%
Recent rally (driven by Bitcoin) looks overstated relative to MSTR's position and in context of insider selling. We see risk that execution could deteriorate given Bitcoin focus.									

Source: Citi Research

HCM, Financials, and Back Office Software

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Companies mentioned: (PAYC.N; US$439.84; 1; 18 Dec 20; 16:00); (CDAY.N; US$97.65; 1; 18 Dec 20; 16:00); (PLAN.N; US$70.49; 2H; 18 Dec 20; 16:00); (AVLR.N; US$179.79; 1H; 18 Dec 20; 16:00); (PCTY.O; US$201.79; 2; 18 Dec 20; 16:00); (WDAY.O; US$241.39; 1; 18 Dec 20; 16:00); (INTU.O; US$380.11; 2; 18 Dec 20; 16:00); (VERX.O; US$34.31; 2; 18 Dec 20; 16:00); (COUP.O; US$366.90; 2; 18 Dec 20; 16:00)

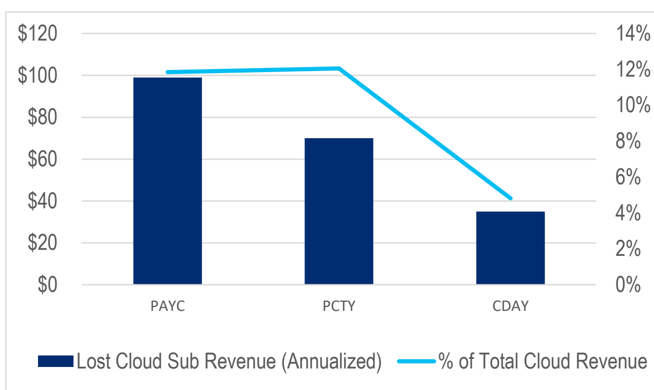
Favor Reaccelerating & Secular Winners Amid Uneven Macro

Following a tough '20, HCM/payroll revenue reacceleration positions the group well as small/mid-sized businesses continue to embrace the cloud. Digital transformation in the office of the CFO is a multi-year tailwind, but stay selective on the stocks amid elevated valuations.

- **Good 2020 for Most Stocks as Many Navigated COVID-19 Headwinds Well** — Within a software sector that more broadly has benefited from a flight to growth, performance within our group was generally positive with most sub-segments showing growth near or above the broader universe. YTD through mid-December, shares of our human capital management software (HCM) cluster increased ~50%, supply chain management (SCM) increased ~76%, and the accounting/finance cluster increased ~73%, compared to an ~62% average / 33% median increase for the broader software market (n=91).

- **HCM: Revenue Reacceleration as CY21 Progresses** — Our continued favorable view of the HCM sub-sector reflects the high likelihood of revenue growth reacceleration as 2021 progresses. As shown in Figure 1, mass layoffs immediately reduced revenue for much of the group during the peak of the pandemic, which is expected to reverse as the economy recovers (although the pace is a risk). Despite challenges from COVID-19, 2H20 new business activity, particularly down-market (PAYC, PCTY), has exceeded pre-pandemic levels as the pandemic accelerated later adopters of HR tech among smaller businesses. Revenue growth estimates for the group entering CY21 appear reasonable with the pace of economic recovery (i.e. hiring) likely to drive incremental upside to numbers, although street margins appear at risk. We like CDAY, PAYC and WDAY.

Figure 55. Lost Revenue Due to Lower Employment in 2020 – Recovery Upside in 2021/22



Source: Citi Research

- **HCM: Portfolio Extension More Widespread** — HCM adoption, particularly in the middle to upmarket, is approaching later cycle with ~2/3rds of the market already in the cloud today. Some companies have started to expanded into adjacent markets. WDAY is the clearest example as the company scales a multiproduct SaaS platform with financials, planning and supply chain. But others are expanding into new directions, like CDAY's Wallet – an on-demand pay app and financial portal which eventually could be a mid-single digit tailwind to EBITDA, or PCTY's new Community and new premium video services which embeds the PCTY platform deeper into a company's workflows. We continue to see the primary focus of CDAY, PAYC and PCTY on client acquisition, but we anticipate more product expansions to sell back into the base overtime.

- **Tax / Accounting: Cloud Battles to Intensify Upmarket** — For enterprises, core financials are still largely on-prem, but that is changing as more companies shift to the cloud. As the market shifts, the ecosystem around the core has been shifting too. Tax calculation is a market in the early days of shifting to the cloud at the enterprise level. 2020 marked an inflection in how companies are positioning for the enterprise tax cloud, including AVLR's purchase of TTR and VERX's increasing investment in its emerging cloud platform – a competitive environment which we think will last for at least several years and where AVLR is well positioned. In consumer tax, INTU is positioned for a solid 2021, although macro headwinds impact the company on a number of fronts including in its small business services business.

- **SCM & Planning: Gauging the Priorities around CFO Digital Transformation** — Digital transformation around the CFO office is an ongoing theme as companies look to improve procurement functions, increase automation, boost compliance, and institute more dynamic planning. The debate is how much CY21/22 could benefit from economic normalization given so far here in the early day it appears that pandemic will be an accelerant to digital transformation. Our latest CFO IT survey noted ~50% of enterprise respondents COVID-19 has "significantly" accelerated there work (see: Financial Software Survey - COVID-19 Catalyzing Shift to Cloud; Budgets Better than Expected). Yet valuations for some in this group, like COUP and PLAN, are not cheap relative to the broader software sector compared to the near-term growth outlook, which leaves us looking for better entry points, especially in a rotation away from high-growth software.

Software: Top Buys

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Avalara	**AVLR**	**Buy/H**	**$177.66**	**$203.00**	**0.0%**	**22.8%**	**NM**	**27.1x**	**-2.3%**
We see a favorable long-term set-up for the company as it scales in mid-market and enterprise tax, with what we see as ~5% share today.									
Paycom	**PAYC**	**Buy**	**$441.80**	**$457.00**	**0.0%**	**7.8%**	**103.6x**	**26.1x**	**25.2%**
PAYC's focus on client employee self-service and customer ROI should support new client wins and retention (~93%). Great mix of growth and protfitability.									
Workday	**WDAY**	**Buy**	**$239.81**	**$265.00**	**0.0%**	**20.3%**	**87.3x**	**17.7x**	**20.3%**
Emerging from COVID-19 we see the growth vectors in HCM and financials manifesting in sustainable ~20% topline growth over the medium-term with improving margins.									

Source: Citi Research

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Companies mentioned:
(AMZN.O; US$3,201.65; 1; 18 Dec 20; 16:00);
(GOOGL.O; US$1,726.22; 1; 18 Dec 20; 16:00);
(W.N; US$276.73; 3H; 18 Dec 20; 16:00);
(CRTO.O; US$18.75; 1H; 18 Dec 20; 16:00);
(DMS.N; US$11.13; 1H; 18 Dec 20; 16:00);
(NFLX.O; US$534.45; 2; 18 Dec 20; 16:00);
(ROKU.N; US$341.07; 1; 18 Dec 20; 16:00);
(MTCH.O; US$155.07; 1; 18 Dec 20; 16:00);
(EXPE.O; US$125.54; 2; 18 Dec 20; 16:00);
(TRVG.O; US$2.21; 2; 18 Dec 20; 16:00);
(BKNG.O; US$2,099.65; 2; 18 Dec 20; 16:00);
(TRIP.O; US$26.99; 2; 18 Dec 20; 16:00);
(SPOT.N; US$336.10; 2; 18 Dec 20; 16:00);
(FB.O; US$276.40; 1; 18 Dec 20; 16:00);
(SNAP.N; US$52.99; 3; 18 Dec 20; 16:00);
(PINS.N; US$70.36; 2; 18 Dec 20; 16:00);
(TWTR.N; US$55.87; 2; 18 Dec 20; 16:00);
(CARG.O; US$34.09; 2H; 18 Dec 20; 16:00);
(TRUE.O; US$4.42; 2H; 18 Dec 20; 16:00);
(ANGI.O; US$12.87; 1H; 18 Dec 20; 16:00);
(UPWK.O; US$40.21; 2H; 18 Dec 20; 16:00);
(ATVI.O; US$90.37; 2; 18 Dec 20; 16:00);
(VRSN.O; US$217.82; 2; 18 Dec 20; 16:00);
(JCOM.O; US$98.41; 1; 18 Dec 20; 16:00);
(GDRX.O; US$44.61; 1; 18 Dec 20; 16:00);
(ROOT.O; US$14.05; 2H; 18 Dec 20; 16:00);
(DIS.N; US$172.89; 1; 18 Dec 20; 16:00);
(ZG.O; US$140.15; 2H; 18 Dec 20; 16:00);
(FVRR.N; US$209.29; 1; 18 Dec 20; 16:00);
(EA.O; US$142.61; 2; 18 Dec 20; 16:00);
(GDDY.N; US$85.03; 1; 18 Dec 20; 16:00);
(IAC.O; US$164.00; 1; 18 Dec 20; 16:00);
(CVNA.N; US$266.24; 1H; 18 Dec 20; 16:00);
(CARS.N; US$12.31; 2H; 18 Dec 20; 16:00);
(WIX.O; US$273.45; 1; 18 Dec 20; 16:00)

We Prefer Bounded to Unbounded Firms

Investors have aggressively re-rated a number of unbounded firms within our coverage universe. Unbounded firms are smaller, potential disruptors and traffic in a segment of the market where it is hard to disprove how large they may become. Bounded firms are, by definition, a bit boring. But, they may be far less risky in 2021.

- **Setting the 2020 Stage** — 2020 was, to say the least, an unusual year. The COVID crisis ushered in three distinct investing regimes. At the start of the crisis, investors bought COVID outperformers (like Amazon or Netflix). Next, investors bought COVID underperformers (like Live Nation or Booking). In the final regime – following positive vaccine news – investors bought COVID recovery stocks. As such, at the end of 2020, there are few – if any – remaining COVID investing themes.

- **This Year is Different** — When we typically explore key investment themes or ideas for the year ahead, we focus on the most salient areas. This includes questions like: 'Where we are in the economic cycle?', 'Who might benefit from M&A?', 'Which firms might have the most robust capital returns?' or 'Which firms have exposure to particular topline trends?'. But, with the market broaching all time highs - and most of the COVID related trades fully exhausted - we are in the midst of a new paradigm.

- **New Paradigm** — In this new regime, the most salient question – indeed it seems to be the *only* question – is whether a stock is 'bounded' or 'unbounded'. Bounded stocks are easier to evaluate because there is a relatively tight range of likely financial results and a fairly tight range of likely multiples. Unbounded stocks are different. The company – or the segment of the market they participate in – is so nascent, it is difficult to assess how large, exactly, the firm can become. And, in 2020, unbounded stocks vastly outperformed bounded stocks.

- **Some Bounded and Unbounded Examples** — Within our coverage universe, bounded stocks are typically larger, navigate in specific well-defined markets and are usually valued using traditional metrics: P/E multiples, EV-EBITDA multiples or FCF multiples. Bounded stocks include firms like Alphabet, Facebook, Booking and Verisign. Unbounded stocks, on the other hand, are typically smaller, navigate in markets that are less well defined or where material shifts in market share might occur. Unbounded stocks include firms like Airbnb, Roku, Snap, The Trade Desk and Pinterest.

- **We Prefer Bounded to Unbounded Stocks** — While there are exceptions, in broad terms, for 2021 we prefer bounded stocks to unbounded stocks. The trick, however, if to find bounded stocks that are not under secular pressure. Our favorite bounded stocks include: Alphabet, Amazon and Disney.

Figure 56. Unbounded stocks have increased materially…

	Mrkt. Cap	Short Interest	2021E Cons. Rev	▲ YTD	Y/Y	YTD Returns
E-commerce						
AMZN	1,624,384	1%	448,129	16%	18%	75%
W	20,905	20%	16,050	12%	13%	218%
ETSY	23,594	7%	1,810	46%	12%	322%
Advertising						
GOOGL	1,099,476	1%	214,843	-4%	21%	30%
TTD	39,592	6%	1,078	0%	34%	263%
CRTO	1,131	2%	779	-22%	-3%	9%
DMS	306	5%	417	N/A	26%	-9%
Streaming Services						
NFLX	234,969	2%	29,524	1%	18%	64%
ROKU	36,103	4%	2,393	15%	38%	147%
SPOT	61,448	4%	11,728	2%	22%	120%
Social Media						
FB	660,731	1%	104,479	2%	24%	34%
PINS	36,360	3%	2,342	19%	44%	282%
TWTR	43,605	3%	4,393	-2%	22%	71%
SNAP	65,884	7%	3,454	13%	42%	227%
MTCH	39,535	5%	2,839	N/A	19%	46%
OTAs						
EXPE	16,662	13%	7,764	-45%	43%	13%
TRVG	122	--	504	-53%	62%	-16%
BKNG	85,806	2%	10,167	-42%	50%	2%
TRIP	3,253	12%	953	-45%	60%	-12%

Source: Citi Research, FactSet

Figure 57. …despite minimal increases in 2021 consensus estimates

	Mrkt. Cap	Short Interest	2021E Cons. Rev	▲ YTD	Y/Y	YTD Returns
Online Auto						
CVNA	19,315	28%	7,906	-4%	48%	197%
CARG	3,149	14%	649	-22%	18%	-5%
CARS	854	8%	598	-7%	11%	4%
TRUE	467	11%	252	-35%	-10%	-6%
Real Estate & Home Repair						
ANGI	934	21%	1,652	-13%	13%	41%
ZG	31,730	4%	4,794	-32%	46%	212%
Freelancing						
FVRR	7,188	12%	257	53%	37%	771%
UPWK	4,822	6%	435	4%	19%	270%
Video Games						
ATVI	68,112	1%	8,341	11%	2%	48%
EA	40,401	2%	6,328	8%	5%	30%
Web Services						
WIX	15,129	3%	1,262	8%	29%	122%
GDDY	14,698	4%	3,669	1%	11%	29%
VRSN	24,801	1%	1,327	-7%	5%	13%
Digital Media						
JCOM	4,423	15%	1,623	4%	12%	4%
IAC	12,707	2%	3,367	N/A	13%	48%
Other						
GDRX	1,987	30%	737	N/A	35%	-16%
ROOT	838	17%	921	N/A	49%	-48%

Source: Citi Research, FacSet

- **We Don't Like Most Unbounded Stocks** — While there are exceptions, in broad terms, for 2021, we think investors should avoid unbounded stocks. Our least favorite unbounded stock is Snap. For investors that do want to own an unbounded stock, our favorite firm is Roku. We prefer Roku to Snap because the migration to digital ads – that began 20 years ago – is far more developed than the connected TV market, which is still relatively nascent.

Internet & Media: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Alphabet	GOOGL	Buy	$1757.19	$2000.00	0.0%	13.8%	29x	5.2x	17.8%
Regulatory risks overblown; firm may see operating leverage via Cloud.									
Amazon	AMZN	Buy	$3240.96	$3600.00	0.0%	11.1%	73x	14.2x	19.6%
COVID accelerated e-commerce; significant runway of future growth.									
Disney	DIS	Buy	$173.12	$175.00	0.0%	1.1%	100x	3.6x	3.6%
Firm's strategic pivot apt to be embraced by the Street.									
Top Sells									
Snap Inc.	SNAP	Sell	$51.65	$24.00	0.0%	-53%	N/A	34.5x	N/A
Street estimates may be too high for social media in '21 and '22									
Wayfair	W	Sell	$273.09	$230.00	0.0%	-16%	80x	N/A	N/A
COVID tailwinds will be short-lived and margins will contract as S&M spend increases again.									

Source: Citi Research

IT Hardware and Tech Supply Chain

Focus on Demand Recovery and Structural Change After the Pandemic

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Companies mentioned: (DELL.N; US$74.71; 1; 17 Dec 20; 16:00); (VMW.N; US$148.10; 1; 17 Dec 20; 16:00); (APH.N; US$132.17; 1; 17 Dec 20; 16:00); (AAPL.O; US$128.70; 1; 17 Dec 20; 16:00); (JBL.N; US$44.09; 1; 17 Dec 20; 16:00); (XRX.N; US$23.13; 3; 17 Dec 20; 16:00); (CDW.O; US$135.24; 1; 17 Dec 20; 16:00); (LOGI.O; US$93.71; 1; 17 Dec 20; 16:00); (FLEX.O; US$17.81; 1; 17 Dec 20; 16:00)

- **Investment Thesis –** With a vaccine and stimulus package on the horizon, we focus on demand recovery thesis in hardware space. In addition, we think the pandemic has structurally changed some end markets permanently as people adopting hybrid working model enabled by technologies.

- **Dell (DELL)** — We maintain our Buy rating on Dell shares. While enterprise order trends remain tempered, we like Dell's competitive position relative to their peer group. PC trends appear to be stronger for longer with commercial demand expected to pick up ahead. Deleveraging and tax free spin of VMW should help to rerate the shares. Our Target Price reflects the likelihood of a one-time special cash dividend and a VMW spin off likely to happen in late 2021.

- **Amphenol (APH)** — We have a Buy on APH (Focus List) given the company's potential upside in 5G iPhone cycle, diversified end exposure and strong execution through cycles. In fact, APH has shown margin resiliency in 1H20 during supply chain disruptions in China. Given our view that Apple has a strong ramping in 5G iPhone, we expect upside in Amphenol's Apple exposure (~9% of rev.) driven by extra content dollars with 5G platform. Lastly, we see margin upside and topline synergies from recent MTS acquisition. Alert: APH: Expanding Sensor Offerings with MTS Acquisition; Maintain Buy

- **Apple (AAPL)** — Underlying momentum in Apple's products remain strong with iPhones expected to improve in 2021 off a delayed launch in 2020. Moreover, Apple is transitioning to a platform company and wearables, services revenue growth and installed base growth are positives. The full product + software + service package is what makes Apple unique as others do not control this. We see Apple shares as attractive given the revenue diversification, unique product + service set and potential for strong cash flow generation and shareholder returns.

- **Jabil (JBL)** — We have Buy rating on JBL. The stock has underperformed the S&P500 YTD (down 2% vs. SP500 up 13%) but the company is showing better margin resiliency than in previous cycles and potentially gaining shares from competitors in iPhone supply chain. Moreover, the stock trades at a ~10x NTM P/E which is close to the 10-year median with a widening gap vs. the S&P500 and peer FLEX. We think top-line upside and better margins should drive valuation expansion.

- **CDW (CDW)** — We have Buy rating on CDW. Our bull thesis is based on our view that CDW's execution and balanced portfolio should help the company to continue share gains in the VAR space. In addition, the company's ~50% exposure to SMB end market makes it well positioned to capture SMB demand recovery. CDW: Outperformance vs. IT Spending Should Continue Despite Near Term Volatilities; Initiate with Buy and TP of $140

- **Logitech (LOGI) -** We maintain our Buy rating on Logitech shares as we continue to see strong underlying demand for consumer tech peripherals due to overall TAM expansion in the near to mid term as trends in work from home, online content creation, online learning, online gaming, video conferencing which are unlikely to reverse once the economy resumes normal post COVID operations. We expect Logitech's strong net cash position (~8% of current market cap, no debt) provides an opportunity for the company to deploy to support organic investments and tuck in acquisitions.

- **Who is left behind in the recovery - Xerox (XRX)** - We maintain our Sell rating on Xerox shares based on our belief that society will not fully return to the office, and that the office copier industry will see accelerated structural declines. The new team at Xerox has made some notable changes, in our view, which we find encouraging but realize it is very early. Until we can see more evidence of these innovations coming to market, we maintain our Sell rating, but we closely watch these developments to see if indeed they make their way to full commercial viability, as well as the demand uptake.

IT Hardware and Tech Supply Chain: Top Buys and Sells

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
Dell	**DELL**	**Buy**	**$74.47**	**$82.00**	**0.0%**	**11.0%**	**10.0x**	**9.3x**	**36.3%**
VMW spin and better end exposure than peers									
Amphenol	**APH**	**Buy**	**$132.03**	**$140.00**	**0.8%**	**7.9%**	**32.2x**	**6.7x**	**22.5%**
Strong executions plus synergies from MTS acquisition									
Apple	**AAPL**	**Buy**	**$128.56**	**$125.00**	**0.6%**	**-1.6%**	**32.4x**	**39.1x**	**n.a**
Product diversification and unique product + service model									
Jabil	**JBL**	**Buy**	**$44.03**	**$50.00**	**0.8%**	**14.3%**	**10.3x**	**2.7x**	**27.3%**
Margin resiliency and share gains in iPhone supply chain									
CDW	**CDW**	**Buy**	**$134.05**	**$140.00**	**1.2%**	**10.8%**	**18.6x**	**10.6x**	**58.9%**
Well positioned to capture SMB recovery (50% exposure)									
Logitech	**LOGI**	**Buy**	**$93.60**	**$105.00**	**0.8%**	**15.7%**	**23.4x**	**8.0x**	**30.7%**
Benefit from structural change to hybrid work model									
Top Sells									
Xerox	**XRX**	**Sell**	**$22.94**	**$13.00**	**4.3%**	**-39.2%**	**10.5x**	**0.8x**	**8.0%**
Accelerated structural decline in office copier industry									

Source: Citi Research

Payments, Processors & IT Services

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Companies mentioned: (CCC.N; US$30.46; 1; 17 Dec 20; 16:00); (PYPL.O; US$235.51; 1; 17 Dec 20; 16:00); (RXT.O; US$20.32; 1; 17 Dec 20; 16:00); (EPAM.N; US$344.20; 1; 17 Dec 20; 16:00); (IBM.N; US$125.55; 2; 17 Dec 20; 16:00); (ADT.N; US$8.41; 1; 17 Dec 20; 16:00); (FIS.N; US$145.97; 1; 17 Dec 20; 16:00); (FISV.O; US$114.70; 1; 17 Dec 20; 16:00); (GPN.N; US$195.42; 1; 17 Dec 20; 16:00); (CSGP.O; US$893.97; 1; 17 Dec 20; 16:00); (ADP.O; US$177.34; 2; 17 Dec 20; 16:00); (PAYX.O; US$95.65; 1; 17 Dec 20; 16:00); (FLT.N; US$282.01; 2; 17 Dec 20; 16:00); (WEX.N; US$204.76; 2; 17 Dec 20; 16:00)

Clearly Visible Destination…and Winding Road

We are incrementally positive on IT Services…believe IT budgets should indicate an accelerating multi-year trend towards digital transformation – positive on Rackspace and EPAM, less so on IBM and BPOs. A FinTech recovery is better anticipated and expectations are the key…continued tech enablement of consumer payment flows; cloud penetration and automation within bank IT; business payments traction; and demographic changes are factors to consider - we're positive on deal stocks and PayPal. Business Services remains a stockpicker's game – we like Clarivate and CoStar.

- **We're Positive on our Sector…** — …as shown by our Buy ratings. Because the underlying rationale for being positive is clear (described below), the opportunity (and the risks) lie in the path taken. We note (i) 2020's unusual feast-or-famine performance meant ~1/3rd of our stocks did very well and the rest were not really close. For the stocks that the market decided were "recovery stocks", a key question is "how much is left?" and quarterly cadence and expectations become more important. Our view on back-ended recovery is unchanged, with Mar-qtr earnings/Jun-qtr outlook a key point of risk; (ii) A robust capital formation calendar must be considered because the discovery and education process will undoubtedly keep the "old economy vs. new economy" debate alive and pressure certain stocks; (iii) Sustainable higher growth levels should be expected (secular drivers, easier comps, lower political uncertainty) and combined with lower-for-longer interest rates should support higher multiples, in our view.

- **Payments & Processors View** — Technology and demographic trends support higher growth with near-term business survivorship and persistently higher unemployment as the key risks. Most of our covered public payments ideas are well-situated to deliver steady growth based on continued strength of tech-enabled channels while the recovery in deeply-hurt industries (e.g., travel) is likely a multi-year support starting in 2Q21. Banks have no choice but to spend on digital transformation. Meanwhile, the emergence of new payment flows & ways to play payments (e.g., infrastructure, business payments, etc.) is exciting.

- **IT Services View** — We believe IT budgets should indicate an accelerating multi-year trend towards digital transformation…that includes cloud-related investments, automation and eventually emerging tech spending (e.g., AI, etc.).

- **Business Services View** — Our info/business services coverage have recovered well in the second-half with line-of-sight towards the end of the pandemic. The pace and nuances of the broader economic recovery will remain top-of-mind concerns for ADP & PAYX holders where we continue to favor PAYX coming out of the pandemic with our "PAY-off, ROLL-off" thesis. M&A should also remain elevated in 2021 – (i) ADP/PAYX have been historically active coming out of recessions, (ii) CoStar, Clarivate, and Dun & Bradstreet look to scale new capabilities/value propositions across their respective ecosystems, and (iii) ADT seeks to remain digitally relevant with its partnership with Google.

- **Payments & Processors Picks** — We continue to like all three of the deal stocks – FISV, FIS, GPN. There has been recent momentum in these stocks, with two out of three outperforming the market recently. These stocks can benefit from the 2021 recovery and higher revenue growth profile – GPN has the most consumer payments-related exposure, followed by FISV and FIS. All of these companies had positive commentary at our FinTech conference, and FISV's analyst day followed with a fairly bullish near- and longer-term outlooks and product roadmap. These stocks can benefit as investors do more work into 2021. In addition to favorable fundamentals, valuation, and bottom-line visibility, these companies have a healthy ability to deploy capital over the next few years. Within the deal stocks, our preference is currently FISV followed by GPN and FIS. Beyond these, we continue to like PYPL – there engagement-based growth (crypto, BNPL) should be a stronger factor than net new account additions.

- **IT Services Picks** — EPAM remains our top IT Services pick as we believe it to be well-positioned as a digital pure-play given both near-term and long-term trends (multi-year digital transformation spend acceleration expected) and its ability to quickly accelerate back to 20%+ organic growth exiting the pandemic. RXT is one of our top IT Services ideas as we believe its multicloud demand is a key building block for digital transformation and its investments over time in technology, partnerships, and its go-to-market have positioned it well to gain share in a large and growing end-market.

- **Business Services Picks** — CoStar is our top info/business services pick for 2021 benefiting from multiple facets including (i) “recovery” in CoStar suite growth, (ii) “accelerated secular growth” in online apartment and commercial property listings, and (iii) “disruption” potential with digital commercial property auctions and now competing in residential real estate services. Further, we are impressed with how the “Idea Management Ecosystem” mosaic is quickly forming. Coupled with our view that the company is a high-level executor, we believe Clarivate is poised to shift its organic growth potential higher in 2021.

- **Who is left behind in the recovery?** — The fast-forward nature of our sector supports relative rather than absolute positioning. So we do not have Sells but lower-ranked names include IBM and the BPOs. We also have relative picks among ADP/PAYX (favor PAYX) and FLT/WEX.

Payments, Processors & IT Services

	Ticker	Rating	Price (12/17/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
PayPal	PYPL	Buy	$235.51	$230.00	0.0%	(2.3%)	52.9x	11.5x	15.7%
PYPL: Key beneficiary from the accelerated shift to digital commerce.									
Fiserv	FISV	Buy	$114.70	$140.00	0.0%	22.1%	21.7x	1.8x	5.8%
FISV: Highly visible and solid top- and bottom-line outcomes + attractive valuation + material capital return									
EPAM Systems	EPAM	Buy	$344.20	$408.00	0.0%	18.5%	45.9x	7.5x	18.3%
EPAM: Digital pure-play; Well-positioned to capture accelerated digital transformation spend									
Global Payments	GPN	Buy	$195.42	$208.00	0.4%	6.8%	24.2x	2.2x	4.8%
GPN: Payments “pure play” among deal stocks + highly visible and strong top- and bottom-line outcomes + attractive valuation + capital deployment									
Fidelity National Info Srvcs.	FIS	Buy	$145.97	$158.00	1.1%	9.3%	22.2x	1.8x	3.7%
FIS: Highly visible and solid top- and bottom-line outcomes + attractive valuation + capital return as a surprise catalyst?									
Rackspace Technologies	RXT	Buy	$20.32	$26.00	0.0%	28.0%	17.9x	2.9x	2.9%
RXT: Pure play on cloud transformation / multi-cloud trend + bookings point to organic growth acceleration + attractive valuation									
CoStar Group	CSGP	Buy	$893.97	$1,000.00	0.0%	11.9%	73.3x	6.8x	6.9%
CSGP: Top Biz Services idea; “Recovery” in CoStar suite growth; “Accelerated secular growth” in online property listings; “Disruption” potential with digital offerings									
Clarivate	CCC	Buy	$30.46	$33.00	0.0%	8.3%	35.9x	6.6x	(0.3%)
CCC: Impressed with the “Idea Management Ecosystem”; Company is a high-level executor; Poised for higher organic growth potential in 2021									

Source: Citi Research

Semiconductor Capital Equipment

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Companies mentioned: (AMKR.O; US$15.29; 3; 18 Dec 20; 16:00); (CCMP.O; US$146.74; 3; 18 Dec 20; 16:00); (FORM.O; US$42.99; 1; 18 Dec 20; 16:00); (ENTG.O; US$95.78; 1; 18 Dec 20; 16:00); (KLAC.O; US$262.15; 1; 18 Dec 20; 16:00); (IIVI.O; US$74.57; 1; 18 Dec 20; 16:00); (LRCX.O; US$480.97; 1; 18 Dec 20; 16:00); (005930.KS; W73,000; 1; 21 Dec 20; 15:45)

Expect Strong WFE Growth in 2021

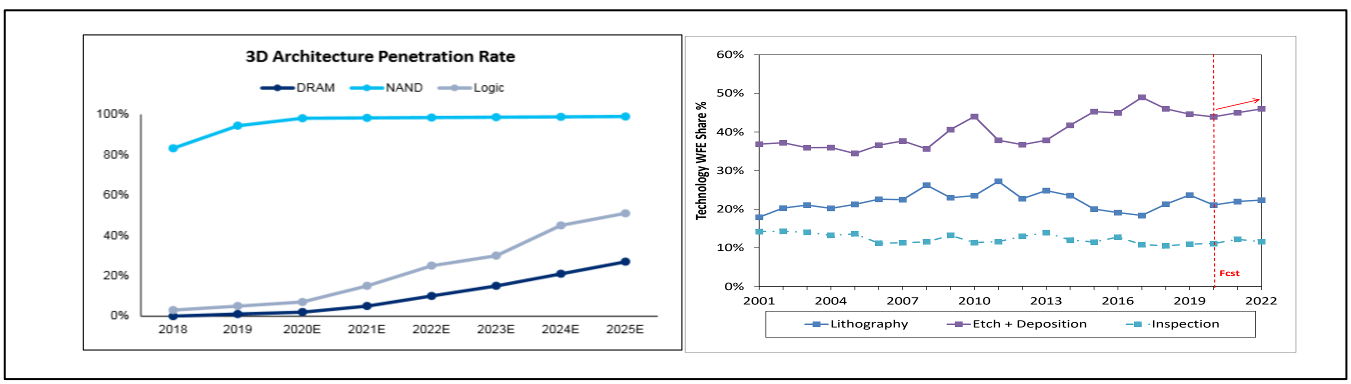
We expect strong 20%+ WFE growth next year with 3D device architecture, DRAM Inflection & NAND Consolidation, and China Domestic Outlook as Key Themes

- **Strong WFE Growth** — We expect WFE spend +20% next year or above Street's current ~10% expectations on strong memory investments +25% Y/Y led by DRAM +43% Y/Y and continued strength in foundry +18% Y/Y. Samsung NAND investments and domestic China spend outlook will be the key downside and upside swing factors. Our top buy-rated picks are LRCX, KLAC, ENTG, and FORM.

- **3D Device Megatrend** — We view 3D architecture adoption in logic devices as transistor architecture shifts to GAA (Gate All Around) and horizontal nanosheets (HNS) below 3nm from FinFET and eventually DRAM to be a key megatrend for equipment industry. Specifically, we expect increased demand for etch and deposition equipment in the next five years similar to what we saw through 2012-17 for 3D NAND to be a incremental growth driver for our top picks LRCX & ENTG (see Beyond Moore's Law: 3D Architecture with Material Innovation).

- **DRAM Inflection** — One off panic demand from Huawei saved the DRAM market from prolonged oversupply in 2H20 and helped deplete inventories. US memory supply chain expects server DRAM prices to improve sequentially in 1Q21 and up sharply in 2Q21 on hyper scale servers, GPU graphics, and 5G smartphones. NAND market is expected to remain in oversupply in 1H21 and improve in 2H21 with further consolidation in the NAND market or down to 3-4 players similar to the DRAM industry as a big swing factor. Citi Samsung analyst models Samsung NAND capex +40% Y/Y in 2021.

Figure 58. 3D Device Penetration to Drive Higher Etch & Deposition Sales



Source: Citi Research, WWSEMS

- **Domestic China Outlook** — We believe that Biden will continue some hawkish policies towards China, but rather than focusing on broadly restricting equipment sales, Biden will be more focused on IP protection and could likely ease some of the restrictions put in place by the Trump administration. We model China domestic WFE spend down 25% Y/Y in 2011 due to continued SMIC restrictions.

- **Who is left behind in the recovery?** Our sell-rated stocks CCMP and AMKR are both at risk of losing share in their respective markets. We believe CCMP is losing share in its existing slurries and pads business and that new replacement metals could create a structural risk to their core slurry business. We believe that AMKR is challenged with increasing packaging competition from China on the low end and TSMC at the high end.

Semiconductor Capital Equipment: Top Buys and Sells

			Price	Target	Yield	ETR	2021E		
	Ticker	Rating	(12/16/20)	Price	(%)	(%)	P/E	P/BV	ROE
Top Buys									
Lam Research Corporation	**LRCX**	**Buy**	**$486.24**	**$420**	**1.1%**	**-12.6%**	**22.7x**	**10.7x**	**53.6%**
Top front-end memory equipment pick and 3D device megatrend beneficiary									
KLA Corporation	**KLAC**	**Buy**	**$259.68**	**$236**	**1.4%**	**-7.7%**	**23.4x**	**14.0x**	**56.4%**
High 5G and EUV equipment appeal									
Entegris, Inc	**ENTG**	**Buy**	**$96.29**	**$92.00**	**0.3%**	**-4.1%**	**33.6x**	**7.3x**	**22.3%**
One-line explanation for why a Top Buy									
Top Sells									
Amkor Technology, Inc.	**AMKR**	**Sell**	**$15.38**	**$11.40**	**0.0%**	**-24.8%**	**14.6x**	**1.0x**	**10.6%**
Gross margin contraction risk on increasing competition									
CMC Materials, Inc	**CCMP**	**Sell**	**$145.44**	**$140.00**	**1.1%**	**-2.5%**	**21.8x**	**3.6x**	**13.4%**
Losing share in its existing slurries and pads business and that new replacement metals could create a structural risk to their core slurry business									

Source: Citi Research

Semiconductors

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Companies mentioned: (QCOM.O; US$147.42; 1; 18 Dec 20; 16:00); (AMD.O; US$95.92; 3; 18 Dec 20; 16:00); (TXN.O; US$164.07; 1; 18 Dec 20; 16:00); (ADI.O; US$144.56; 1; 18 Dec 20; 16:00); (ON.O; US$31.54; 1; 18 Dec 20; 16:00); (MXIM.O; US$86.45; 2; 18 Dec 20; 16:00); (NXPI.O; US$155.51; 2; 18 Dec 20; 16:00); (QRVO.O; US$162.66; 2; 18 Dec 20; 16:00); (SWKS.O; US$148.19; 2; 18 Dec 20; 16:00)

Continued Strength in 1H21 but We Believe a Slowdown is Due

Demand from the PC and handset end markets, coupled with supply tightness should drive further strength in semis, though we believe a slowdown is due. QCOM remains our top pick due to 5G upgrade cycle, while AMD is our top sell as the PC demand tapers.

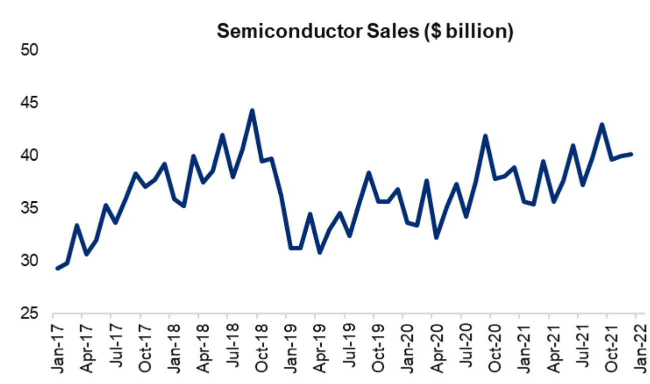
- **Expect semis to keep trending higher in 1H20** — We expect the semiconductor group to continue to trade higher as the PC and Handset end markets (53% of semi TAM) remain strong, and the Automotive and Industrial end markets (roughly 25% of semi TAM) are improving. We expect 2020 semi sales forecast to be up 7% YoY and 2021 semi sales to be up 6% YoY.

- **Component supply tightness driving semi strength** — We believe the supply chain tightness, increasing lead times, and lean channel inventories are driving some double ordering and inventory hoarding, resulting in the semi strength, which we believe will persist through 1H21.

- **PC demand remains strong** — The PC demand trends have continued longer than expected. Citi expects PC units to be up 9% YoY in 2020, and to be up 1% YoY in 2021 as the underlying TAM has increased driven by demand for multiple PCs per household. We believe consumer demand should taper off in 1H21, while commercial demand picks up in 2H21.

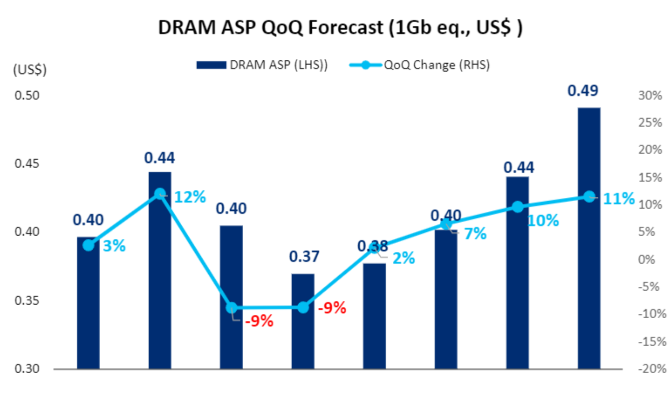
- **Handset demand remains strong; 5G ramp still in early innings** — We expect strong 5G handset demand to continue into 1H21. Citi expects 470 million 5G phones in 2021, 81% growth over 260 million in 2020. We are in the early innings of the 5G upgrade cycle and believe that the 5G upgrade cycle will last longer than the 4G upgrade cycle as it has the potential to drive new applications such as automonous driving, cloud-based gaming and widespread adoption of IoT devices. We believe this is positive for QCOM, QRVO and SWKS

Figure 59. Monthly Semiconductor Sales (2017-2021E)



Source: SIA, Citi Research

Figure 60. DRAM ASP QoQ Forecast



Source: DRAMexchange, Citi Research

- **Expect DRAM market to recover in 1H21** — We turned more bullish on the recovery of the DRAM market due to the power outage issue in Micron's DRAM Fab on Dec 3rd, 2020. We now expect DRAM prices to recover in 1Q21E, with ASP rising 2% in 1Q21E, 7% in 2Q21E, 10% in 3Q21E and 11% in 4Q21E.

- **Current auto strength to subside in 2021** — Auto semiconductor revenue should be back to peak levels in 4Q20, while global auto production units are down 7%. Global automotive production is expected to remain below 2019 levels til 2023. As such, we believe the strong demand from the automotive end market in 2H20 should subside in 2021 as inventory gets replenished. This could create a headwind for analog stocks such as TXN, ADI, NXP, ON and MXIM.
- **We believe a slowdown is due, likely in 2H21** — We maintain our belief that a slowdown is due in 2021 as 2020 semi sales growth of up 7% YoY is well above global GDP decline of 4% YoY. We believe the massive economic stimulus, fears of supply disruptions and trade tensions have driven inventory hoarding and resulted in better than expected demand. We do not believe the strength can continue given the work/school from home and stimulus that drove demand has to run out at some point.
- **Buy: Qualcomm (QCOM)** — We are still in the early innings of the 5G ramp and expect upside to both revenue and margins for Qualcomm going forward due to share gains, higher ASPs, and increased royalty revenues.
- **Buy: Texas Instruments (TXN)** — We believe TXN is a high-quality stock that outperforms in both industry upturns and downturns. TI has one of the highest margins and EPS growth in our coverage universe.
- **Reiterate AMD as our Top Sell** — We believe AMD market share gains will slow as Intel starts a price war with AMD, which we expect. As such, we believe AMD's valuation of 51X NTM P/E, twice that of SOX's valuation of 25X, is unjustified.

Semiconductors: Top Buys and Sells

			Price	Target	Yield	ETR	2021E		
	Ticker	Rating	(12/16/20)	Price	(%)	(%)	P/E	P/BV	ROE
Top Buys									
Qualcomm	**QCOM**	**Buy**	**$149.74**	**$194.00**	**1.7%**	**31.3%**	**20.4X**	**16.2X**	**94.6X**
We are still in early innings of the 5G ramp and expect upside to both revenue and margins									
Texas Instruments	**TXN**	**Buy**	**$162.12**	**$174.00**	**2.5%**	**9.8%**	**27.9**	**17.3X**	**57.2X**
We believe TXN is a high-quality stock that outperforms in both industry upturns and downturns									
Top Sells									
Advanced Micro Devices	**AMD**	**Sell**	**$96.85**	**$13.00**	**0.0%**	**87.0%**	**53.8X**	**18.7X**	**29.1X**
We believe AMD market share gains will slow as Intel starts a price war with AMD.									

Source: Citi Research

Software

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Companies mentioned: (ADBE.O; US$502.95; 2; 18 Dec 20; 16:00); (TEAM.O; US$247.78; 1; 18 Dec 20; 16:00); (AUDC.O; US$27.82; 2H; 18 Dec 20; 16:00); (CHKP.O; US$122.25; 2; 18 Dec 20; 16:00); (CTXS.O; US$132.65; 1; 18 Dec 20; 16:00); (CRWD.N; US$204.29; 2H; 18 Dec 20; 16:00); (DOCU.O; US$241.00; 1; 18 Dec 20; 16:00); (DBX.O; US$23.68; 1; 18 Dec 20; 16:00); (FSLY.N; US$101.78; 3H; 18 Dec 20; 16:00); (FEYE.O; US$19.23; 2; 18 Dec 20; 16:00); (FTNT.O; US$145.85; 3; 18 Dec 20; 16:00); (HUBS.N; US$404.55; 1H; 18 Dec 20; 16:00); (MCFE.N; US$17.21; 2H; 18 Dec 20; 16:00); (MDLA.N; US$35.32; 2H; 18 Dec 20; 16:00); (MSFT.O; US$218.59; 1; 18 Dec 20; 16:00); (NICE.O; US$273.55; 1; 18 Dec 20; 16:00); (NLOK.O; US$21.24; 2; 18 Dec 20; 16:00); (OKTA.O; US$271.81; 1H; 18 Dec 20; 16:00); (ORCL.K; US$65.06; 2; 18 Dec 20; 16:00); (PING.N; US$28.97; 1H; 18 Dec 20; 16:00); (PFPT.O; US$131.11; 1; 18 Dec 20; 16:00); (SAIL.N; US$55.57; 1H; 18 Dec 20; 16:00); (CRM.N; US$227.43; 2; 18 Dec 20; 16:00); (SCWX.O; US$14.25; 2; 18 Dec 20; 16:00); (NOW.N; US$565.43; 1; 18 Dec 20; 16:00); (SHOP.N; US$1,170.96; 2H; 18 Dec 20; 16:00); (WORK.N; US$42.79; 2H; 18 Dec 20; 16:00); (SMAR.N; US$72.25; 2H; 18 Dec 20; 16:00); (SWI.N; US$14.18; 1; 18 Dec 20; 16:00); (SPLK.O; US$165.89; 2; 18 Dec 20; 16:00); (VMW.N; US$140.14; 1; 18 Dec 20; 16:00); (ZEN.N; US$140.27; 2H; 18 Dec 20; 16:00); (ZM.O; US$406.01; 2H; 18 Dec 20; 16:00); (ZS.O; US$195.88; 1H; 18 Dec 20; 16:00); (CSCO.O; US$45.44; 2; 18 Dec 20; 16:00); (BIGC.O; US$70.58; 3H; 18 Dec 20; 16:00); (FTNT.O; US$145.85; 3; 18 Dec 20; 16:00)

Great Secular Trends Continue; Vaccine / Recovery Could be Headwind

We see secular trends, which further came to light with rapid COVID-induced changes as burning brighter into 2021. At the same time, we are cognizant that the "scarce growth" thesis that has fueled significant software outperformance could reverse. We would stick with secular winners, although be careful with companies that have seen significant 2020 COVID benefit.

- **Scarce growth in 2020 has been great for software** — Software has showed significant outperformance vs. the S&P this year, up 44% vs. the benchmark through 12/18, this the 16th in 18 years that the sector has outperformed (2014 and 2019 were years of underperformance). We see the driver of outperformance in the sector this year as an extreme flight to growth, which has become scarcer in the macro backdrop of the COVID-19 pandemic. We note expected (NTM) revenue software growth is back to pre-COVID levels. This is on backdrop of expected S&P revenue growth is ahead of pre-COVID levels, suggesting cyclical exposure may outshine software in 2021. For the top decline SW companies, we note valuation premium is well ahead of growth premium, suggesting multiple expansion in this cohort (and top quartile) is unlikely without growth acceleration.

- **2021 Playbook will be impacted by vaccine / recovery** — We expect THE theme of 2021 for software will be the impact of a global recovery from COVID challenges on the "scarce growth" thesis that has driven 2020 performance. We expect the most challenging set-ups to be companies that benefitted in 2020 from COVID but have a more challenging secular outlook driven by COVID. Those would include CHKP and FTNT. Opposite of that, we see the best set-up (relative to COVID / macro) to be where COVID was a 2020 headwind but where COVID-related forces drive positive impact long-term including MDLA, SAIL, SMAR, TEAM, ZEN. We show summary in Figure 1.

- **Secular trends are likely here to stay** — Amidst a focus on vaccines, a recovery and potentially cyclical rotation, we also expect powerful secular trends affecting software to carry weight in share performance. At the top of this list, we still see the front-office market, where connections to customers and others will drive continued transformation in selling, marketing, customer service, commerce and the like. We also see favorable trends in productivity / collaboration and security, although more balance and more challenging secular trends in infrastructure.

- **Some old trends and some new trends in the numbers** — Beyond durable top-line growth, we see cloud / SaaS transition as being a top investable trend in numbers. We have the most confidence in CTXS and TEAM here while we note SPLK and VMW are worth watching. We see ARR metric, increasing mix of recurring business dragging up growth rate as the primary mechanic here. On the other end, we note that margins have likely run unsustainably high for some companies. While investors seem to understand this and OpEx run rates are not going back to pre-COVID levels, there is room for disappointment. We highlight companies where there is more cash flow focus on valuation as ones to watch, notably CHKP, FTNT, MSFT, NOW, ORCL.

- **High equity valuations / loose monetary policy and uneven macro likely to drive more M&A** — While we expect some macro improvement in 2021, ample forms of consideration (equity and plentiful cash), combined with macro conditions that favor larger vendors is likely to drive more M&A. We see front office (ADBE, MSFT buyers, MDLA, HUBS, ZEN targets), prod / collab (MSFT, CSCO buyers, SMAR, DBX targets) and security (MSFT, CSCO buyers, ZS, PING, SAIL targets) as most likely to be the center of activity.

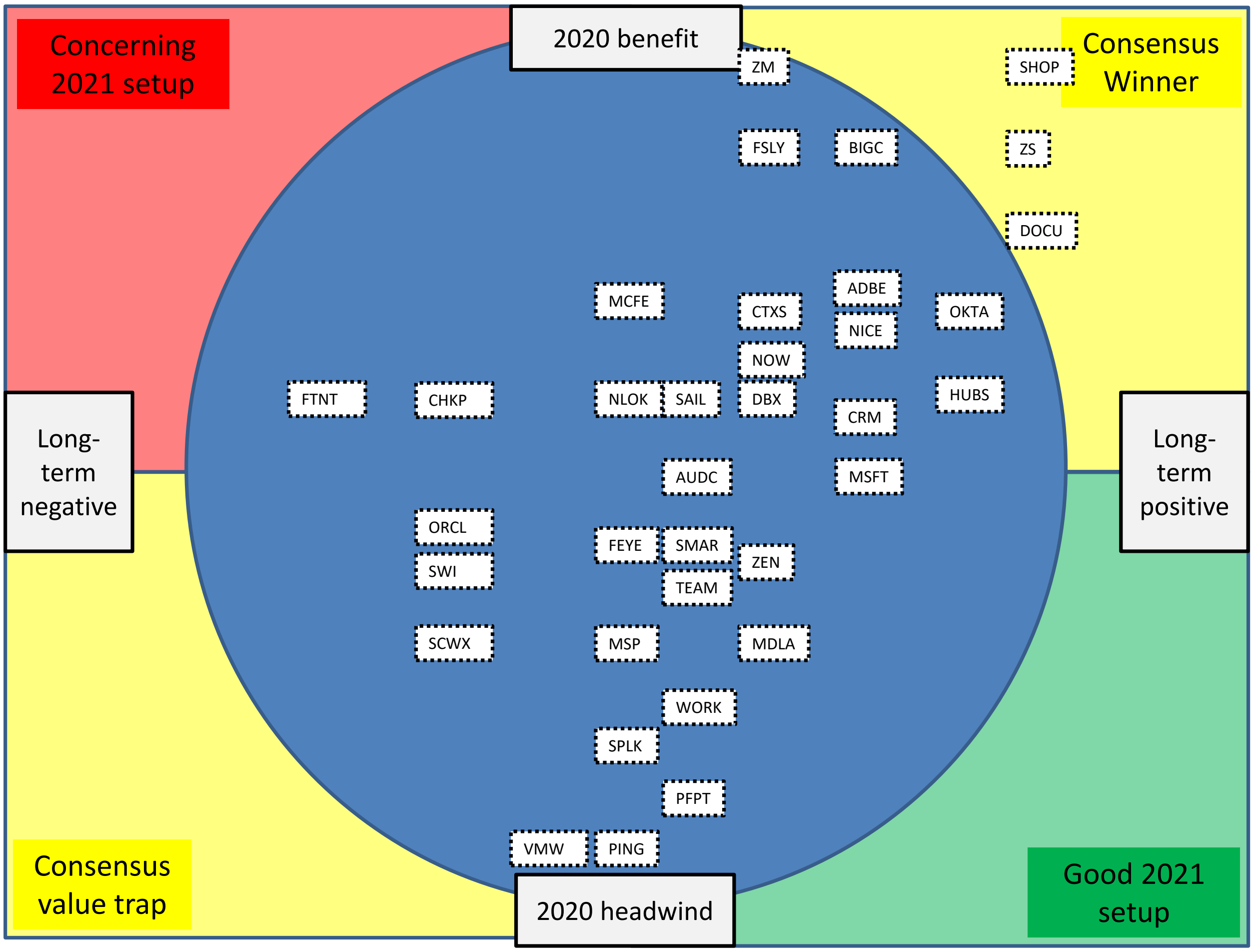
- **Front office sees enduring benefit** — We expect the dramatic transformations of 2020 will continue to play out as B2B and B2C businesses accelerate the pace of multi-year plans, after being sparked by COVID. This includes some spending coming back in "challenged" verticals. While we note CRM leads these trends, given the pace of and breadth of change, we see ample room for smaller players in this market across areas like customer experience management (MDLA), SMB-focused (HUBS) and customer service (ZEN). We see some tough comps in eCommerce (SHOP, BIGC). For larger players, (CRM and ADBE), we note the pace of market development likely necessitates acquisitions at relative high valuations.

- **Productivity / collaboration adoption accelerating, but suites gaining traction**— We see accelerated adoption continuing through 2021, although we expect there could be significant rationalization of fragmented landscape and point offering consolidation. We see collaborative work management (SMAR, privates) as most likely to be impacted.

- **Hyperscalers drive infrastructure growth, but there is still hybrid** — We see continued hyperscaler "hypergrowth" both driving workload growth and fueling concerns around encroachment into overlapping markets. We see companies closer to complex, large enterprise customers as better positioned (CTXS, DT, VMW) while we note competing in cloud native areas is more challenging (FSLY).

- **Cloud security opportunity underappreciated** — We see continued fragmentation and competitive landscape as a challenge, although we note growing, attractive cloud security opportunity that is hitting mainstream adoption. We see this as a significant driver for OKTA and ZS while we note tangible opportunity here at CWRD is less clear. We see position of "legacy" PFPT and SAIL as underestimated.

Figure 61. Temporary and Long-Term Impact of COVID



Source: Citi Research and FactSet Consensus

Software: Top Buys and Sells

	Ticker	Rating	Price (12/18/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E P/BV	2021E ROE
Top Buys									
DocuSign	**DOCU**	**Buy**	**$241.00**	**$282.00**	**0.0%**	**17.0%**	**158.8x**	**73.7x**	**32.4%**
Share gainer in crowded application and infrastructure monitoring, with balance of growth and profitability on healthy new customer additions and existing customer expansion.									
Nice Ltd	**NICE**	**Buy**	**$273.55**	**$292.00**	**0.0%**	**6.7%**	**41.0x**	**5.8x**	**13.5%**
We see Cloud growth maintaining accelerated growth rate and more than offseting license declines on the back of more urgent CCaaS demand with WFH / SIP.									
ServiceNow	**NOW**	**Buy**	**$565.43**	**$589.00**	**0.0%**	**4.2%**	**99.2x**	**21.7x**	**21.3%**
Significant core and adjacent market opportunities drive sustained above market growth with balance of margin expansion.									
Top Sells									
Fastly	**FSLY**	**Sell**	**$101.78**	**$47.00**	**0.0%**	**-53.8%**	**-477.3x**	**22.8x**	**-5.0%**
Bull case in "edge cloud" appears too early to offset risk of large CDN exposure where margins and multiples are much lower. Semi-recurring revenue at risk post-COVID.									
Fortinet Inc	**FTNT**	**Sell**	**$145.85**	**$110.00**	**0.0%**	**-24.6%**	**36.8x**	**14.3x**	**35.5%**
Company is focusing its investments in security appliances / hardware-based adjacencies during time market is transitioning to cloud and away from hardware deployment.									
SecureWorks	**SCWX**	**Neutral**	**$14.25**	**N/A**	**N/A**	**N/A**	**45.2x**	**1.8x**	**2.7%**
Expecting undistinguished growth with lagging margins on the back of challenging trends in managed security services.									

Source: Citi Research and FactSet Consensus

Telecommunications

Communications Services & Infrastructure

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Companies mentioned: (TMUS.O; US$130.01; 1; 17 Dec 20; 16:00); (EQIX.O; US$712.74; 1; 17 Dec 20; 16:00); (T.N; US$29.62; 1; 17 Dec 20; 16:00); (SWCH.N; US$15.94; 1; 17 Dec 20; 16:00); (LUMN.N; US$10.25; 3H; 17 Dec 20; 16:00)

I Feel the Need, the Need for Speed & Content

We are taking a positive view on the prospects for the communications category in 2021 after a year that has revealed greater resilience of customer spending across wireless, broadband and home video entertainment services amidst higher unemployment and macroeconomic uncertainties caused by the pandemic.

- **Positive Outlook for 2021** — Looking forward into 2021, we believe the demand for bandwidth and content can continue to push service revenues up another 2% with consumer spending up almost 3% and business spending down about 1%. The pandemic has reinforced that customers are willing to pay for greater broadband speeds for fixed services. We find consumers are still growing aggregate video spend, even while cord cutting is picking up. The combination of preferences for greater speed and greater content seems to be reinforced within the wireless category, as carriers are finding greater take rates for higher spending tiers that combine greater broadband speeds (including 5G) with content bundles. The broadband category should continue to grow at about 6% in 2021 with a balanced contribution from rising subscriptions and ARPU, while cable should continue to outperform from further share gains. We believe the communications infrastructure category, including Towers and Data centers, remains better positioned over time to directly and indirectly monetize the growth of Internet traffic.

- **Key Risks for the Sector** — Competition, regulation and a higher interest rate environment remain high-level risks across all of the sub-sectors we cover, while we also recognize a prolonged pandemic and elevated unemployment could eventually lead consumer and business customers to optimize spending lower.

- **Top Picks** — Our top pick across all our coverage universe is Buy-rated T-Mobile, as we like the prospects to take further revenue share in the core mobile market, expand its addressable market with geographic and product expansion, and to quickly grow margins and cash flow. Our second ranked pick, as well as our top infrastructure pick, is Equinix given the prospects to grow revenue and improve returns on capital with a differentiated business model within the global data center category.

- **Slicing 5G to Monetize the Platform**– All three national wireless carriers have now launched 5G services and each of their initial strategies are heavily influenced by their spectrum and network positions. A number of executives have noted the benefit of 5G capacity is that it can be sliced and dynamically allocated to customize performance, including by product, geography, customer vertical, and even possibly for individual customers. We expect investors to heavily focus on the strategies carriers are employing to monetize their 5G investments, especially with the current mid-band spectrum auction under way through which carriers could invest an incremental $35 billion (under our base case) or about 20% of industry revenue. The three broad opportunities for 5G monetization are enhanced mobile (which carriers are now actively marketing), 5G fixed wireless broadband (which is emerging), and a broad range of new business/IoT services (which seems like a promising, albeit long-term opportunity, for additional revenue for the category).

- **Evolving Video Consumption** – We are observing rising total video spend as the adoption of a broader number of SVOD and dMVPD services are more than offsetting the revenue headwinds from cord cutting. We believe user experience is still a critical input into the decision for households to revisit their consumption model (linear, OTT, SVOD-only) and believe Smart Boxes and aggregating applications will play a more important role in defining the rate at which customers migrate to new solutions. Over the next number of years, many customers could very well end with the same breadth of content, but simply packaged and purchased in a different way than today.

- **Cloud Services Getting a Lift, While Workloads May Extend to the Edge** – The increase in remote work combined with rising data speeds over wireline and wireless networks have seemingly accelerated the interest for companies to push more compute and storage into the cloud, while the lower latency of fiber and 5G services introduces the potential for firms to benefit from edge data center deployments.

- **Regulatory Change Is Likely** – Regulatory policy can influence the competitive landscape and returns for the category over time and the upcoming change in Administration is likely to be viewed as a net risk for share leaders in the communications category and a potential help for insurgents with room to gain share.

Communication Services and Infrastructure: Top Buys and Sells

	Ticker	Rating	Price (12/16/20)	Target Price	Yield (%)	ETR (%)	2021E P/E	2021E EV/OIBDA	2021E ROE
Top Buys									
T-Mobile US	**TMUS**	**Buy**	**$132.94**	**$151.00**	**0.0%**	**13.59%**	**24.1x**	**9.8x**	**9.7%**
Outperforming industry revenue growth with share gains, expanding its addressable market for services,& significant margin expansion opportunity from synergies.									
Equinix	**EQIX**	**Buy**	**$697.79**	**$883.00**	**1.7%**	**26.54%**	**NA**	**22.7x**	**9.2%**
Favorable global growth from retail-centric strategy with a differentiated product portfolio, opportuniites to improve margin with scale, & favorable return on capital.									
Switch	**SWCH**	**Buy**	**$15.79**	**$23.00**	**1.3%**	**45.66%**	**NA**	**18.5x**	**3.0%**
Favorable domestic revenue growth from core and expansion markets, favorable returns on capital, positive strategic optionality from its market position and product portfolio									
AT&T	**T**	**Buy**	**28.75**	**$36.00**	**7.23%**	**25.22%**	**9.2x**	**6.9x**	**11.99%**
Stabilize revenue partly from better wireless performance, positive option value from enhanced HBO Max strategy, & focus on net debt reduction and current dividend payout,									
Top Sells									
Lumen	**LUMN**	**Sell**	**$10.50**	**$7.50**	**9.7%**	**(28.6%)**	**7.4x**	**5.0x**	**11.1%**
Risk to consensus EBITDA from elevated unemployment, loss of high-margin broadband subsidy revenue, and ongoing legacy revenue pressures									

Source: Citi Research

Complete companies mentioned list:
(PHM.N; US$45.10; 1; 18 Dec 20; 16:00); (PII.N; US$99.22; 1H; 18 Dec 20; 16:00); (GH.O; US$127.30; 1H; 18 Dec 20; 16:00); (OMF.N; US$45.28; 1; 18 Dec 20; 16:00); (SGRY.O; US$28.46; 1H; 18 Dec 20; 16:00); (ETSY.O; US$190.76; 1H; 18 Dec 20; 16:00); (ENTG.O; US$95.78; 1; 18 Dec 20; 16:00); (EXP.N; US$100.01; 1; 18 Dec 20; 16:00); (EPAY.O; US$49.17; 1; 18 Dec 20; 16:00); (DBX.O; US$23.68; 1; 18 Dec 20; 16:00); (OSK.N; US$85.75; 1; 18 Dec 20; 16:00); (LOGI.O; US$94.85; 1; 18 Dec 20; 16:00); (HPP.N; US$24.18; 1; 18 Dec 20; 16:00); (SNX.N; US$82.18; 1; 18 Dec 20; 16:00); (EPZM.O; US$12.39; 1H; 18 Dec 20; 16:00); (GTLS.O; US$111.98; 1; 18 Dec 20; 16:00); (BERY.N; US$54.07; 1; 18 Dec 20; 16:00); (SAIC.N; US$98.21; 1; 18 Dec 20; 16:00); (MRCY.O; US$83.00; 1; 18 Dec 20; 16:00); (NOMD.N; US$25.21; 1; 18 Dec 20; 16:00); (BYND.O; US$144.73; 2; 18 Dec 20; 16:00); (HSY.N; US$150.88; 1; 18 Dec 20; 16:00); (POST.N; US$98.89; 1; 18 Dec 20; 16:00); (BRBR.N; US$24.49; 1; 18 Dec 20; 16:00); (K.N; US$62.08; 1; 18 Dec 20; 16:00); (SMPL.O; US$25.74; 1; 18 Dec 20; 16:00); (GIS.N; US$59.40; 2; 18 Dec 20; 16:00); (CPB.N; US$47.57; 2; 18 Dec 20; 16:00); (WW.O; US$26.80; 1; 18 Dec 20; 16:00); (IPAR.O; US$58.43; 2; 18 Dec 20; 16:00); (YETI.N; US$72.37; 1; 18 Dec 20; 16:00); (VVV.N; US$23.40; 1; 18 Dec 20; 16:00); (KMB.N; US$135.08; 3; 18 Dec 20; 16:00); (REYN.O; US$30.43; 1; 18 Dec 20; 16:00); (HLF.N; US$48.38; 1; 18 Dec 20; 16:00); (NWL.O; US$20.60; 1; 18 Dec 20; 16:00); (ELF.N; US$22.60; 2H; 18 Dec 20; 16:00); (PG.N; US$139.04; 1; 18 Dec 20; 16:00); (ENR.N; US$42.69; 1; 18 Dec 20; 16:00); (CLX.N; US$203.17; 1; 18 Dec 20; 16:00); (EL.N; US$261.31; 2; 18 Dec 20; 16:00); (COTY.N; US$6.99; 1; 18 Dec 20; 16:00); (EPC.N; US$35.96; 2; 18 Dec 20; 16:00); (NUS.N; US$52.44; 2; 18 Dec 20; 16:00); (CHD.N; US$88.15; 2; 18 Dec 20; 16:00); (CL.N; US$85.93; 2; 18 Dec 20; 16:00); (TUP.N; US$31.46; 2H; 18 Dec 20; 16:00); (BJ.N; US$38.32; 2; 18 Dec 20; 16:00); (TGT.N; US$170.42; 1; 18 Dec 20; 16:00); (BURL.N; US$240.85; 1; 18 Dec 20; 16:00); (HOG.N; US$35.72; 1; 18 Dec 20; 16:00); (ACI.N; US$15.62; 1; 18 Dec 20; 16:00); (AEO.N; US$19.17; 1; 18 Dec 20; 16:00); (LCII.N; US$134.14; 2; 18 Dec 20; 16:00); (MO.N; US$43.78; 1; 18 Dec 20; 16:00); (ANF.N; US$20.04; 1; 18 Dec 20; 16:00); (OLLI.O; US$81.85; 3; 18 Dec 20; 16:00); (DECK.N; US$294.72; 1; 18 Dec 20; 16:00); (SIG.N; US$26.92; 3; 18 Dec 20; 16:00); (DG.N; US$210.48; 1; 18 Dec 20; 16:00); (BC.N; US$81.39; 2H; 18 Dec 20; 16:00); (RL.N; US$101.21; 1; 18 Dec 20; 16:00); (WGO.N; US$62.67; 1; 18 Dec 20; 16:00); (WMT.N; US$145.95; 1; 18 Dec 20; 16:00); (PLCE.O; US$45.21; 2; 18 Dec 20; 16:00); (PM.N; US$86.09; 1; 18 Dec 20; 16:00); (FL.N; US$39.04; 2; 18 Dec 20; 16:00); (HAS.O; US$93.81; 1; 18 Dec 20; 16:00); (COST.O; US$367.00; 2; 18 Dec 20; 16:00); (PFE.N; US$37.68; 2; 18 Dec 20; 16:00); (KR.N; US$30.87; 2; 18 Dec 20; 16:00); (M.N; US$10.43; 3; 18 Dec 20; 16:00); (ROST.O; US$117.66; 1; 18 Dec 20; 16:00); (LB.N; US$38.63; 3; 18 Dec 20; 16:00); (ABI.BR; €56.65; 2; 21 Dec 20; 17:30); (DLTR.O; US$111.88; 1; 18 Dec 20; 16:00); (XOM.N; US$42.73; 2; 18 Dec 20; 16:00); (CVX.N; US$87.19; 2; 18 Dec 20; 16:00); (PDCE.O; US$18.90; 1; 18 Dec 20; 16:00); (PXD.N; US$114.36; 1; 18 Dec 20; 16:00); (COP.N; US$40.98; 1; 18 Dec 20; 16:00); (OVV.N; US$14.90; 2H; 18 Dec 20; 16:00); (CLR.N; US$16.80; 2; 18 Dec 20; 16:00); (MRO.N; US$6.73; 2; 18 Dec 20; 16:00); (MGY.N; US$7.47; 2; 18 Dec 20; 16:00); (XEC.N; US$39.00; 1; 18 Dec 20; 16:00); (EOG.N; US$51.77; 1; 18 Dec 20; 16:00); (PSX.N; US$66.85; 1; 18 Dec 20; 16:00); (CXO.N; US$59.56; 1; 18 Dec 20; 16:00); (PBF.N; US$6.81; 3H; 18 Dec 20; 16:00); (CVE.TO; C$7.57; 1; 18 Dec 20; 16:00); (OKE.N; US$39.87; 2; 18 Dec 20; 16:00); (PSXP.N; US$27.83; 1; 18 Dec 20; 16:00); (WMB.N; US$21.18; 1; 18 Dec 20; 16:00); (ET.N; US$6.78; 1; 18 Dec 20; 16:00); (EPD.N; US$20.56; 1; 18 Dec 20; 16:00); (ENB.TO; C$41.93; 1; 18 Dec 20; 16:00); (SHLX.N; US$10.20; 1; 18 Dec 20; 16:00); (RKT.N; US$21.64; 1; 18 Dec 20; 16:00); (NMIH.O; US$23.52; 1H; 18 Dec 20; 16:00); (AZN.L; £74.40; 1; 21 Dec 20; 16:30); (VRTX.O; US$236.72; 1; 18 Dec 20; 16:00); (ALXN.O; US$156.75; 2; 18 Dec 20; 16:00); (REGN.O; US$498.89; 2; 18 Dec 20; 16:00); (NAVI.O; US$9.34; 1; 18 Dec 20; 16:00); (BMRN.O; US$88.85; 2; 18 Dec 20; 16:00); (AMGN.O; US$228.49; 1; 18 Dec 20; 16:00); (BIIB.O; US$249.62; 3; 18 Dec 20; 16:00); (GILD.O; US$59.08; 1; 18 Dec 20; 16:00); (PHR.N; US$54.66; 2; 18 Dec 20; 16:00); (TLND.O; US$38.32; 1H; 18 Dec 20; 16:00); (CI.N; US$197.08; 1; 18 Dec 20; 16:00); (ACHC.O; US$48.94; 1; 18 Dec 20; 16:00); (SLQT.N; US$22.56; 1; 18 Dec 20; 16:00); (PGNY.N; US$40.02; 1; 18 Dec 20; 16:00); (UHS.N; US$137.29; 1; 18 Dec 20; 16:00); (MPLN.N; US$9.62; 1H; 18 Dec 20; 16:00); (CVS.N; US$69.55; 1; 18 Dec 20; 16:00); (WBA.O; US$40.69; 2; 18 Dec 20; 16:00); (FIT.N; US$7.25; 2H; 18 Dec 20; 16:00); (IRTC.O; US$232.05; 1; 18 Dec 20; 16:00); (HCAT.O;

US$41.95; 1; 18 Dec 20; 16:00); (AMZN.O; US$3,201.65; 1; 18 Dec 20; 16:00); (INOV.O; US$18.27; 2; 18 Dec 20; 16:00); (MD.N; US$24.08; 2; 18 Dec 20; 16:00); (AAPL.O; US$126.66; 1; 18 Dec 20; 16:00); (ONEM.O; US$40.28; 1H; 18 Dec 20; 16:00); (TDOC.N; US$196.34; 1; 18 Dec 20; 16:00); (0880.HK; HK$8.78; 1; 21 Dec 20; 16:10); (0027.HK; HK$58.55; 1; 21 Dec 20; 16:10); (LVS.N; US$57.43; 1; 18 Dec 20; 16:00); (MLCO.O; US$18.97; 1; 18 Dec 20; 16:00); (HZNP.O; US$69.68; 1; 18 Dec 20; 16:00); (GD.N; US$152.67; 1; 18 Dec 20; 16:00); (RTX.N; US$70.17; 2; 18 Dec 20; 16:00); (CACI.N; US$247.77; 1; 18 Dec 20; 16:00); (TXT.N; US$47.37; 2; 18 Dec 20; 16:00); (LHX.N; US$187.21; 1; 18 Dec 20; 16:00); (NOC.N; US$303.13; 1; 18 Dec 20; 16:00); (DAL.N; US$40.68; 1; 18 Dec 20; 16:00); (BA.N; US$219.75; 2; 18 Dec 20; 16:00); (ENDP.O; US$5.57; 1; 18 Dec 20; 16:00); (SAVE.N; US$25.88; 1; 18 Dec 20; 16:00); (LDOS.N; US$105.67; 1; 18 Dec 20; 16:00); (BHC.N; US$20.73; 1; 18 Dec 20; 16:00); (HII.N; US$169.62; 1; 18 Dec 20; 16:00); (TEVA.N; US$10.01; 2; 18 Dec 20; 16:00); (AAL.O; US$16.51; 3; 18 Dec 20; 16:00); (BAH.N; US$89.80; 1; 18 Dec 20; 16:00); (GE.N; US$10.81; 1; 18 Dec 20; 16:00); (SB.N; US$1.20; 3H; 18 Dec 20; 16:00); (KCS.N^G06; Delisted); (HMLP.N; US$14.41; 3; 18 Dec 20; 16:00); (KSU.N; US$197.62; 1; 18 Dec 20; 16:00); (MTZ.N; US$66.08; 1; 18 Dec 20; 16:00); (CFX.N; US$36.57; 3; 18 Dec 20; 16:00); (MGA.N; US$63.78; 1; 18 Dec 20; 16:00); (VNT.N; US$33.91; 1; 18 Dec 20; 16:00); (ALSN.N; US$43.10; 2; 18 Dec 20; 16:00); (PNR.N; US$52.26; 1; 18 Dec 20; 16:00); (APTV.N; US$124.30; 1; 18 Dec 20; 16:00); (FSR.N; US$16.13; 1H; 18 Dec 20; 16:00); (TKR.N; US$76.93; 1; 18 Dec 20; 16:00); (EMR.N; US$80.90; 1; 18 Dec 20; 16:00); (TSLA.O; US$695.00; 3H; 18 Dec 20; 16:00); (DOV.N; US$123.86; 1; 18 Dec 20; 16:00); (CMRE.N; US$8.06; 1; 18 Dec 20; 16:00); (GM.N; US$41.01; 1H; 18 Dec 20; 16:00); (FTV.N; US$69.83; 1; 18 Dec 20; 16:00); (J.N; US$106.58; 1; 18 Dec 20; 16:00); (ROK.N; US$247.95; 1; 18 Dec 20; 16:00); (UBER.N; US$50.62; 1; 18 Dec 20; 16:00); (ARCB.O; US$43.29; 1; 18 Dec 20; 16:00); (UNP.N; US$203.60; 1; 18 Dec 20; 16:00); (VRT.N; US$19.19; 1H; 18 Dec 20; 16:00); (AXL.N; US$7.52; 1H; 18 Dec 20; 16:00); (CHRW.O; US$92.60; 1; 18 Dec 20; 16:00); (AGCO.N; US$102.88; 1; 18 Dec 20; 16:00); (CAT.N; US$180.96; 1; 18 Dec 20; 16:00); (GTES.N; US$13.25; 1; 18 Dec 20; 16:00); (ACM.N; US$47.78; 1; 18 Dec 20; 16:00); (NSC.N; US$232.39; 1; 18 Dec 20; 16:00); (XPO.N; US$119.11; 1; 18 Dec 20; 16:00); (FLR.N; US$16.37; 2; 18 Dec 20; 16:00); (PCAR.O; US$86.01; 1; 18 Dec 20; 16:00); (KBR.N; US$29.47; 1; 18 Dec 20; 16:00); (HON.N; US$210.04; 1; 18 Dec 20; 16:00); (CMI.N; US$224.31; 1; 18 Dec 20; 16:00); (TEX.N; US$35.36; 1; 18 Dec 20; 16:00); (TT.N; US$141.06; 1; 18 Dec 20; 16:00); (FDX.N; US$275.57; 1; 18 Dec 20; 16:00); (EURN.N; US$8.15; 1; 18 Dec 20; 16:00); (LYFT.O; US$49.98; 1; 18 Dec 20; 16:00); (APG.N; US$17.88; 1; 18 Dec 20; 16:00); (AMP.N; US$186.94; 1; 18 Dec 20; 16:00); (WLTW.O; US$204.89; 1; 18 Dec 20; 16:00); (AON.N; US$205.49; 1; 18 Dec 20; 16:00); (PRU.N; US$76.51; 2; 18 Dec 20; 16:00); (VOYA.N; US$56.06; 1; 18 Dec 20; 16:00); (ALL.N; US$107.40; 1; 18 Dec 20; 16:00); (RE.N; US$232.53; 1; 18 Dec 20; 16:00); (CB.N; US$152.36; 1; 18 Dec 20; 16:00); (EQH.N; US$25.17; 1; 18 Dec 20; 16:00); (AFL.N; US$43.89; 3; 18 Dec 20; 16:00); (RETA.O; US$121.63; 1H; 18 Dec 20; 16:00); (ABT.N; US$108.97; 1; 18 Dec 20; 16:00); (MDT.N; US$116.71; 1; 18 Dec 20; 16:00); (NGM.O; US$29.62; 1H; 18 Dec 20; 16:00); (IFF.N; US$114.29; 2; 18 Dec 20; 16:00); (LIN.N; US$257.67; 1; 18 Dec 20; 16:00); (PPG.N; US$145.43; 1; 18 Dec 20; 16:00); (ARVN.O; US$68.95; 1H; 18 Dec 20; 16:00); (ECL.N; US$218.58; 2; 18 Dec 20; 16:00); (CTVA.N; US$39.41; 1; 18 Dec 20; 16:00); (MRK.N; US$79.53; 1; 18 Dec 20; 16:00); (TSE.N; US$47.65; 2; 18 Dec 20; 16:00); (BSX.N; US$35.45; 1; 18 Dec 20; 16:00); (ZBH.N; US$151.85; 1; 18 Dec 20; 16:00); (GKOS.N; US$72.26; 2; 18 Dec 20; 16:00); (CRTX.O; US$28.75; 3H; 18 Dec 20; 16:00); (SYK.N; US$240.00; 1; 18 Dec 20; 16:00); (NVRO.N; US$181.23; 1; 18 Dec 20; 16:00); (JNJ.N; US$154.51; 1; 18 Dec 20; 16:00); (NTR.N; US$47.79; 1; 18 Dec 20; 16:00); (TNDM.O; US$90.04; 1; 18 Dec 20; 16:00); (ACAD.O; US$55.25; 1H; 18 Dec 20; 16:00); (KRTX.O; US$104.36; 1H; 18 Dec 20; 16:00); (DXCM.O; US$358.57; 1; 18 Dec 20; 16:00); (PQG.N; US$13.09; 2; 18 Dec 20; 16:00); (SRPT.O; US$175.40; 1H; 18 Dec 20; 16:00); (FMC.N; US$115.65; 1; 18 Dec 20; 16:00); (PODD.O; US$240.65; 2; 18 Dec 20; 16:00); (ALC.N; US$65.58; 3; 18 Dec 20; 16:00); (ROKU.N; US$341.07; 1; 18 Dec 20; 16:00); (TWTR.N; US$55.87; 2; 18 Dec 20; 16:00); (W.N; US$276.73; 3H; 18 Dec 20; 16:00); (AAL.L; £24.31; 1; 21 Dec 20; 16:30); (CARG.O; US$34.09; 2H; 18 Dec 20; 16:00); (FOXA.O; US$28.16; 2; 18 Dec 20; 16:00); (IAC.O; US$164.00; 1; 18 Dec 20; 16:00); (EXPE.O; US$125.54; 2; 18 Dec 20; 16:00); (FVRR.N; US$209.29; 1; 18 Dec 20; 16:00); (VMW.N;

US$140.14; 1; 18 Dec 20; 16:00); (TRUE.O; US$4.42; 2H; 18 Dec 20; 16:00); (DMS.N; US$11.13; 1H; 18 Dec 20; 16:00); (NFLX.O; US$534.45; 2; 18 Dec 20; 16:00); (PTC.O; US$118.39; 2; 18 Dec 20; 16:00); (DELL.N; US$72.92; 1; 18 Dec 20; 16:00); (X.N; US$16.87; 2H; 18 Dec 20; 16:00); (FB.O; US$276.40; 1; 18 Dec 20; 16:00);; (WMG.O; US$37.10; 2; 18 Dec 20; 16:00); (OUT.N; US$19.99; 1; 18 Dec 20; 16:00); (NEXA.N; US$7.41; 1; 18 Dec 20; 16:00); (TTD.O; US$951.50; 2H; 18 Dec 20; 16:00); (GMEXICOB.MX; P$83.91; 2; 18 Dec 20; 14:00); (BVN.N; US$12.78; 2; 18 Dec 20; 16:00); (LAD.N; US$284.37; 2; 18 Dec 20; 16:00); (GDRX.O; US$44.61; 1; 18 Dec 20; 16:00); (QRTEA.O; US$10.57; 2; 18 Dec 20; 16:00); (PVG.N; US$11.39; 2H; 18 Dec 20; 16:00); (JCOM.O; US$98.41; 1; 18 Dec 20; 16:00); (XRX.N; US$22.86; 3; 18 Dec 20; 16:00); (TECKb.TO; C$22.87; 2; 18 Dec 20; 16:00); (MSTR.O; US$301.20; 3H; 18 Dec 20; 16:00); (OMC.N; US$61.62; 1; 18 Dec 20; 16:00); (SNAP.N; US$52.99; 3; 18 Dec 20; 16:00); (AEM.N; US$71.57; 2; 18 Dec 20; 16:00); (NUE.N; US$53.93; 1; 18 Dec 20; 16:00); (CDW.O; US$134.37; 1; 18 Dec 20; 16:00); (CSPR.N; US$6.59; 1H; 18 Dec 20; 16:00); (RS.N; US$117.74; 2; 18 Dec 20; 16:00); (VALE.N; US$17.37; 1; 18 Dec 20; 16:00); (JBL.N; US$42.43; 1; 18 Dec 20; 16:00); (CARS.N; US$12.31; 2H; 18 Dec 20; 16:00); (SIRI.O; US$6.31; 1; 18 Dec 20; 16:00); (FM.TO; C$21.65; 1H; 18 Dec 20; 16:00); (NEM.N; US$60.50; 1; 18 Dec 20; 16:00); (WIX.O; US$273.45; 1; 18 Dec 20; 16:00); (RIO.L; £56.07; 1; 21 Dec 20; 16:30); (GLEN.L; £2.36; 1; 21 Dec 20; 16:30); (SEAS.N; US$31.13; 1; 18 Dec 20; 16:00); (TX.N; US$30.62; 1; 18 Dec 20; 16:00); (TRVG.O; US$2.21; 2; 18 Dec 20; 16:00); (NLSN.N; US$20.09; 1; 18 Dec 20; 16:00); (SCCO.N; US$62.75; 3; 18 Dec 20; 16:00); (PLTR.N; US$25.97; 2H; 18 Dec 20; 16:00); (TRIP.O; US$26.99; 2; 18 Dec 20; 16:00); (GGBR4.SA; R$24.83; 2; 18 Dec 20; 18:00); (ESTC.N; US$153.55; 1H; 18 Dec 20; 16:00); (UPWK.O; US$40.21; 2H; 18 Dec 20; 16:00); (GOOGL.O; US$1,726.22; 1; 18 Dec 20; 16:00); (VRSN.O; US$217.82; 2; 18 Dec 20; 16:00); (CCO.N; US$1.51; 1; 18 Dec 20; 16:00); (SPOT.N; US$336.10; 2; 18 Dec 20; 16:00); (STLD.O; US$36.12; 1; 18 Dec 20; 16:00); (AA.N; US$22.01; 2; 18 Dec 20; 16:00); (WSG.O; US$2.27; 2; 18 Dec 20; 16:00); (DISCA.O; US$27.80; 1; 18 Dec 20; 16:00); (ATVI.O; US$90.37; 2; 18 Dec 20; 16:00); (HCC.N; US$19.04; 2H; 18 Dec 20; 16:00); (HMHC.O; US$3.66; 2; 18 Dec 20; 16:00); (CVNA.N; US$266.24; 1H; 18 Dec 20; 16:00); (PINS.N; US$70.36; 2; 18 Dec 20; 16:00); (VIAC.O; US$35.26; 1; 18 Dec 20; 16:00); (EAF.N; US$8.72; 2; 18 Dec 20; 16:00); (FCX.N; US$24.63; 2; 18 Dec 20; 16:00); (CLDR.N; US$12.68; 2H; 18 Dec 20; 16:00); (CRTO.O; US$18.75; 1H; 18 Dec 20; 16:00); (BHP.AX; A$43.66; 2; 21 Dec 20; 16:00); (MTCH.O; US$155.07; 1; 18 Dec 20; 16:00); (MDP.N; US$18.91; 1; 18 Dec 20; 16:00); (CMC.N; US$20.08; 2; 18 Dec 20; 16:00); (ANGI.O; US$12.87; 1H; 18 Dec 20; 16:00); (ANSS.O; US$357.81; 2; 18 Dec 20; 16:00); (SNOW.N; US$334.25; 2H; 18 Dec 20; 16:00); (TDC.N; US$23.00; 1; 18 Dec 20; 16:00); (LAMR.O; US$83.31; 2; 18 Dec 20; 16:00); (WWE.N; US$46.43; 1; 18 Dec 20; 16:00); (GWRE.N; US$125.72; 2; 18 Dec 20; 16:00); (BKNG.O; US$2,099.65; 2; 18 Dec 20; 16:00); (GDDY.N; US$85.03; 1; 18 Dec 20; 16:00); (CLF.N; US$13.48; 2H; 18 Dec 20; 16:00); (MDB.O; US$376.87; 1H; 18 Dec 20; 16:00); (AYX.N; US$126.99; 1H; 18 Dec 20; 16:00); (APH.N; US$130.65; 1; 18 Dec 20; 16:00); (ROOT.O; US$14.05; 2H; 18 Dec 20; 16:00); (AMC.N; US$2.80; 3; 18 Dec 20; 16:00); (GOLD.N; US$23.27; 2; 18 Dec 20; 16:00); (GCI.N; US$2.55; 3; 18 Dec 20; 16:00); (USIM5.SA; R$14.39; 2; 18 Dec 20; 18:00); (EA.O; US$142.61; 2; 18 Dec 20; 16:00); (DIS.N; US$172.89; 1; 18 Dec 20; 16:00); (IPG.N; US$23.94; 1; 18 Dec 20; 16:00); (VEEV.N; US$275.71; 1; 18 Dec 20; 16:00); (ZG.O; US$140.15; 2H; 18 Dec 20; 16:00); (IBM.N; US$125.85; 2; 18 Dec 20; 16:00); (WEX.N; US$204.60; 2; 18 Dec 20; 16:00); (EPAM.N; US$346.53; 1; 18 Dec 20; 16:00); (CSGP.O; US$904.70; 1; 18 Dec 20; 16:00); (FLEX.O; US$17.78; 1; 18 Dec 20; 16:00); (T.N; US$29.40; 1; 18 Dec 20; 16:00); (EQIX.O; US$709.73; 1; 18 Dec 20; 16:00); (FLT.N; US$279.47; 2; 18 Dec 20; 16:00); (FISV.O; US$114.81; 1; 18 Dec 20; 16:00); (RXT.O; US$20.07; 1; 18 Dec 20; 16:00); (ADP.O; US$179.24; 2; 18 Dec 20; 16:00); (PYPL.O; US$236.45; 1; 18 Dec 20; 16:00); (FIS.N; US$145.22; 1; 18 Dec 20; 16:00); (SWCH.N; US$15.86; 1; 18 Dec 20; 16:00); (LUMN.N; US$10.16; 3H; 18 Dec 20; 16:00); (CCC.N; US$30.72; 1; 18 Dec 20; 16:00); (PAYX.O; US$96.92; 1; 18 Dec 20; 16:00); (ADT.N; US$8.43; 1; 18 Dec 20; 16:00); (TMUS.O; US$131.92; 1; 18 Dec 20; 16:00); (GPN.N; US$196.33; 1; 18 Dec 20; 16:00); (PRMW.N; US$15.81; 1; 18 Dec 20; 16:00); (COKE.O; US$272.55; 2; 18 Dec 20; 16:00); (PEP.O; US$146.93; 1; 18 Dec 20; 16:00); (STZ.N; US$218.68; 2; 18 Dec 20; 16:00); (MNST.O; US$90.13; 2; 18 Dec 20; 16:00); (SBUX.O; US$103.28; 1; 18 Dec 20; 16:00); (SAM.N;

US$964.53; 1; 18 Dec 20; 16:00); (TAP.N; US$45.51; 1; 18 Dec 20; 16:00); (KDP.O; US$30.93; 2; 18 Dec 20; 16:00); (BFb.N; US$79.42; 2; 18 Dec 20; 16:00); (UFS.N; US$32.20; 1; 18 Dec 20; 16:00); (AVY.N; US$152.96; 2; 18 Dec 20; 16:00); (PKG.N; US$134.86; 2; 18 Dec 20; 16:00); (AMCR.N; US$11.66; 1; 18 Dec 20; 16:00); (2689.HK; HK$10.66; 1; 21 Dec 20; 16:10); (SMDS.L; £3.74; 1; 21 Dec 20; 16:30); (SLGN.O; US$36.56; 1; 18 Dec 20; 16:00); (PTVE.O; US$16.75; 1; 18 Dec 20; 16:00); (SKG.L; £34.22; 1; 21 Dec 20; 16:30); (CCK.N; US$96.29; 1; 18 Dec 20; 16:00); (ELS.N; US$61.07; 1; 18 Dec 20; 16:00); (STT.N; US$70.66; 1; 18 Dec 20; 16:00); (KKR.N; US$40.04; 1; 18 Dec 20; 16:00); (MMM.N; US$176.42; 2; 18 Dec 20; 16:00); (LPLA.O; US$103.55; 1; 18 Dec 20; 16:00); (RMR.O; US$39.39; 2; 18 Dec 20; 16:00); (VG.O; US$13.44; 1; 18 Dec 20; 16:00); (BIO.N; US$605.87; 1; 18 Dec 20; 16:00); (WY.N; US$33.74; 1; 18 Dec 20; 16:00); (USM.N; US$30.55; 1; 18 Dec 20; 16:00); (SWK.N; US$181.52; 1; 18 Dec 20; 16:00); (OVID.O; US$2.65; 2H; 18 Dec 20; 16:00); (CNC.N; US$61.15; 1; 18 Dec 20; 16:00); (ELAN.N; US$30.01; 1; 18 Dec 20; 16:00); (QGEN.N; US$52.97; 1; 18 Dec 20; 16:00); (ATKR.N; US$42.28; 2H; 18 Dec 20; 16:00); (ES.N; US$84.71; 2; 18 Dec 20; 16:00); (PCG.N; US$12.27; 1H; 18 Dec 20; 16:00); (CNP.N; US$21.87; 2; 18 Dec 20; 16:00); (EIX.N; US$62.54; 1; 18 Dec 20; 16:00); (DTE.N; US$121.70; 1; 18 Dec 20; 16:00); (BAC.N; US$28.67; 2; 18 Dec 20; 16:00); (MS.N; US$64.18; 2; 18 Dec 20; 16:00); (GS.N; US$242.13; 1; 18 Dec 20; 16:00); (KEY.N; US$15.42; 2; 18 Dec 20; 16:00); (FITB.O; US$26.63; 2; 18 Dec 20; 16:00); (PNC.N; US$144.91; 2; 18 Dec 20; 16:00); (WFC.N; US$29.01; 2H; 18 Dec 20; 16:00); (BK.N; US$40.79; 2; 18 Dec 20; 16:00); (TFC.N; US$45.90; 2; 18 Dec 20; 16:00); (NTRS.O; US$91.90; 2; 18 Dec 20; 16:00); (CFG.N; US$34.21; 2; 18 Dec 20; 16:00); (CMA.N; US$52.63; 2; 18 Dec 20; 16:00); (JPM.N; US$119.08; 2; 18 Dec 20; 16:00); (USB.N; US$44.86; 2; 18 Dec 20; 16:00); (RF.N; US$15.26; 2; 18 Dec 20; 16:00); (MTB.N; US$123.73; 2; 18 Dec 20; 16:00); (HLT.N; US$104.61; 1; 18 Dec 20; 16:00); (HTA.N; US$27.34; 1; 18 Dec 20; 16:00); (EQR.N; US$57.65; 2; 18 Dec 20; 16:00); (RHP.N; US$61.47; 2; 18 Dec 20; 16:00); (SBAC.O; US$276.93; 1; 18 Dec 20; 16:00); (DLR.N; US$134.02; 1; 18 Dec 20; 16:00); (MAA.N; US$124.04; 2; 18 Dec 20; 16:00); (UDR.N; US$37.01; 2; 18 Dec 20; 16:00); (HST.O; US$14.09; 1; 18 Dec 20; 16:00); (CONE.O; US$70.38; 2; 18 Dec 20; 16:00); (MAR.O; US$128.82; 1; 18 Dec 20; 16:00); (AVB.N; US$158.44; 2; 18 Dec 20; 16:00); (PSB.N; US$130.21; 2; 18 Dec 20; 16:00); (ESS.N; US$234.37; 2; 18 Dec 20; 16:00); (LSI.N; US$116.55; 1; 18 Dec 20; 16:00); (INVH.N; US$28.38; 1; 18 Dec 20; 16:00); (NSA.N; US$34.96; 2; 18 Dec 20; 16:00); (DOC.N; US$17.97; 2; 18 Dec 20; 16:00); (IRT.N; US$13.29; 2; 18 Dec 20; 16:00); (SUI.N; US$146.65; 1; 18 Dec 20; 16:00); (HR.N; US$29.60; 2; 18 Dec 20; 16:00); (REXR.N; US$47.91; 2; 18 Dec 20; 16:00); (AMT.N; US$221.52; 1; 18 Dec 20; 16:00); (CPT.N; US$96.48; 2; 18 Dec 20; 16:00); (DRE.N; US$39.24; 1; 18 Dec 20; 16:00); (PLD.N; US$98.07; 1; 18 Dec 20; 16:00); (EGP.N; US$136.31; 2; 18 Dec 20; 16:00); (CUBE.N; US$33.18; 2; 18 Dec 20; 16:00); (AMH.N; US$29.13; 2; 18 Dec 20; 16:00); (STAG.N; US$30.43; 2; 18 Dec 20; 16:00); (RPAI.N; US$8.60; 2H; 18 Dec 20; 16:00); (OFC.N; US$25.79; 1; 18 Dec 20; 16:00); (COR.N; US$122.26; 1; 18 Dec 20; 16:00); (O.N; US$59.52; 2; 18 Dec 20; 16:00); (CLI.N; US$12.71; 2; 18 Dec 20; 16:00); (SHO.N; US$10.89; 2; 18 Dec 20; 16:00); (WRI.N; US$21.45; 2; 18 Dec 20; 16:00); (MAC.N; US$10.51; 3H; 18 Dec 20; 16:00); (AKR.N; US$14.68; 2; 18 Dec 20; 16:00); (ACC.N; US$42.19; 2H; 18 Dec 20; 16:00); (DEA.N; US$21.79; 1; 18 Dec 20; 16:00); (DRH.N; US$8.14; 2; 18 Dec 20; 16:00); (VTR.N; US$50.83; 2H; 18 Dec 20; 16:00); (OHI.N; US$37.28; 2H; 18 Dec 20; 16:00); (SKT.N; US$10.53; 2H; 18 Dec 20; 16:00); (PK.N; US$17.04; 2; 18 Dec 20; 16:00); (PEB.N; US$18.36; 2; 18 Dec 20; 16:00); (HIW.N; US$39.12; 2; 18 Dec 20; 16:00); (SLG.N; US$58.11; 2; 18 Dec 20; 16:00); (KRC.N; US$56.53; 1; 18 Dec 20; 16:00); (BDN.N; US$11.77; 3; 18 Dec 20; 16:00); (FRT.N; US$88.31; 2; 18 Dec 20; 16:00); (ADC.N; US$63.99; 1; 18 Dec 20; 16:00); (VNO.N; US$36.71; 2H; 18 Dec 20; 16:00); (DEI.N; US$29.60; 2; 18 Dec 20; 16:00); (FEYE.O; US$19.23; 2; 18 Dec 20; 16:00); (PFPT.O; US$131.11; 1; 18 Dec 20; 16:00); (FSLY.N; US$101.78; 3H; 18 Dec 20; 16:00); (PCTY.O; US$201.79; 2; 18 Dec 20; 16:00); (INTU.O; US$380.11; 2; 18 Dec 20; 16:00); (WORK.N; US$42.79; 2H; 18 Dec 20; 16:00); (HUBS.N; US$404.55; 1H; 18 Dec 20; 16:00); (NICE.O; US$273.55; 1; 18 Dec 20; 16:00); (CRWD.N; US$204.29; 2H; 18 Dec 20; 16:00); (CSCO.O; US$45.44; 2; 18 Dec 20; 16:00); (CTXS.O; US$132.65; 1; 18 Dec 20; 16:00); (AUDC.O; US$27.82; 2H; 18 Dec 20; 16:00); (VERX.O; US$34.31; 2; 18 Dec 20; 16:00); (DOCU.O; US$241.00; 1; 18 Dec 20; 16:00); (MCFE.N; US$17.21; 2H; 18 Dec 20; 16:00); (NOW.N; US$565.43; 1; 18 Dec 20; 16:00); (SAIL.N;

US$55.57; 1H; 18 Dec 20; 16:00); (MSFT.O; US$218.59; 1; 18 Dec 20; 16:00); (PING.N; US$28.97; 1H; 18 Dec 20; 16:00); (SPLK.O; US$165.89; 2; 18 Dec 20; 16:00); (FTNT.O; US$145.85; 3; 18 Dec 20; 16:00); (PAYC.N; US$439.84; 1; 18 Dec 20; 16:00); (SMAR.N; US$72.25; 2H; 18 Dec 20; 16:00); (WDAY.O; US$241.39; 1; 18 Dec 20; 16:00); (TEAM.O; US$247.78; 1; 18 Dec 20; 16:00); (ZS.O; US$195.88; 1H; 18 Dec 20; 16:00); (COUP.O; US$366.90; 2; 18 Dec 20; 16:00); (PLAN.N; US$70.49; 2H; 18 Dec 20; 16:00); (CRM.N; US$227.43; 2; 18 Dec 20; 16:00); (SCWX.O; US$14.25; 2; 18 Dec 20; 16:00); (ZM.O; US$406.01; 2H; 18 Dec 20; 16:00); (BIGC.O; US$70.58; 3H; 18 Dec 20; 16:00); (OKTA.O; US$271.81; 1H; 18 Dec 20; 16:00); (SWI.N; US$14.18; 1; 18 Dec 20; 16:00); (NLOK.O; US$21.24; 2; 18 Dec 20; 16:00); (CDAY.N; US$97.65; 1; 18 Dec 20; 16:00); (MDLA.N; US$35.32; 2H; 18 Dec 20; 16:00); (CHKP.O; US$122.25; 2; 18 Dec 20; 16:00); (AVLR.N; US$179.79; 1H; 18 Dec 20; 16:00); (ADBE.O; US$502.95; 2; 18 Dec 20; 16:00); (SHOP.N; US$1,170.96; 2H; 18 Dec 20; 16:00); (ZEN.N; US$140.27; 2H; 18 Dec 20; 16:00); (ORCL.K; US$65.06; 2; 18 Dec 20; 16:00); (AMD.O; US$95.92; 3; 18 Dec 20; 16:00); (TXN.O; US$164.07; 1; 18 Dec 20; 16:00); (ON.O; US$31.54; 1; 18 Dec 20; 16:00); (QCOM.O; US$147.42; 1; 18 Dec 20; 16:00); (MXIM.O; US$86.45; 2; 18 Dec 20; 16:00); (ADI.O; US$144.56; 1; 18 Dec 20; 16:00); (NXPI.O; US$155.51; 2; 18 Dec 20; 16:00); (QRVO.O; US$162.66; 2; 18 Dec 20; 16:00); (SWKS.O; US$148.19; 2; 18 Dec 20; 16:00); (KLAC.O; US$262.15; 1; 18 Dec 20; 16:00); (IIVI.O; US$74.57; 1; 18 Dec 20; 16:00); (LRCX.O; US$480.97; 1; 18 Dec 20; 16:00); (FORM.O; US$42.99; 1; 18 Dec 20; 16:00); (CCMP.O; US$146.74; 3; 18 Dec 20; 16:00); (005930.KS; W73,000; 1; 21 Dec 20; 15:45); (AMKR.O; US$15.29; 3; 18 Dec 20; 16:00); (MLM.N; US$276.35; 1; 18 Dec 20; 16:00); (FOR.N; US$20.77; 1H; 18 Dec 20; 16:00); (DHI.N; US$73.23; 1; 18 Dec 20; 16:00); (VMC.N; US$145.22; 1; 18 Dec 20; 16:00); (OC.N; US$76.91; 2; 18 Dec 20; 16:00); (TOL.N; US$46.25; 2; 18 Dec 20; 16:00); (KKR.N; US$39.70; 1; 21 Dec 20; 16:00); (BLK.N; US$698.83; 1; 21 Dec 20; 16:00); (FHI.N; US$28.90; 2; 21 Dec 20; 16:00); (AB.N; US$33.52; 1; 21 Dec 20; 16:00); (SCU.N; US$15.00; 1; 21 Dec 20; 16:00); (SCHW.N; US$51.75; 1; 21 Dec 20; 16:00); (CME.O; US$181.77; 1; 21 Dec 20; 16:00); (LPLA.O; US$103.16; 1; 21 Dec 20; 16:00); (APAM.N; US$49.91; 1; 21 Dec 20; 16:00); (CBOE.K; US$90.26; 1; 21 Dec 20; 00:00)

Appendix A-1

Analyst Certification

The research analysts primarily responsible for the preparation and content of this research report are either (i) designated by "AC" in the author block or (ii) listed in bold alongside content which is attributable to that analyst. If multiple AC analysts are designated in the author block, each analyst is certifying with respect to the entire research report other than (a) content attributable to another AC certifying analyst listed in bold alongside the content and (b) views expressed solely with respect to a specific issuer which are attributable to another AC certifying analyst identified in the price charts or rating history tables for that issuer shown below. Each of these analysts certify, with respect to the sections of the report for which they are responsible: (1) that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc. and its affiliates; and (2) no part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

An employee of Citigroup Global Markets or its affiliates is a Director of Trane Technologies PLC.

Citigroup Global Markets Inc acted as financial advisor to Walt Disney (DIS) in its acquisition of 21st Century Fox.

Due to Citigroup Global Market Inc's role as advisor to SYK in relation to their announced acquisition of K2M Group Holdings , Citi Research restricted publication of new research reports, and suspended its rating and target price on 2018-08-30 (the"Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 2018-11-14, when Citi Research resumed full coverage

Citigroup Global Markets Inc. is acting as a manager in Prologis,Inc.'s 'at-the-market' equity offering program. Due to Citi's involvement in announced acquisition involving Prologis Inc. (PLD) (the "Company") and Liberty Property Trust (LPT), Citi Research restricted publication of new research reports, and suspended its rating and target price on October 27, 2019 (the "Suspension Date"). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and February 4, 2020 when Citi Research resumed full coverage.

Due to Citi's involvement in the announced definitive merger agreement in which Teladoc Health Inc. (TDOC) merged with Livongo Health Inc. (LVGO), Citi Research suspended its ratings and target prices for both companies on October 2, 2020 (the Suspension Date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website for Livongo Health Inc. (LVGO) does not reflect that Citi Research did not have a rating or target price since the suspension date and the publication of this report November 10, 2020.

Citi Research restricted publication of new research reports, and suspended its rating and target price on 21 May,2019 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 10 July, 2019, when Citi Research resumed full coverage.

Due to Citigroup Global Market Inc's role as advisor to BC in relation to the divestiture of their Fitness business, Citi Research restricted publication of new research reports, and suspended its rating and target price on 2019-05-02 (the"Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 2019-07-18, when Citi Research resumed full coverage.

Due to Citi's involvement as advisor in the re-domiciliation to the United States and rebranding of EnCana, now Ovintiv, (the Company"), Citi Research suspended its rating and target price on October 31, 2019 (the Suspension Date"). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and April 6, 2020, when Citi Research resumed full coverage.

A member of Research Management has a position that may be considered material to that individual in the securities of JP Morgan Chase & Co.

Citigroup Global Markets Inc is providing financing to Clarivate in the announced transaction between Clarivate and CPA Global.

Due to legal reasons, Citi Research restricted publication of new research reports, and suspended its rating and target price on 02/21/2020 (the "Suspension Date"). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi did not have a rating or target price between the Suspension Date and 04/26/2020, when Citi Research resumed full coverage.

Due to Citigroup Global Market Inc's involvement as advisor to ERJ on the announced JV with BA (the Companies), Citi Research restricted publication of new Research reports, and suspended its rating and target price on 5th July 2018 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 26th March 2019, when Citi Research resumed full coverage.

Due to Citigroup Global Markets Limited's involvement as advisor to Europac in relation to its announced sale to DS Smith Plc, Citi Research restricted publication of new research reports and suspended its rating and target price on 4th June 2018 ('the Suspension Date'). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and the 8th February 2019, when Citi Research resumed full coverage.

Due to Citi's involvement in the acquisition involving United Technologies (the Company), Citi Research restricted publication of new research reports, and suspended its rating and target price on 09/05/2017(the SuspensionDate). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 01/02/2019 when Citi Research resumed full coverage. Due to Citi's involvement in the merger of equals involving Raytheon Company (RTN) and United

Technologies (UTX), Citi Research restricted publication of new research reports, and suspended its ratings and target prices for both companies on 06/09/2019 the (Suspension Date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 06/24/2020 when Citi Research resumed full coverage.

Due to Citi's involvement as a Financial Advisor in relation to Federated Investors, Inc's (FII) announced acquisition of Hermes Investment Management, Citi Research restricted publication of new research reports, and suspended its rating and target price on April 13, 2018 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and April 25, 2018, when Citi Research resumed full coverage.

Citigroup Global Markets Inc. is acting as sole bookrunner in Essex Property Trust Inc's.,recently announced 'at-the-market' equity offering program.

Due to Citigroup Global Markets Inc involvement as advisor to SRCI in PDC Energy's acquisition of SRC Energy, Citi Research restricted publication of new research reports, and suspended its rating and target price for PDC Energy Inc (the Company) on 8 Aug, 2019 (the Suspension Date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 13 Feb, 2020 when Citi Research resumed full coverage.

Due to Citigroup Global Market Inc's role financing the Keurig Green Mountain acquisition of Dr Pepper Schnapple , Citi Research restricted publication of new research reports, and suspended its rating and target price on 2018-02-01 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 08/09/2018, when Citi Research resumed full coverage.

Due to Citi's role as financial advisor to Walt Disney Co. (DIS) in the acquisition of Twenty-first Century Fox (FOXA), Citi Research restricted publication of new research reports, and suspended its rating and target price on 28 Feb., 2018, (the Suspension Date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 8 Apr., 2019, when Citi Research resumed full coverage. Due to Citi's involvement advising Fox Corporation (FOXA) (the "Company"), Citi Research restricted publication of new research reports, and suspended its rating and target price on 12 Nov., 2019 (the "Suspension Date"). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 13 Apr., 2020 when Citi Research resumed full coverage.

Citigroup Global Markets Inc is providing acquisition finance to CRM on their announced offer to acquire WORK.

Due to Citigroup Global Market Inc's role as an advisor in relation to IPG's announced acquisition of the Acxiom Marketing Solutions business unit, Citi Research restricted publication of new research reports, and suspended its rating and target price on 2018-07-02 (the "Suspension Date"). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 2018-10-18, when Citi Research resumed full coverage.

Due to Citigroup Global Market Inc's involvement as an advisor to Time Warner Inc in the announced acquisition of Time Warner Inc by AT&T Inc (the Company). Citi Research restricted publication of new research reports, and suspended its rating and target price on the Company on October 22nd 2016 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and July 2nd 2018, when Citi Research resumed full coverage.

Due to legal reasons, involving Lyft Inc. (" the company"), Citi Research restricted publication of new research reports, and suspended its rating and target price on September 24th, 2019 (the "Suspension Date"). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi did not have a rating or target price between the Suspension Date and April 30th, 2020 when Citi Research resumed full coverage.

Due to Citi's involvement in Broadcom Limited's previously announced but now terminated offer to acquire Qualcomm Incorporated involving NXP Semiconductors NV (the Company), Citi Research restricted publication of new research reports, and suspended its rating and target price on November 6th 2017 (the Suspension Date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and April 11th 2018 when Citi Research resumed full coverage.

A member of the Reg AC's analyst team is currently interviewing for a position with INVH.

Due to Citigroup Global Market Inc's role as advisor to Nex Group Plc in relation to their takeover by CME, Citi Research restricted publication of new research reports, and suspended its rating and target price on 2018-03-15 (the"Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 11-19-2018, when Citi Research resumed full coverage.

Citigroup Global Markets Inc are financial advisors to Axtel on the sale of three data centers that serve the Mexico City and Monterrey metro areas of Mexico to Equinix Inc. Citigroup Global Markets Inc are financial advisors to Equinix on the announced joint venture with GIC to develop and operate data centers in Europe.

Citi Research restricted publication of new research reports, and suspended its rating and target price on 2019-02-03 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 2019-4-11, when Citi Research resumed full coverage.

Due to Citigroup Global Market Inc's role as an advisor to Versum Materials in relation to the attempted merger with Entegris, Citi Research restricted publication of new research reports, and suspended its rating and target price on March 6th , 2019 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and May 9th , 2019 when Citi Research resumed full coverage.

Due to Citi's involvement in the acquisition of First Data by Fiserv (the Company), Citi Research restricted publication of new research reports, and suspended its rating and target price on 16 Jan 2019 (the Suspension Date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 29 Aug 2019 when Citi Research resumed full coverage.

Due to Citigroup Global Market Inc's role as a advisor to Xerox in relation to the potential combination with HP, Citi Research restricted publication of new research reports, and suspended its rating and target price on 2019-11-07 (the Suspension Date). Please note the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 2020-04-08 , when Citi Research resumed full coverage.

Citigroup Global Markets Inc is mandated as advisor to Farmers Insurance Exchanges in relation to the announced acquisition, together with Zurich Insurance Group, of MetLife's P&C business.

Citigroup Global Markets Inc. has entered into a sales agreement with Retail Properties of America Inc. pursuant towhich Retail Properties of America Inc. may sell shares of its common stock from time to time through its Sales Agents.

Due to Citi's involvement as financial advisor to Fifth Third in the definitive merger agreement with MB Financial, Citi Research suspended its rating and target price on May, 21, 2018 (the “Suspension Date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and January 9th, 2019 when Citi Research resumed full coverage.

Due to Citigroup Global Markets Limited's involvement as advisor to Smurfit Kappa in relation to the proposal received from International Paper Corporation, Citi Research restricted publication of new research reports and suspended its rating and target price on the 6th March 2018 (‘the Suspension Date’). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and 7th June 2018, when Citi Research resumed full coverage.

Citigroup Global Markets Inc is acting as advisor to GlaxoSmithKline in the acquisition of its consumer healthcare business by Pfizer.

Citigroup Global Markets Inc is acting as an advisor to PNC Financial Services Group in relation to the Company's announced acquisition of BBVA US from Banco Bilbao Vizcaya Argentaria SA.

Due to Citi's involvement in ADT’s acquisition of Defenders, Citi Research restricted publication of new research reports for ADT, and suspended its rating and target price on January 6, 2020 (the “Suspension Date”). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and April 3, 2020 when Citi Research resumed full coverage.

Due to Citigroup Global Markets Limited acting as advisor to SAIC in the acquisition of Engility, Citi Research restricted publication of new research reports on SAIC('the Company') and suspended its rating and target price on September 10th 2018 (the suspension date). Please note that the Company price chart that appears in this report and available on Citi Research's disclosure website does not reflect that Citi Research did not have a rating or target price between the Suspension Date and the 19th February 2019, when Citi Research resumed full coverage.

Citigroup Global Markets Ltd is currently mandated as advisor to the Hellenic Republic in relation the announced privatisation process of various State owned airports and Hellinikon.

Alexander Hacking, CFA, Analyst, holds a long position in the securities of Procter & Gamble Co.

Niki Whelan, Senior Associate, holds a long position in the securities of PNC Financial Services Group Inc,Leidos Holdings Inc.

Suneet Kamath, CFA, Analyst, holds a long position in the securities of AllianceBernstein Holding LP.

Drew Foster, Senior Associate, holds a long position in the securities of Dell Technologies.

P.J. Juvekar, Analyst, holds a long position in the securities of Corteva Agriscience.

Christopher Danely, Analyst, holds a long position in the securities of Invitation Homes.

Stephen Malichek, Associate, holds a long position in the securities of General Electric Company,Alteryx Inc,Etsy Inc.,Guardant Health Inc,Spirit Airlines, Inc.,GoodRx.

Mandy Chan, Analyst, holds a long position in the securities of Estee Lauder Inc.

J.B. Lowe, CFA, Analyst, holds a long position in the securities of Vonage Holdings Corp,AT&T Inc,PG&E Corp,Walt Disney Co,Twitter.

Richard W Schlatter, Analyst, holds a long position in the securities of Facebook, Inc.

Daniel Jester, Analyst, holds a long position in the securities of CenterPoint Energy Inc.

Therese Messina, Analyst, holds a long position in the securities of Constellation Brands,Estee Lauder Inc.

Anthony Occhiogrosso, Senior Associate, holds a long position in the securities of Gilead Sciences, Inc.,Teladoc Health, Inc..

Kenny Xunyuan Hu, CFA, Strategist, holds a long position in the securities of Amazon.com, Inc.,Tesla Inc,Atlassian Corp PLC,Splunk,Walt Disney Co,Uber Technologies, Inc. ,Raytheon Technologies Corp,Activision Blizzard, Inc.,Alteryx Inc,Vonage Holdings Corp.

A member of the household of Keith Horowitz, CFA, Analyst, holds a long position in the securities of JP Morgan Chase & Co.

A member of the household of Tobias M Levkovich, Strategist, holds a long position in the securities of ViacomCBS Inc,Microsoft Corp..

A member of the household of Hong Li, Analyst, holds a long position in the securities of Cisco Systems,AT&T Inc.

A member of the household of Pernille B Henneberg, Economist, holds a long position in the securities of Goldman Sachs Group, Inc..

A member of the household of James Shin, Senior Associate, holds a long position in the securities of Johnson & Johnson.

Citigroup Global Markets Inc. or its affiliates beneficially owns 1% or more of any class of common equity securities of Agree Realty, Beyond Meat, Inc., Expedia Group Inc, American Airlines Group Inc., Tanger Factory Outlet Centers Inc, Qiagen NV, Sunstone Hotel Investors, Zillow Group Inc, FitBit, Spirit Airlines, Inc., Willis Towers Watson PLC, Teva Pharmaceutical Industries Ltd , Arch Resources Inc, Carvana Co., National Storage Affiliates, Lumen. This position reflects information available as of the prior business day.

Citigroup Global Markets Inc. or its affiliates has a net long position of 0.5% or more of any class of common equity securities of SailPoint Technologies, Agree Realty, Target Corp, Uber Technologies, Inc. , AllianceBernstein Holding LP, UDR, Inc, Snap Inc, KBR, Shopify Inc, Discovery Inc, Beyond Meat, Inc., Teladoc Health, Inc., ViacomCBS Inc, Lamar Advertising Company, Easterly Government Properties, Macerich Co, General Motors Company, Bank of America Corp, Aon plc, Starbucks Corp, Expedia Group Inc, Mack-Cali Realty Corp, JP Morgan Chase & Co, American Airlines Group Inc., Stanley Black & Decker, AMC Entertainment, Alphabet Inc, Tanger Factory Outlet Centers Inc, Qiagen NV, Cisco Systems, Proofpoint, Inc., Boeing Co., DS Smith PLC, Abercrombie & Fitch, Teradata Corporation, Concho Resources Inc, Etsy Inc., Activision Blizzard, Inc., Sunstone Hotel Investors, VMware, Inc., Zillow Group Inc, Exxon Mobil Corp, Pinterest Inc, Keurig Dr Pepper Inc, STAG Industrial Inc, FitBit, Root Inc., Vonage Holdings Corp, salesforce.com, inc., AstraZeneca PLC, CVS Health, Splunk, J2 Global, Hilton, Alexion Pharmaceuticals Inc, Ralph Lauren Corporation, Corteva Agriscience, Kilroy Realty Corp, The Charles Schwab Corporation, Dropbox, Inc., Okta, Inc., Cenovus Energy, Delta Air Lines, Inc, Spirit Airlines, Inc., Willis Towers Watson PLC, Dell Technologies, Teva Pharmaceutical Industries Ltd , US Bancorp, FireEye, Inc., CME Group Inc., Elastic NV, MasTec, BigCommerce Holdings Inc, Wells Fargo & Co, Slack Technologies Inc, Arch Resources Inc, Foot Locker Inc, PayPal, Carvana Co., BHP Group Ltd, Workday Inc, International Flavors & Fragrances Inc., National Storage Affiliates, Booking Holdings, Phillips 66 Partners LP, Wayfair, Energizer Holdings, Energy Transfer LP, Alteryx Inc, Tesla Inc, Lumen, Pioneer Natural Resources Co., Macys.

Citigroup Global Markets Inc. or its affiliates beneficially owns 2.0% or more of any class of common equity securities of Beyond Meat, Inc., Expedia Group Inc, American Airlines Group Inc., Willis Towers Watson PLC, Carvana Co., National Storage Affiliates.

Citigroup Global Markets Inc. or its affiliates beneficially owns 5.0% or more of any class of common equity securities of Agree Realty.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of SBA Communications Corp, Agree Realty, PepsiCo, Rocket Companies Inc, Target Corp, Uber Technologies, Inc. , GoodRx, Amazon.com, Inc., Walt Disney Co, Flex, Eversource Energy, Omnicom, Stryker Corporation, International Business Machines Corp, Horizon Therapeutics, Dollar General, Herbalife Nutrition Ltd, Citrix Systems, Inc., UDR, Inc, Regions Financial Corp, Emerson Electric Co., Hershey Company, KBR, Prologis Inc, Shopify Inc, Meredith Corp, Vertiv Holdings Co, Ameriprise Financial Inc, Discovery Inc, Ping Identity Holding Corp, Harley-Davidson, Kimberly-Clark, Zimmer Biomet Inc, Owens Corning, ANGI Homeservices, Inc, Teladoc Health, Inc., Kansas City Southern, ViacomCBS Inc, Oracle Corporation, Ecolab Inc, Texas Instruments Inc, Leidos Holdings Inc, Lamar Advertising Company, Philip Morris International, iRhythm Technologies Inc, General Mills, Inc., Abbott Laboratories, General Motors Company, Johnson & Johnson, Realty Income Corp, Aon plc, Starbucks Corp, The Kroger, D.R. Horton, Elanco Animal Health Inc., MultiPlan, Corp, Wix.com, Lam Research Corp, Northrop Grumman Corp., American Airlines Group Inc., Clarivate PLC, Stanley Black & Decker, AMC Entertainment, Agnico Eagle Mines Ltd, Alphabet Inc, Fastly, XPO Logistics, Regeneron Pharmaceuticals, Inc., Northern Trust Corporation, Reynolds Consumer Products Inc., Phillips 66, ServiceNow, Inc., Acadia Healthcare Company Inc, Rackspace Technology, Inc., Federal Realty, Boeing Co., ON Semiconductor, The Clorox Co, Avalara Inc, Freeport McMoRan, Procter & Gamble Co, Qurate Retail Inc, Raytheon Technologies Corp, II-VI, General Electric Company, BNY Mellon Corporation, Surgery Partners, Warner Music Group, Essex Property Trust Inc, Sun Communities, DTE Energy Co, Amgen Inc., Pactiv Evergreen, Concho Resources Inc, Etsy Inc., Activision Blizzard, Inc., Qorvo, Post Holdings Inc, Avery Dennison Corp, McAfee Corp, Caterpillar Inc., Chevron, VMware, Inc., Zillow Group Inc, Casper Sleep Inc, Cboe Global Markets, Forestar Group Inc, Exxon Mobil Corp, Enterprise Products Partners LP, PDC Energy Inc, Universal Health Services, Altria, STAG Industrial Inc, Digital Realty Trust Inc, Lithia Motors, Inc., Fox Corporation, Root Inc., State Street Corporation, Vertex Inc., AstraZeneca PLC, CVS Health, J2 Global, PG&E Corp, Merck & Co, Marriott International, Valvoline Inc., Interpublic Group of Companies, L Brands, AT&T Inc, AudioCodes Ltd., Artisan Partners Asset Management, Coty Inc, Union Pacific Corp., Qualcomm Inc, Kilroy Realty Corp, The Charles Schwab Corporation, BlackRock Inc, Boston Scientific Corporation, Fiverr International Ltd. , Honeywell International Inc., CoStar Group, Inc., MongoDB Inc, Norfolk Southern Corp., TripAdvisor, PPG Industries Inc, Snowflake Inc., Estee Lauder Inc, Textron Inc., Jabil Inc, AvalonBay Communities, Inc, 3M Company, United States Cellular Corp, Delta Air Lines, Inc, L3Harris Technologies, Spirit Airlines, Inc., Willis Towers Watson PLC, Truist Financial Corp, T-Mobile US, Dell Technologies, Citizens Financial Group, Magna International Inc, NMI Holdings, Inc., Equinix Inc., Equitable Holdings Inc, FedEx Corp., Goldman Sachs Group, Inc., Cigna Corp., CoreSite Realty Corporation, Prudential Financial Inc., Ventas Inc, Continental Resources, Medallia Inc, Entegris Inc, Fiserv, Inc., Newmont Corporation, 1Life Healthcare Inc , Arch Resources Inc, Aptiv PLC, Xerox Holdings Corp, PayPal, DiamondRock Hospitality Company, MetLife Inc., Carvana Co., Burlington Stores, KKR & Co Inc, Retail Properties of America, SelectQuote, Inc., Campbell Soup Company, The Williams Companies Inc, Edison International, EOG Resources Inc, National Storage Affiliates, Cummins Inc., Anglo American PLC, Fifth Third Bancorp, Booking Holdings, Gilead Sciences, Inc., Cleveland Cliffs, Costco Wholesale Corp, Bausch Health Companies Inc, Enbridge Inc., Nutrien Ltd, Pfizer, Biogen Inc., Wayfair, Amcor PLC, ADT, Inc., Energizer Holdings, Oneok Inc, Analog Devices, Energy Transfer LP, SAIC, NICE Ltd, United States Steel Corp., Tesla Inc, Lumen, Match Group Inc, American Tower Corp, Pioneer Natural Resources Co., Macys, KLA Corp, South Korea, United States, Canada, Germany, Australia, France, United Kingdom, Italy, Spain, Brazil, Indonesia, Mexico, Philippines, Turkey, Colombia, Chile, Poland, Hungary, Finland, Belgium, Sweden, Greece, Ireland, Slovakia, Cyprus.

Citigroup Global Markets Inc. owns a position of 1 million USD or more in the debt securities of SBA Communications Corp, Agree Realty, PepsiCo, Hasbro, Church & Dwight Co Inc, Navient Corp, Target Corp, GoDaddy Inc, Uber Technologies, Inc. , Cars.com, Amazon.com, Inc., DocuSign, Walt Disney Co, Eversource Energy, Omnicom, Stryker Corporation, Verisign, Inc., International Business Machines Corp, Las Vegas Sands, Horizon Therapeutics, Dollar General, UDR, Inc, Snap Inc, Ryman Hospitality Properties, Inc., Emerson Electric Co., Medtronic Plc, Hershey Company, KBR, Prologis Inc, Shopify Inc, Ceridian, Comerica Inc, Ross Stores, Zendesk, Inc., Beyond Meat, Inc., Harley-Davidson, Kimberly-Clark, Vulcan Materials , Walgreens Boots Alliance Inc, Teladoc Health, Inc., Kansas City Southern, ViacomCBS Inc, Oracle Corporation, Ecolab Inc, Texas Instruments Inc, Nielsen Holdings PLC, NortonLifeLock, Intuit Inc., Linde PLC, Philip Morris International, Macerich Co, General Mills, Inc., Abbott Laboratories, General Motors Company, Johnson & Johnson, Bank of America Corp, Aon plc, Starbucks Corp, The Kroger, D.R. Horton, Elanco Animal Health Inc., Expedia Group Inc, Lam Research Corp, JP Morgan Chase

& Co, Northrop Grumman Corp., Constellation Brands, Voya Financial, Inc., American Airlines Group Inc., IAC/Interactivecorp, AB-InBev, Stanley Black & Decker, Allstate Corporation, Agnico Eagle Mines Ltd, Alphabet Inc, First Quantum Minerals Ltd, CenterPoint Energy Inc, XPO Logistics, Regeneron Pharmaceuticals, Inc., Tanger Factory Outlet Centers Inc, Qiagen NV, Fortive Corporation, Grupo Mexico, General Dynamics Corp., Cisco Systems, Brown-Forman, Pultegroup Inc, Phillips 66, Biomarin Pharmaceutical Inc, CDW Corp, ServiceNow, Inc., Acadia Healthcare Company Inc, Automatic Data Processing Inc, Federal Realty, Boeing Co., ON Semiconductor, Freeport McMoRan, Procter & Gamble Co, Raytheon Technologies Corp, Colgate-Palmolive Co, Host Hotels & Resorts, Crown Holdings Inc, General Electric Company, BNY Mellon Corporation, DexCom Inc, Centene Corp, Essex Property Trust Inc, ConocoPhillips, DTE Energy Co, Amgen Inc., Amphenol Corp, Concho Resources Inc, Etsy Inc., Activision Blizzard, Inc., Sunstone Hotel Investors, Qorvo, Post Holdings Inc, Caterpillar Inc., Chevron, VMware, Inc., Zillow Group Inc, Forestar Group Inc, Exxon Mobil Corp, Advanced Micro Devices, Gerdau, Enterprise Products Partners LP, Palantir Technologies Inc, HubSpot Inc, Pinterest Inc, Ollie's Bargain Outlet Holdings, Inc., Vontier Corporation, Coupa Software Inc, Keurig Dr Pepper Inc, Altria, Healthcare Realty, Fox Corporation, Zoom Video Communications, Inc., State Street Corporation, CyrusOne, salesforce.com, inc., AstraZeneca PLC, CVS Health, Equity Residential, J2 Global, PG&E Corp, Merck & Co, Hilton, Marriott International, Valvoline Inc., Interpublic Group of Companies, Apple, Inc., Barrick Gold Corporation, L Brands, AT&T Inc, Union Pacific Corp., Lyft, Inc., Ralph Lauren Corporation, Qualcomm Inc, Netflix, Inc, PBF Energy, Corteva Agriscience, Camden Property Trust, Kilroy Realty Corp, The Charles Schwab Corporation, Walmart Inc, BlackRock Inc, Boston Scientific Corporation, Honeywell International Inc., CoStar Group, Inc., MongoDB Inc, Norfolk Southern Corp., Okta, Inc., Snowflake Inc., Estee Lauder Inc, Textron Inc., Rockwell Automation, AvalonBay Communities, Inc, 3M Company, Delta Air Lines, Inc, FMC Corporation, L3Harris Technologies, Fidelity National Info Svcs, Inc, Spirit Airlines, Inc., Willis Towers Watson PLC, Truist Financial Corp, Newell Brands Inc, T-Mobile US, Teva Pharmaceutical Industries Ltd , US Bancorp, Citizens Financial Group, Anaplan Inc, Electronic Arts Inc, Magna International Inc, CME Group Inc., Equinix Inc., Equitable Holdings Inc, Packaging Corp of America, FedEx Corp., Facebook, Inc, Goldman Sachs Group, Inc., Cigna Corp., Prudential Financial Inc., Ventas Inc, Vertex Pharmaceuticals Inc, Kellogg Company, OneMain Holdings, Inc, Continental Resources, Atlassian Corp PLC, Medallia Inc, Wells Fargo & Co, Fiserv, Inc., Dollar Tree, Slack Technologies Inc, Arch Resources Inc, Xerox Holdings Corp, Microsoft Corp., PayPal, Crowdstrike Holdings Inc, MetLife Inc., Carvana Co., Reata Pharmaceuticals, Inc., KKR & Co Inc, SelectQuote, Inc., Campbell Soup Company, The Williams Companies Inc, Edison International, National Storage Affiliates, Cummins Inc., Morgan Stanley, Booking Holdings, Gilead Sciences, Inc., Cleveland Cliffs, Costco Wholesale Corp, Bausch Health Companies Inc, Chubb Limited, Enbridge Inc., Nutrien Ltd, Phillips 66 Partners LP, Pfizer, Adobe Inc., Toll Brothers, Twitter, Wayfair, PNC Financial Services Group Inc, Energizer Holdings, Oneok Inc, Analog Devices, AFLAC, Inc., Energy Transfer LP, Marathon Oil Corp, SAIC, NICE Ltd, United States Steel Corp., Southern Copper Company, Tesla Inc, Lumen, Match Group Inc, American Tower Corp, Winnebago Industries, Molson Coors, Park Hotels & Resorts, Macys, KLA Corp, United States, Canada, Brazil, China, Mexico, Philippines, Colombia, Chile.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from SBA Communications Corp, Agree Realty, PepsiCo, Rocket Companies Inc, Hasbro, Trane Technologies Plc, Target Corp, GoDaddy Inc, Uber Technologies, Inc. , GoodRx, Cars.com, Amazon.com, Inc., Walt Disney Co, Flex, Eversource Energy, Omnicom, Stryker Corporation, Fisker Inc., International Business Machines Corp, Horizon Therapeutics, Gates Corporation, Dollar General, Herbalife Nutrition Ltd, Citrix Systems, Inc., AllianceBernstein Holding LP, UDR, Inc, Ryman Hospitality Properties, Inc., Regions Financial Corp, Emerson Electric Co., Medtronic Plc, Fluor Corporation, Corporate Office Properties Trust, Hershey Company, KBR, Prologis Inc, Shopify Inc, Ceridian, Meredith Corp, Sculptor Capital Management, Vertiv Holdings Co, Ameriprise Financial Inc, Nomad Foods Ltd., Vornado Realty Trust, Discovery Inc, Ping Identity Holding Corp, Harley-Davidson, Kimberly-Clark, Zimmer Biomet Inc, Colfax, Owens Corning, Walgreens Boots Alliance Inc, ANGI Homeservices, Inc, Berry Global Group, Teladoc Health, Inc., Kansas City Southern, ViacomCBS Inc, Oracle Corporation, Ecolab Inc, Texas Instruments Inc, Leidos Holdings Inc, Lamar Advertising Company, Easterly Government Properties, Alcoa Corp, WW International Inc, Nielsen Holdings PLC, NortonLifeLock, Linde PLC, Galaxy Entertainment, Philip Morris International, iRhythm Technologies Inc, General Mills, Inc., Abbott Laboratories, Brunswick Corporation, General Motors Company, Johnson & Johnson, Realty Income Corp, Bank of America Corp, Aon plc, Starbucks Corp, The Kroger, D.R. Horton, Elanco Animal Health Inc., MultiPlan, Corp, Shell Midstream Partners, Expedia Group Inc, Wix.com, Mack-Cali Realty Corp, Lam Research Corp, Ovintiv Inc, JP Morgan Chase & Co, Northrop Grumman Corp., Constellation Brands, Voya Financial, Inc., American Airlines Group Inc., Clarivate PLC, IAC/Interactivecorp, AB-InBev, Warrior Met Coal, Stanley Black & Decker, Teck Resources, AMC Entertainment, Allstate Corporation, Spotify Technology SA, Agnico Eagle Mines Ltd, Alphabet Inc, First Quantum Minerals Ltd, Fastly, Allison Transmission Inc., CenterPoint Energy Inc, XPO Logistics, Safe Bulkers Inc, APi Group Corporation, Talend SA, Regeneron Pharmaceuticals, Inc., Fortive Corporation, Inovalon Holdings, Inc., Grupo Mexico, Melco Resorts & Entertainment, Northern Trust Corporation, Reynolds Consumer Products Inc., Everest Re Group, Ltd., Cisco Systems, Brown-Forman, Pultegroup Inc, Phillips 66, Acadia Healthcare Company Inc, Automatic Data Processing Inc, Roku, Inc., Federal Realty, Wanda Sports Group , Karuna Therapeutics Inc, PACCAR Inc., Boeing Co., DS Smith PLC, ON Semiconductor, The Clorox Co, Trivago NV, Avalara Inc, Freeport McMoRan, Procter & Gamble Co, Qurate Retail Inc, Raytheon Technologies Corp, Rio Tinto PLC, II-VI, Colgate-Palmolive Co, Coca-Cola Consolidated, SecureWorks, Abercrombie & Fitch, Crown Holdings Inc, General Electric Company, BNY Mellon Corporation, Warner Music Group, Centene Corp, Bio-Rad Laboratories Inc., Federated Hermes, Inc, Essex Property Trust Inc, Sun Communities, Guidewire Software, ConocoPhillips, BellRing Brands, Inc., DTE Energy Co, Aecom, Amgen Inc., Amphenol Corp, Pactiv Evergreen, Concho Resources Inc, Gannett Co Inc, Etsy Inc., Activision Blizzard, Inc., Sunstone Hotel Investors, M&T Bank Corp, Qorvo, Post Holdings Inc, Avery Dennison Corp, McAfee Corp, Caterpillar Inc., Chevron, Mid-America Apartment Communities, VMware, Inc., Zillow Group Inc, Casper Sleep Inc, Cboe Global Markets, Forestar Group Inc, Exxon Mobil Corp, Advanced Micro Devices, Gerdau, Enterprise Products Partners LP, Amkor Technology Inc, PDC Energy Inc, Palantir Technologies Inc, Pinterest Inc, Pentair PLC, Vontier Corporation, Universal Health Services, Life Storage Inc, Keurig Dr Pepper Inc, Altria, Switch, Inc., STAG Industrial Inc, Digital Realty Trust Inc, Independence Realty, Lithia Motors, Inc., Atkore International Group, Fox Corporation, FitBit, RMR Group Inc., Root Inc., Sabra Healthcare REIT, State Street Corporation, salesforce.com, inc., Vertex Inc., AstraZeneca PLC, CVS Health, PQ Group Holdings, Equity Residential, J2 Global, PG&E Corp, Merck & Co, Hilton, Marriott International, Valvoline Inc., Interpublic Group of Companies, Apple, Inc., Barrick Gold Corporation, L Brands, AT&T Inc, AudioCodes Ltd., Artisan Partners Asset Management, Coty Inc, Union Pacific Corp., Alexion Pharmaceuticals Inc, Qualcomm Inc, Netflix, Inc, PBF Energy, Corteva Agriscience, SL Green Realty Corp, Kilroy Realty Corp, Graftech, NXP Semiconductors NV, Samsung Electronics, The Charles Schwab Corporation, Walmart Inc, BlackRock Inc, Boston Scientific Corporation, Fiverr International Ltd. , Honeywell International Inc., CoStar Group, Inc., MongoDB Inc, Norfolk Southern Corp., TripAdvisor, PPG Industries Inc, Snowflake Inc., Estee Lauder Inc, Textron Inc., Jabil Inc, Houghton Mifflin Harcourt Co., Rockwell Automation, AvalonBay Communities, Inc, 3M Company, United States Cellular Corp, Delta Air Lines, Inc, FMC Corporation, L3Harris Technologies, Fidelity National Info Svcs, Inc, Spirit Airlines, Inc., Sirius XM Holdings Inc, Nexa Resources, Willis Towers Watson PLC, Dover Corporation, Truist Financial Corp, Newell Brands Inc, T-Mobile US, Dell Technologies, Teva Pharmaceutical Industries Ltd , Clear Channel Outdoor Holdings Inc, US Bancorp, SeaWorld Entertainment, Inc., Citizens Financial Group, Duke Realty Corp, Synnex Corp, Electronic Arts Inc, Magna International Inc, NMI Holdings, Inc., CME Group

Inc., Equinix Inc., Equitable Holdings Inc, Packaging Corp of America, FedEx Corp., Goldman Sachs Group, Inc., Cigna Corp., CoreSite Realty Corporation, Prudential Financial Inc., Outfront Media Inc, Ventas Inc, Nine Dragons Paper Holdings, Vertex Pharmaceuticals Inc, Brandywine Realty Trust, Kellogg Company, OneMain Holdings, Inc, Continental Resources, Ternium, Medallia Inc, Wells Fargo & Co, Entegris Inc, Fiserv, Inc., Newmont Corporation, 1Life Healthcare Inc , Arch Resources Inc, Aptiv PLC, Xerox Holdings Corp, Microsoft Corp., PayPal, DiamondRock Hospitality Company, Endo International PLC, Arvinas, MetLife Inc., Carvana Co., Pebblebrook Hotel Trust, SJM Holdings, Reata Pharmaceuticals, Inc., KKR & Co Inc, Keycorp, Retail Properties of America, SelectQuote, Inc., BHP Group Ltd, Hoegh LNG Partners, Campbell Soup Company, International Flavors & Fragrances Inc., The Williams Companies Inc, Edison International, EOG Resources Inc, American Homes 4 Rent, National Storage Affiliates, Cummins Inc., Glencore PLC, Anglo American PLC, Fifth Third Bancorp, Morgan Stanley, Booking Holdings, Gilead Sciences, Inc., Cleveland Cliffs, Costco Wholesale Corp, LPL Financial Holdings Inc, Bausch Health Companies Inc, Chubb Limited, Enbridge Inc., Magnolia Oil & Gas, Nutrien Ltd, Smurfit Kappa Group, Phillips 66 Partners LP, Alcon Inc, Pfizer, Toll Brothers, Twitter, Telephone & Data Systems Inc, Biogen Inc., Wayfair, Amcor PLC, Rexford Industrial Realty Inc., PNC Financial Services Group Inc, ADT, Inc., Oneok Inc, Analog Devices, AFLAC, Inc., Energy Transfer LP, Marathon Oil Corp, SAIC, American Axle & Manufacturing Holdings Inc., NICE Ltd, United States Steel Corp., Southern Copper Company, Upwork Inc, Tesla Inc, Lumen, Match Group Inc, American Tower Corp, Pioneer Natural Resources Co., Trinseo, Molson Coors, Park Hotels & Resorts, Macys, KLA Corp, Japan, South Korea, United States, Canada, Germany, Australia, France, United Kingdom, Italy, Spain, Brazil, Indonesia, China, Mexico, Russian Federation, Malaysia, Taiwan, Pakistan, Thailand, South Africa, Philippines, India, Hong Kong, Turkey, Colombia, Chile, Czech Republic, Poland, Nigeria, Hungary, Finland, Belgium, Switzerland, Sweden, Norway, Greece, Ireland, Slovakia, Cyprus.

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Horton, Elanco Animal Health Inc., Shell Midstream Partners, Expedia Group Inc, Mack-Cali Realty Corp, Lam Research Corp, Ovintiv Inc, JP Morgan Chase & Co, Northrop Grumman Corp., Voya Financial, Inc., American Airlines Group Inc., Clarivate PLC, IAC/Interactivecorp, AB-InBev, Warrior Met Coal, Stanley Black & Decker, Edgewell Personal Care Co, Teck Resources, AMC Entertainment, Allstate Corporation, Spotify Technology SA, Agnico Eagle Mines Ltd, Alphabet Inc, First Quantum Minerals Ltd, Fastly, Allison Transmission Inc., Commercial Metals Co, CenterPoint Energy Inc, XPO Logistics, Safe Bulkers Inc, APi Group Corporation, Regeneron Pharmaceuticals, Inc., Qiagen NV, Fortive Corporation, Inovalon Holdings, Inc., Grupo Mexico, Melco Resorts & Entertainment, Northern Trust Corporation, Reynolds Consumer Products Inc., Euronav NV, Everest Re Group, Ltd., General Dynamics Corp., Cisco Systems, Brown-Forman, Pultegroup Inc, Phillips 66, Biomarin Pharmaceutical Inc, Acadia Healthcare Company Inc, Roku, Inc., Federal Realty, Wanda Sports Group , PACCAR Inc., Boeing Co., PTC Inc, DS Smith PLC, ON Semiconductor, The Clorox Co, Trivago NV, Freeport McMoRan, Procter & Gamble Co, Qurate Retail Inc, Raytheon Technologies Corp, Rio Tinto PLC, Agco Corporation, Nu Skin Enterprises Inc, II-VI, MicroStrategy Inc., Colgate-Palmolive Co, Host Hotels & Resorts, Coca-Cola Consolidated, Mercury Systems, SecureWorks, Crown Holdings Inc, General Electric Company, BNY Mellon Corporation, Warner Music Group, Centene Corp, Bio-Rad Laboratories Inc., Teradata Corporation, Federated Hermes, Inc, Essex Property Trust Inc, Sun Communities, Guidewire Software, ConocoPhillips, BellRing Brands, Inc., DTE Energy Co, Aecom, Amgen Inc., Amphenol Corp, Pactiv Evergreen, Reliance Steel & Aluminum Co., Concho Resources Inc, Gannett Co Inc, Etsy Inc., Activision Blizzard, Inc., Sunstone Hotel Investors, M&T Bank Corp, Qorvo, Post Holdings Inc, Avery Dennison Corp, Caterpillar Inc., Weyerhaeuser Co, Chevron, Mid-America Apartment Communities, VMware, Inc., Zillow Group Inc, Cboe Global Markets, Forestar Group Inc, Exxon Mobil Corp, Advanced Micro Devices, Gerdau, Enterprise Products Partners LP, Amkor Technology Inc, PDC Energy Inc, Palantir Technologies Inc, Pinterest Inc, Pentair PLC, Vontier Corporation, Universal Health Services, Life Storage Inc, Keurig Dr Pepper Inc, Altria, Switch, Inc., STAG Industrial Inc, Digital Realty Trust Inc, Independence Realty, Atkore International Group, Fox Corporation, FitBit, RMR Group Inc., Root Inc., Sabra Healthcare REIT, Silgan Holdings Inc, State Street Corporation, salesforce.com, inc., AstraZeneca PLC, CVS Health, PQ Group Holdings, Equity Residential, Splunk, PG&E Corp, Merck & Co, Hilton, Marriott International, Valvoline Inc., Interpublic Group of Companies, Apple, Inc., Barrick Gold Corporation, L Brands, Children's Place, AudioCodes Ltd., Artisan Partners Asset Management, Coty Inc, CheckPoint Software Technologies, Inc., Union Pacific Corp., Alexion Pharmaceuticals Inc, Ralph Lauren

Corporation, Qualcomm Inc, Netflix, Inc, PBF Energy, Corteva Agriscience, SL Green Realty Corp, Kilroy Realty Corp, Graftech, NXP Semiconductors NV, Samsung Electronics, The Charles Schwab Corporation, Booz Allen Hamilton, Walmart Inc, World Wrestling Entertainment, BlackRock Inc, Boston Scientific Corporation, Honeywell International Inc., MongoDB Inc, Norfolk Southern Corp., TripAdvisor, Snowflake Inc., Terex Corporation, Cenovus Energy, Estee Lauder Inc, Textron Inc., Insulet Corp, Jabil Inc, Houghton Mifflin Harcourt Co., Rockwell Automation, AvalonBay Communities, Inc, 3M Company, Delta Air Lines, Inc, FMC Corporation, L3Harris Technologies, Spirit Airlines, Inc., Sirius XM Holdings Inc, Nexa Resources, Willis Towers Watson PLC, Nucor Corp., Dover Corporation, Truist Financial Corp, ArcBest Corp, Newell Brands Inc, Dell Technologies, Teva Pharmaceutical Industries Ltd , Clear Channel Outdoor Holdings Inc, Tupperware Brands Corp, US Bancorp, SeaWorld Entertainment, Inc., Citizens Financial Group, Duke Realty Corp, Anaplan Inc, Synnex Corp, Electronic Arts Inc, Magna International Inc, NMI Holdings, Inc., CME Group Inc., Elastic NV, Equitable Holdings Inc, Packaging Corp of America, FedEx Corp., Facebook, Inc, Goldman Sachs Group, Inc., Cigna Corp., CoreSite Realty Corporation, Prudential Financial Inc., Ventas Inc, Vertex Pharmaceuticals Inc, Brandywine Realty Trust, Kellogg Company, OneMain Holdings, Inc, Continental Resources, Atlassian Corp PLC, Ternium, Wells Fargo & Co, Entegris Inc, Newmont Corporation, The Trade Desk, Inc., The Simply Good Foods Co., Timken, Arch Resources Inc, Aptiv PLC, Xerox Holdings Corp, Microsoft Corp., Ovid Therapeutics, DiamondRock Hospitality Company, Endo International PLC, MetLife Inc., Carvana Co., Pebblebrook Hotel Trust, KKR & Co Inc, Monster Beverage Corp, Keycorp, Retail Properties of America, BHP Group Ltd, Workday Inc, Hoegh LNG Partners, Campbell Soup Company, International Flavors & Fragrances Inc., The Williams Companies Inc, Edison International, EOG Resources Inc, American Homes 4 Rent, National Storage Affiliates, Cummins Inc., Glencore PLC, Anglo American PLC, Fifth Third Bancorp, Morgan Stanley, Booking Holdings, Gilead Sciences, Inc., Cleveland Cliffs, Costco Wholesale Corp, LPL Financial Holdings Inc, Bausch Health Companies Inc, Chubb Limited, Enbridge Inc., Magnolia Oil & Gas, Nutrien Ltd, Smurfit Kappa Group, Phillips 66 Partners LP, Yeti Holdings, Alcon Inc, Pfizer, Adobe Inc., Toll Brothers, WEX Inc., Twitter, Biogen Inc., Wayfair, Amcor PLC, Rexford Industrial Realty Inc., PNC Financial Services Group Inc, Energizer Holdings, Oneok Inc, Analog Devices, AFLAC, Inc., Energy Transfer LP, Marathon Oil Corp, SAIC, American Axle & Manufacturing Holdings Inc., NICE Ltd, United States Steel Corp., Southern Copper Company, Upwork Inc, Tesla Inc, Match Group Inc, Pioneer Natural Resources Co., Winnebago Industries, Molson Coors, Park Hotels & Resorts, Macys, KLA Corp, Japan, South Korea, United States, Canada, Germany, Australia, France, United Kingdom, Italy, Spain, Brazil, Indonesia, China, Mexico, Russian Federation, Malaysia, Taiwan, Pakistan, Thailand, South Africa, Philippines, India, Hong Kong, Turkey, Colombia, Chile, Czech Republic, Poland, Nigeria, Hungary, Finland, Belgium, Switzerland, Sweden, Norway, Greece, Ireland, Slovenia, Slovakia, Cyprus in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as investment banking client(s): Amphenol Corp, Flex, Jabil Inc, American Tower Corp, Telephone & Data Systems Inc, United States Cellular Corp, Vonage Holdings Corp, Ecolab Inc, PPG Industries Inc, Automatic Data Processing Inc, Constellation Brands, Microsoft Corp., PepsiCo, NortonLifeLock, Allison Transmission Inc., ServiceNow, Inc., Berry Global Group, Caterpillar Inc., Trinseo, LPL Financial Holdings Inc, Artisan Partners Asset Management, KKR & Co Inc, Sculptor Capital Management, PayPal, Surgery Partners, FitBit, Digital Realty Trust Inc, CyrusOne, Reata Pharmaceuticals, Inc., Atkore International Group, General Motors Company, Talend SA, Ovid Therapeutics, 3M Company, Centene Corp, PQ Group Holdings, Global Payments, Inc., Fidelity National Info Svcs, Inc, International Business Machines Corp, CoStar Group, Inc., Gates Corporation, Cloudera Inc., Ceridian, DocuSign, Equitable Holdings Inc, American Axle & Manufacturing Holdings Inc., Arvinas, Yeti Holdings, SolarWinds, ADT, Inc., Equinix Inc., CoreSite Realty Corporation, FMC Corporation, Lumen, Slack Technologies Inc, Fastly, Uber Technologies, Inc. , RMR Group Inc., Ping Identity Holding Corp, Clarivate PLC, Crowdstrike Holdings Inc, Elanco Animal Health Inc., Ovintiv Inc, 1Life Healthcare Inc , Reynolds Consumer Products Inc., Teva Pharmaceutical Industries Ltd , Fortive Corporation, General Electric Company, BellRing Brands, Inc., Delta Air Lines, Inc, Splunk, Progyny Inc, SelectQuote, Inc., Nomad Foods Ltd., NMI Holdings, Inc., II-VI, Spirit Airlines, Inc., AudioCodes Ltd., Rocket Companies Inc, Intuit Inc., Vertex Inc., Avalara Inc, Horizon Therapeutics, Rackspace Technology, Inc., AB-InBev, Vertiv Holdings Co, APi Group Corporation, Vontier Corporation, MultiPlan, Corp, McAfee Corp, Medallia Inc, Continental Resources, Fisker Inc., Aptiv PLC, Fiserv, Inc., SBA Communications Corp, Agree Realty, Hasbro, Trane Technologies Plc, Target Corp, GoDaddy Inc, GoodRx, Cars.com, Amazon.com, Inc., Walt Disney Co, Eversource Energy, Omnicom, Stryker Corporation, Dollar General, Herbalife Nutrition Ltd, Citrix Systems, Inc., AllianceBernstein Holding LP, UDR, Inc, Ryman Hospitality Properties, Inc., Regions Financial Corp, Emerson Electric Co., Medtronic Plc, Fluor Corporation, Corporate Office Properties Trust, Hershey Company, KBR, Prologis Inc, Shopify Inc, Meredith Corp, Ameriprise Financial Inc, Vornado Realty Trust, Discovery Inc, Harley-Davidson, Kimberly-Clark, Zimmer Biomet Inc, Colfax, Owens Corning, Walgreens Boots Alliance Inc, ANGI Homeservices, Inc, Teladoc Health, Inc., Kansas City Southern, ViacomCBS Inc, Oracle Corporation, Texas Instruments Inc, Leidos Holdings Inc, Lamar Advertising Company, Easterly Government Properties, Alcoa Corp, WW International Inc, Nielsen Holdings PLC, Linde PLC, Galaxy Entertainment, Philip Morris International, iRhythm Technologies Inc, General Mills, Inc., Abbott Laboratories, Brunswick Corporation, Johnson & Johnson, Realty Income Corp, Bank of America Corp, Aon plc, Starbucks Corp, The Kroger, D.R. 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Technologies, Clear Channel Outdoor Holdings Inc, US Bancorp, SeaWorld Entertainment, Inc., Citizens Financial Group, Duke Realty Corp, Synnex Corp, Electronic Arts Inc, Magna International Inc, CME Group Inc., Packaging Corp of America, FedEx Corp., Goldman Sachs Group, Inc., Cigna Corp., Prudential Financial Inc., Outfront Media Inc, Ventas Inc, Nine Dragons Paper Holdings, Vertex Pharmaceuticals Inc, Brandywine Realty Trust, Kellogg Company, OneMain Holdings, Inc, Ternium, Wells Fargo & Co, Entegris Inc, Newmont Corporation, Arch Resources Inc, Xerox Holdings Corp, DiamondRock Hospitality Company, Endo International PLC, MetLife Inc., Carvana Co., Pebblebrook Hotel Trust, Burlington Stores, SJM Holdings, Keycorp, Retail Properties of America, BHP Group Ltd, Hoegh LNG Partners, Campbell Soup Company, International Flavors & Fragrances Inc., The Williams Companies Inc, Edison International, EOG Resources Inc, American Homes 4 Rent, National Storage Affiliates, Cummins Inc., Glencore PLC, Anglo American PLC, Fifth Third Bancorp, Morgan Stanley, Booking Holdings, Gilead Sciences, Inc., Cleveland Cliffs, Costco Wholesale Corp, Bausch Health Companies Inc, Chubb Limited, Enbridge Inc., Magnolia Oil & Gas, Nutrien Ltd, Smurfit Kappa Group, Phillips 66 Partners LP, Alcon Inc, Pfizer, Toll Brothers, Twitter, Biogen Inc., Wayfair, Amcor PLC, Rexford Industrial Realty Inc., PNC Financial Services Group Inc, Energizer Holdings, Oneok Inc, Analog Devices, AFLAC, Inc., Energy Transfer LP, Marathon Oil Corp, SAIC, NICE Ltd, United States Steel Corp., Southern Copper Company, Upwork Inc, Tesla Inc, Match Group Inc, Pioneer Natural Resources Co., Molson Coors, Park Hotels & Resorts, Macys, KLA Corp, Japan, South Korea, United States, Canada, Germany, Australia, France, United Kingdom, Italy, Spain, Brazil, Indonesia, China, Mexico, Russian Federation, Malaysia, Taiwan, Pakistan, Thailand, South Africa, Philippines, India, Hong Kong, Turkey, Colombia, Chile, Czech Republic, Poland, Nigeria, Hungary, Finland, Belgium, Switzerland, Sweden, Norway, Greece, Ireland, Slovakia, Cyprus.

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Data current as of 30 Sep 2020	**Buy**	**Hold**	**Sell**	**Buy**	**Hold**	**Sell**
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% of companies in each rating category that are investment banking clients	65%	62%	59%	68%	62%	68%
Citi Research Quantitative World Radar Screen Model Coverage	30%	40%	30%			
% of companies in each rating category that are investment banking clients	38%	36%	37%			
Citi Research Quantitative Latam Radar Screen Model Coverage	20%	59%	21%			
% of companies in each rating category that are investment banking clients	66%	66%	73%			
Citi Research Quantitative Asia Radar Screen Model Coverage	20%	60%	20%			
% of companies in each rating category that are investment banking clients	37%	32%	25%			
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