

We would like to start the last quarterly review for 2020 with a column from Applied Finance Co-Founder Rafael Resendes that appeared in **Real Clear Markets**.

Yes VIRGINIA, Valuation Matters

DEAR EDITOR: I am an investor.
Experts say valuation does not matter.
Please tell me the truth; does valuation matter

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VIRGINIA, they are wrong. For the past 60 years, finance experts have been telling the world that the important activity addressed by valuation – trying to understand if a company is trading above or below its intrinsic value is irrelevant. Instead, academic theories and self-interested marketing by many firms preach repeatedly that it is much better to just buy stocks with some combination of attractive accounting ratios such as high: book to price, earnings to price, sales to price, among others. Yet it is clear, market prices over and under react but with time find their proper intrinsic values. But VIRGINIA, it is impossible to understand the intrinsic value of a company through such ratios. How can static measures capture the dynamic interactions of economic profitability, investment strategy, risk, and competition? It is impossible, and everyone knows it. While such simplistic ratios are somewhat correlated to intrinsic value, after disentangling simple price ratios from intrinsic value, the ratios alone or in combination have no ability to explain subsequent stock returns. In fact, when such ratios are uncorrelated to intrinsic value, they result in portfolios with negative risk adjusted returns. A detailed study on deconstructing value in the working paper [Valuation Beta](#) by Applied Finance shows this is clearly the case. VIRGINIA, understand there are billions of dollars at stake to convince you and everyone else that valuation does not exist.

Yes, VIRGINIA, valuation matters. But there are no shortcuts to performing useful valuations through easy to calculate ratios or relying on unrealistic perpetuity assumptions. That is why so many investors have been fooled over the past few years thinking the overall market is so expensive. Yes, relative to historic norms, many ratios made the market look very expensive since 2018. But what is expensive when interest rates are 1% is very different from what is expensive when interest rates are 10%. Without a clear, complete understanding of corporate performance and required rate of return, it is impossible to comment intelligently about market valuations. When the entire market is valued over the years, in real time, with a comprehensive valuation framework applied in the same manner for decades, it is readily apparent that the overall market has not been expensive over the past few years, but just recently became expensive, despite the calls from “value experts” to the contrary. VIRGINIA, do not listen to experts that do not study live, out-of-sample data. The models from such experts typically are rife with confirmation bias and data snooping. It is easy to build models about the past when you already know the answer.

Not believe in Valuation! You might as well not believe in Supply and Demand! No doubt the market does get irrational from time to time and puts crazy values on companies and their business models. In 2000 it was Pets.com, in 2020 it is food delivery companies, but what does that prove? Ultimately it will just prove someone did not understand a stock's valuation, either the buyer or the seller. You see VIRGINIA, a stock price is nothing more than a reflection of future cash flow expectations. Over time, a company's performance will prove the expectations embedded in the price today are either too optimistic, or pessimistic. Those that have better approaches to quantify those expectations are better prepared to capitalize when market prices do not make sense. Let me tell you about a company called Nvidia. Its stock

has gone up 40- fold in the past 9 years! Most quantitative value experts hated it back then because, its price ratios were much higher than the market, and it was aggressively reinvesting in its business. VIRGINIA, can you imagine that people listen to experts saying those things? Can you imagine that a finance expert analyzing stocks would say that a company should not invest in profitable projects, because its stock price will go down? The empirical studies reaching such conclusions, that so many firms copy rather than objectively critique, lack understanding that investment and profitability are intertwined, and you must consider the interaction of the two to understand wealth creation. It is crazy ideas like “the low investment factor” that make people skeptical about valuation. Afterall, if finance experts preach such nonsense, does finance have any value? But properly performed valuations do exist, and a strategy called The Valuation 50® bought Nvidia (NVDA) at \$13.86 in 2011 and enjoyed the stock’s continued appreciation until it was well above \$500. Nvidia’s multiples became greater and greater during that time, but its true value has appreciated even faster – as the company’s economic profitability and growth have more than doubled.

It is imperative VIRGINIA to understand that markets do not reflect a stock’s intrinsic value at every moment. However, just because every investor does not believe in valuation does not make it any less real. Sometimes investors that believe in growth above all else, dominate the market and “buy buy buy” regardless of a stock’s price relative to its intrinsic value. That is why we do not believe in passive investing VIRGINIA, it is a [false bargain](#). Overtime, passive market capitalization weighted indices such as the S&P 500 have delivered negative risk adjusted returns. Why? It is simple, they ignore valuation. Passive indexes invest too much in overvalued stocks and too little in undervalued stocks. Tesla is a great company, but at its current price it is likely overvalued. Investors that own it will likely suffer over time. But it is a significant component of the S&P 500 and passive investors have to buy it. The same thing happened to Cisco in 2000. Do not be jealous of silly short term price movements VIRGINIA, be patient in owning well priced, well run companies. Learn from history, as Applied Finance’s database of over 20 million live, out of sample intrinsic value estimates consistently shows – overvalued stocks tend to underperform. Further, the more overvalued a

company is at a point in time, the more it tends to underperform in the future.

Is valuation real? Ah, VIRGINIA, in all this investing world there is nothing else more real and abiding, regardless of what those with vested franchises and interests may tell you otherwise. Understanding economic profitability, intrinsic value, and stewardship, is a better path to successful investing than focusing on “cheapness” or growth. From “value” investors confused by low investment growth and cheapness multiples, to growth investors that blindly focus on accelerating company fundamentals rather than economic profit expectations, to passive investors that mis-allocate funds, intrinsic Valuation Driven Investing® bests them all over time.

No Valuation! Thank God! Valuation thrives and thrives forever. A thousand years from now, Virginia, nay, ten times ten thousand years from now, valuation will continue as it always has to be the foundation of proper and efficient capital allocation, and the source for safe, secure long-term investing.

Valuation 50 2020Q4

In the 4th quarter of 2020, the Valuation 50 returned 17.25%, vs. 12.15% for the S&P500 index. In the Valuation 50, 10 of the 11 sectors outperformed their S&P500 sector benchmarks while only Energy underperformed.

2020Q4 Top Contributing Sectors

The Valuation 50’s top contributing sectors in the 4th quarter were: Consumer Discretionary, REITs, Financials, and Healthcare.

Consumer Discretionary: Outperformance in Consumer Discretionary was mainly driven by Aptiv Plc (APTIV) and LKQ Corp (LKQ).

Aptiv (APTIV) reported 20Q3 earnings per share of \$1.13, which easily beat the consensus estimate of \$0.71. Revenue of \$3.67 billion rose 3.06% year over year, also beating the estimate of \$3.23 billion. Encouragingly, management reinstated its FY20 revenue target of \$12.5 to 12.7 billion, just down ~10% from FY19, and ~10% above expected global vehicle production in 2020. Looking forward to 2021, management

expects global production to rise 10% year over year, with Aptiv's revenue growth at 6-8% above the market rate. Aptiv's strong execution in 2020 is a testament to its leading technological positioning and optimized cost structure advantage, which allowed the company to grow 10% above the market YTD, and remained breakeven on EBITDA in 20Q2 when global vehicle production volume was reduced by half. Separately, Aptiv stock's strong performance in Q4 is also a result of a very positive sentiment towards electrical vehicle and autonomous driving, following Tesla's (TSLA) inclusion to the SP500 index and Joe Biden's presidential election win, which will likely bring more focus and interest to decarbonization, and democratization of EV. As a key global vehicle components supplier for electrical architecture, active safety, and autonomous driving technology solutions, Aptiv has a long runway ahead for strong growth.

LKQ's 20Q3 earnings results blew away expectations, with adjusted EPS at \$0.75, vs. the consensus estimates of \$0.52. Revenues were \$3.05 billion, also above the expectation of \$2.94 billion. Importantly, LKQ's 20Q3 revenue was 3.2% lower year over year, while its earnings per share grew 23% higher. In fact, notwithstanding the soft revenue environment, 20Q3 posted the highest level of quarterly earnings in the company's history. Following various sizable acquisitions, LKQ since 2017 has shifted its focus from consolidating acquisitions to operational excellence, with an emphasis on pursuing profitable revenue growth and generating high-quality sustainable FCF. This endeavor has been very successful, and LKQ's gross margin has seen 7 consecutive year over year improvement, excluding restructuring. Its EBITDA margin this year will likely surpass its 2017 level, before the company's fast expansion into Europe brought down the consolidated margins, partly due to regional profitability differences. Moreover, the recent impressive EBITDA margin improvement is being achieved with revenue declines in high single digit this year. LKQ should achieve continued margin success as the company focuses on organic market share growth through leading inventory availability, service reliability, and customer services.

REITs: Host Hotel & Resorts (HST)'s strong stock performance in Q4 is mostly a result of the vaccine rally. On November 9 alone, Host shares appreciated 30%, on reports that the

coronavirus vaccine developed by Pfizer (PFE) and BioNTech (BNTX) showed in an early analysis to be more than 90% effective, a much better than anticipated result. Since then, the vaccine has won FDA's emergency authorization and distribution started in mid December. Given a Covid herd immunity won't be achieved until 70-80% of the population gains anti-bodies, we suspect Host's operation will not experience notable improvement until later in 2021. The latest news about the slower than expected roll out of the vaccine could also push the hotel industry's recovery further down the road. That said, Host will likely end 2020 with approximately \$2.4 billion of available liquidity to support operations. To keep things in perspective, assuming quarterly revenue of approximately \$200 million (HST 2019 quarterly average revenue was \$1.3 billion) Host will have about \$100 million of total monthly cash outflows, including an average hotel level loss of ~ \$40 million, as well as estimated CapEx, interest payments, and general corporate overhead. Host therefore has very strong liquidity to weather the current downturn, and its high-quality assets and best in class management team will ensure its long term success remains on track once the pandemic is over. We believe the company will emerge from this crisis with a stronger operating model, and the ability to capitalize on future acquisition opportunities for growth.

Financials: Financials' outperformance was broad based in Q4. Banks such as JP Morgan (JPM) and Bank of America (BAC) are also vaccine rally beneficiaries, and received a special boost in late December when the Fed released the results of its second bank stress test for 2020, which stated the largest U.S. banks have enough capital to withstand over \$600 billion in losses from a short, sharp economic slump, as well as a moderate longer-lasting downturn, and will be permitted to pay out dividends and buy back stock on a limited basis. JPMorgan immediately announced it would begin buying back stock in Q1 under a new \$30 billion 2021 repurchase program. Capital One (COF) and Unum (UNM) also joined the rally, as an effective vaccine will ensure a return to economic normalcy and continued employment recovery, which bodes well for consumer spending, credit, and workplace insurance. Lastly, the yield curve steepened in the quarter with the 10-year US Treasury yield

rising from 0.68% to 0.92%, resulting in the spread of the 10-2 year US Treasury yield widening from 54 to 80 basis points. Widening yield spreads will help expand net margins at banks and rising long term rates will alleviate investment pressure on securities for insurance companies.

Healthcare: Healthcare's best performing stocks were also driven by the vaccine theme, as CVS Health (CVS), McKesson (MCK), and Stryker (SYK) outperformed while Covid beneficiaries such as Thermo Fisher Scientific (TMO) and Danaher (DHR) underperformed. McKesson is a central distributor of Covid-19 vaccines and related supplies needed to administer the vaccinations for Operation Warp Speed, while CVS will play a significant role to help administer the vaccine at nursing homes, and later to the public. Stryker continues to benefit from the return of elective surgeries and sees a strong recovery in its Orthopaedics and Neurotechnology & Spine segments. Stryker is well positioned to deliver a good 2021, and its long-term target of growing its top line at the high end of med tech with 30-50 bps annual margin expansion is intact. Lastly, Alexion Pharmaceuticals (ALXN) announced on December 12, 2020, that it has agreed to be acquired by AstraZeneca (AZN), the largest pharmaceutical company in the UK, in a cash and stock transaction valued at \$39 billion. The deal includes \$60 in cash and \$115.29 in AZN stock per share (2.1243 AZN shares at AZN's closing price on 12/11/2020) for a total purchase consideration of \$175.29, or 45% premium to ALXN shares at the 12/11/2020 close. We believe AZN made the right strategic decision to acquire ALXN and is paying a good price. We also believe ALXN has a fair amount of upside from the latest trading once AZN shareholders better understand the acquisition and AZN's Covid 19 vaccine gains more approvals and popularity given its lower prices and ease of transport compared to Pfizer and Moderna vaccines. We maintain a Buy rating on ALXN for the Valuation 50 but are actively looking for a replacement given AstraZeneca is not a constituent of the S&P 500 index. The transaction is expected to close in Q3 of 2021.

2020Q4 Top Detracting Sectors

On the detracting side, Valuation 50's Energy holdings underperformed their sector benchmark

slightly but returned an impressive 25% in the quarter nonetheless. Recovering oil prices and high hope for an accelerated economic recovery prompted both the exploration and production companies Chevron (CVX), ConocoPhillips (COP), and the refiner Valero (VLO) stocks to appreciate significantly.

Recapping 2020 for Valuation 50

In 2020, the Valuation 50 returned 15.49%, underperforming the SP500 by 291 bps. The equal weighted SP500 (RSP) returned 12.15%. Separately, the R1000 Value has returned 2.73% vs. 38.25% for the R1000 Growth. As a portfolio that is sector neutral to the SP500, with stocks equal weighted within each sector, the Valuation 50 tends to magnify smaller companies' returns to the portfolio, as the portfolio's weights in smaller companies tend to be significantly greater than their respective weights in the market weighted SP500. Our philosophy of buying quality, undervalued companies results in a very different portfolio than the market portfolio, known as "active share", which is consistently around 80% for the Valuation 50.

When we look at the SP500 in the past 23 years, the largest market cap. companies have significantly underperformed the smaller names on a cumulative basis. In 2020, however, the top market cap. quintile companies in the SP500 returned 16.1% vs. 10.5% for the rest (on an equal weighted basis). This enormous preference towards market capitalization was a negative drag to the Valuation 50, as it entered 2020 with 23 holdings in the top quintile of the SP500 and 27 companies in quintiles 2 to 5. The strategy's weighty exposure to smaller names made it highly challenging to overcome the bias against smaller stocks this year to beat the market cap weighted SPY. Nevertheless, the Valuation 50 handily outperformed the RSP.

SP500 Size Quintile Returns					
	Smallest				Largest
	F	D	C	B	A
Cumulative	1436.7%	850.1%	890.8%	546.1%	435.2%
Annual	13.1%	10.6%	10.9%	8.7%	7.8%
1998	13.6%	16.0%	17.3%	16.5%	22.3%
1999	11.5%	5.5%	11.6%	4.1%	25.0%
2000	13.6%	16.9%	17.8%	12.1%	-8.0%
2001	31.1%	14.0%	-0.9%	-15.5%	-14.5%
2002	-13.3%	-17.5%	-15.7%	-21.9%	-21.5%
2003	70.5%	42.8%	36.1%	33.5%	28.9%
2004	19.5%	18.6%	21.2%	16.9%	9.8%
2005	1.2%	12.2%	12.1%	8.4%	5.6%
2006	19.4%	14.1%	18.0%	13.4%	14.0%
2007	-12.8%	-0.2%	5.5%	8.2%	6.4%
2008	-41.1%	-42.1%	-44.8%	-36.1%	-37.5%
2009	95.1%	45.0%	40.9%	38.0%	23.3%
2010	26.8%	29.2%	24.4%	17.3%	13.5%
2011	-3.4%	1.5%	-1.7%	2.6%	0.7%
2012	19.8%	16.5%	17.8%	15.5%	16.7%
2013	43.9%	34.5%	38.5%	36.3%	36.3%
2014	12.4%	11.9%	14.7%	16.0%	14.1%
2015	-7.0%	-5.3%	-3.6%	0.5%	1.3%
2016	27.1%	11.0%	18.1%	12.6%	9.7%
2017	12.8%	16.8%	19.2%	22.3%	22.4%
2018	-8.7%	-9.8%	-10.6%	-6.0%	-4.3%
2019	24.5%	32.8%	34.7%	29.6%	29.5%
2020	6.0%	14.9%	14.8%	6.5%	16.1%

*9/30/98-12/31/20, Applied Finance Database

Separately, while Value has underperformed Growth cumulatively since 1996, the underperformance is almost entirely driven by the unprecedented underperformance of Value in 2020. In fact, annualized returns of Value and Growth from 1996 to 2019 are comparable at ~9%. In 2020 alone, however, R1K Value has underperformed R1K Growth by 3,568 bps.

	R1k Val	R1k Grw	Val-Grw
Cumul	816.7%	1129.0%	-312.4%
Ann'l	9.3%	10.6%	-1.3%
1996	21.6%	23.1%	-1.5%
1997	35.2%	30.5%	4.7%
1998	15.6%	38.7%	-23.1%
1999	7.4%	33.2%	-25.8%
2000	7.0%	-22.4%	29.4%
2001	-5.6%	-20.4%	14.8%
2002	-15.5%	-27.9%	12.4%
2003	30.0%	29.8%	0.3%
2004	16.5%	6.3%	10.2%
2005	7.0%	5.3%	1.8%
2006	22.2%	9.1%	13.1%
2007	-0.2%	11.8%	-12.0%
2008	-36.9%	-38.4%	1.6%
2009	19.7%	37.2%	-17.5%
2010	15.5%	16.7%	-1.2%
2011	0.4%	2.6%	-2.2%
2012	17.5%	15.3%	2.2%
2013	32.5%	33.5%	-0.9%
2014	13.5%	13.1%	0.4%
2015	-3.8%	5.7%	-9.5%
2016	17.3%	7.1%	10.2%
2017	13.7%	30.2%	-16.6%
2018	-8.3%	-1.5%	-6.7%
2019	26.6%	36.4%	-9.8%
2020	2.8%	38.5%	-35.7%

*12/31/95 -12/31/20, Applied Finance Database

With Apple (APPL), Amazon (AMZN), Facebook (FB), Microsoft (MSFT) in the R1K Growth, there is little surprise why Value suffered so miserably this year. Count wise, at the end of 2020, the SP500 constituents are distributed among Value (59%), Growth (14%), and Blend (27%). The Valuation 50 has a similar distribution of Value (68%), Growth (10%), and Blend (22%). While it is apparent the 50 currently has a value tilt, the SP500 index on an equal weighted basis also has a value tilt. Interesting enough, at the end of 2014, the SP500 constituents were distributed as follows - Value at (30%), Growth (35%), and Blend (35%). Similarly, the Valuation 50 back then had 28% of its holdings in Value, vs. 32% in Growth and 40% in Blend. With the Growth factor performing so strongly since 2014, the 50's focus on valuation has resulted in marginal buys tilting to value. That said, the 50 strategy is not defined or bound by simplistic style labels. It is a true investment strategy that seeks to consistently exploit market mis-pricings. The latest addition to the Valuation 50 in August – Klac (KLAC), for example, is a Growth stock.

Though we are disappointed the Valuation 50 did not outperform the market weighted SP500 index in 2020, we believe the Valuation 50's holdings have navigated the Covid 19 induced economic volatility fairly well, and the strategy generally delivered on making good stock selections. The 291 bps underperformance of the 50 relative to the SP500 in 2020 is mostly attributable to the overwhelming bias against smaller, value oriented companies. It is important to remember however, over longer time horizons, since the mid-90s, Large and Growth factors have not consistently generated alpha for the SP500. Since its inception in June 2004, the Valuation 50 has outperformed the SP500 by almost 100 bps a year. The Valuation 50 is a Valuation Driven strategy seeking outperformance via valuation, unbound by conventional style labels.

Looking Backward and Forward

In 2020, the SP500 has returned 18.40%, vs. 3.39% for Euro Stoxx 50, 16.01% for Nikkei 225, and 17.05% for the iShares MSCI Emerging Market. Those are stunning returns (with the exception of the European markets) for the world equity markets amid a once in a lifetime pandemic, from which the world is still looking for an exit. Those extraordinary returns are the

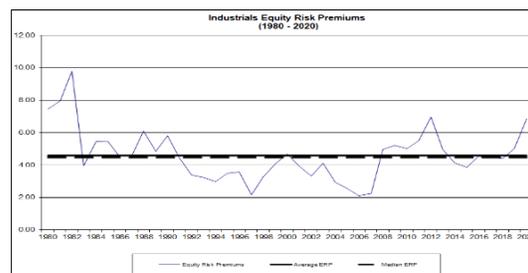
result of enormous fiscal and monetary responses around the globe. In addition, many industries have benefited tremendously from the pandemic, unlike a typical economic recession when almost everyone gets hurt. The largest firms have also performed well or better than their smaller rivals, as they had better resources to adapt. Further, with the rapid development of therapeutics and vaccines for Covid19, the odds for a V shaped recovery are high and equity markets usually act ahead of the curve. All in, 2020 is a year when sectors and industries had very different fortunes and the bifurcation of the haves and have-nots has reached a new extreme.

When we assess a typical SP500 firm ending the 2020 roller coaster, its valuation has become quite unattractive since June of 2020. Granted, the SP500 could stay unattractively valued for an extended period, as was the case in the late 90s through early 2000s. The “stretchy” valuation then, resulted from a multi-year long bull market, followed by, a crash. Today, the SP500 valuation could also improve, if discount rates decline or cash flows improve relative to current expectations or both. Valuation for the S&P500 hit a low point in late 2009, for example, but improved in 2010 and 2011. In this case, the “stretchy” valuation was the result of pessimistic cashflow forecasts amid The Great Recession, while the market rallied back from a sharp sell off. Once long-term interest rates hovered around much lower levels and the economic recovery took hold, the index’s valuation level started to improve, reflecting improving fundamentals. The situation we are facing right now is interesting. The current rich valuation follows a multi-year bull market. However, risk free rates are already at historically low levels, which have very limited room for further downward movement. The latest Fed forecast called for US 2020 GDP to decline 2.4% from 2019, and for 2021 GDP to rise 4.2% from 2020, suggesting the 2021 GDP would surpass 2019 by 1.7%. For SP500, the current EPS estimate is \$169.20 for 2021, nearly 4% higher from \$163.02 in 2019. The SP500 right now is nearly 20% higher from the close of 2019. In comparison, the SP500 EPS grew 47.3% from 2009 to 2010 and 15.1% from 2010 to 2011. Forward P/E for the SP500 is 23 times right now, vs. 13 times at the end of 2009. For stocks’ valuation to improve, the economy will likely need to grow at a much faster rate than currently expected, or companies will need to deliver much better margins in this growth environment than currently projected.



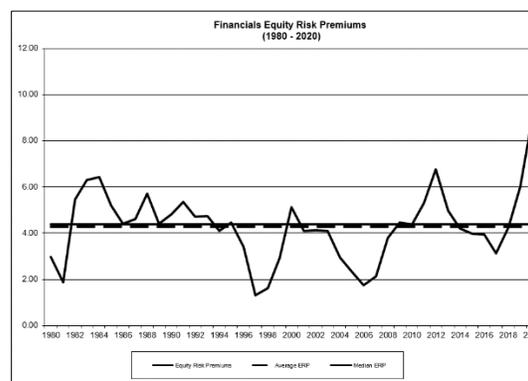
*Applied Finance Research Data

Incorporating the latest 10 Yr US Treasury yield into our market derived discount rate calculation, the Equity Risk Premium (ERP) per our estimates, is currently at ~6.8% for nonfinancial US firms in nominal terms, significantly higher than the historical median and average of ~4.5%. With the risk free rate historically low, equity investors seem to be demanding a fair amount of protection, though the market appears overvalued despite the high ERP.



*Applied Finance Research Data

When we examine Financial firms, their Equity Risk Premium (ERP) per our estimates, is currently at ~8.9% in nominal terms, their highest point since 1980. Everything else equal, Financials appear to be more attractively priced than the industrial firms.



*Applied Finance Research Data

With 10-year US Treasury yields continuously rising, discount rates for equities could also rise. Once that happens, the market must either correct, investors need to lower their return expectations, or future cash flows would need to increase significantly, to justify the market levels. As Yogi Berra said, "It's tough to make predictions, especially about the future", but Wall Street seems to have become extremely flexible in justifying any situation: Right after the November election, the stock market rallied because, according to the pundits, investors liked the prospect of a split government, which would likely result in a better relationship with China and other countries, while at the same time policies such as increasing taxes would not pass. Now the Georgia senate runoff election resulted in a democratic majority in the Congress, which means no split government and high odds for upcoming personal and corporate tax increases. The stock market again rallied cheerfully because, according to the pundits, more stimulus spending will be passed ushering in a faster and stronger economic recovery. The question being ignored, is whether more borrowed stimulus spending will overcome reduced profitability and growth because of potentially higher corporate and personal income taxes? We are very wary of this "rally on anything" mentality.

Valuation can be stretched for a while, as history has shown, but as always, the Valuation 50 will seek to invest in the best names with attractive relative and absolute valuations in their respective sectors, commanding strong fundamentals, and sustainable competitive advantage. Intrinsic value calibration is a result of the dynamic interactions of companies' economic profitability, investment strategy, risk, and competition. While the pandemic has had a dramatic impact on most companies regarding the four valuation components, it did increase our appreciation for competition and risk, for example:

It is amazing to see how Disney (DIS) boasts more than 90 million of Disney + subscribers, a year after the service's inception. Management now forecasts to have 230-260 million global subscribers by 2024, vs the prior 2024 target of 60-90 million. For a point of reference, Netflix (NFLX) currently has approximately 200 million subscribers worldwide, and it started its streaming services in 2007. While Netflix performed well during Covid, the pandemic enabled Disney to become a formidable

competitor at an unprecedented pace, which neither company could have imagined.

Disney's steaming success is a result of perfect timing –the worldwide lockdown happening just 6 months after the Disney + launch, but more importantly management's strategic decision a couple of years ago to create streaming services as a platform to expand its portfolio and strengthen its competitiveness. Disney also had the balance sheet and financial prowess to invest, launch, and grow the new service, which demands enormous amount of capital. Size and leverage are indeed the critical gauges for risk. The large and less leveraged tend to be in better position to navigate choppy waters.

The future path of the virus, the mass distribution of the vaccines, and the Biden administration's implementation of the policies he campaigned on, especially regarding taxation and the green economy, may increase price volatility, especially to a valuation stretched US equity market. We expect to gain more clarity on companies' mid to long term prospects in the year ahead. We will continue to focus on companies' fundamentals and their valuation resilience.

Valuation 50 Changes in 2020Q4

- No changes in the quarter but Alexion Pharmaceuticals (ALXN) has agreed to be acquired by AstraZeneca (AZN) in December, and we intend to replace ALXN before the acquisition's expected completion in 21Q3.

Valuation 50 2020Q4 Performance and Attributes Summary (see next page)

Valuation 50 DISCLAIMER

The Valuation 50 portfolio is a long strategy comprised of approximately 50 U.S. traded large cap equity securities believed to offer superior total returns over long-term investment horizons. The equity securities have attractive Valuations and are selected to provide broad economic sector exposure. The Valuation 50 is a hypothetical model portfolio and does not reflect actual client investments.

The above presentation is based on holdings in the Valuation 50 strategy which started 6/10/2004. Holdings in the Valuation 50 strategy and security prices are subject to change throughout the year.

Gross Performance of the Valuation 50 strategy is based on a hypothetical fully-invested portfolio and excludes all fees and expenses. Net Performance of the Valuation 50 strategy is calculated by deducting an annual investment management fee from Gross Performance. Most individual accounts will have some cash level. Performance is calculated on a pre-tax basis and does not include any reduction for applicable non-U.S. withholding taxes, if any. Past performance is no guarantee of future results. Individual security weights may vary by account.

References to stocks held in the Valuation 50 are for informational purposes only and do not constitute an offer to buy or sell any security.

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The Russell 1000 Index is a market capitalization-weighted index of 1000 of the largest U.S. equities. The Russell 1000 Value index measures the performance of the Russell 1000's value segment, which includes firms with lower price-to-book ratios and lower expected growth values.

The S&P 500 Index is a market capitalization-weighted index of 500 of the largest U.S. equities and is often used as the standard for measuring large-cap U.S. stock market performance.

An investor cannot directly invest in an index and the performance of the index may be materially different from the actual performance obtained by a specific investor.