FOUNTAINHEAD INSIGHTS

Where Are We Going? *Disruption, Upheaval, Innovation!*

December 2021 – Explorations

A front-line chicken processing plant job is among the less desirable positions available. One must stand all day on an assembly line doing hard, repetitive, and dangerous manual labor within feet of your fellow workers on either side[1]. For this privilege, the average salary is $36,000 a year, or roughly $17 an hour[2]. Prior to Covid, these jobs were already becoming increasingly hard to fill. Now there is a material shortage of candidates, as those who had historically taken these jobs did not feel safe returning to them or have found alternative means of supporting themselves either through opportunities elsewhere, increased government subsidies, or some combination of both.

Between employee shortages, which will lead to higher eventual costs for the processing plant, and the realities of Covid-inflicted shutdowns, there is expected wage inflation – but for how long? Well, Tyson Foods is not waiting for this answer. It has announced a spend of around $1.3 billion in developing robotic meat cutters over the next three years. It expects $450 million in annual savings by 2024 through reducing head count and increasing efficiency[3].

If Tyson Foods is successful, this short-term wage inflation will result in longer term general deflationary trends. Truckers face the same issue – being automated out of jobs—as highlighted in our Q4 2019 Us vs The Machine Explorations.

Disruption creates upheaval which ultimately leads to innovation.

Prior to Covid, we had identified a number of longer-term trends. These include:

- An increasing pace of innovation
- A (slow) move away from globalization
- Cracks in our Empire (the US) despite material natural and created advantages

Let's explore how Covid affected these trends as we analyze the world going forward!

History Rhymes: Demise of Mexican Bracero Program Leads to Automation

From 1917- 1921 and then again from 1942 – 1964, the Bracero Program was an agreement between the US and Mexico allowing Mexican workers to legally cross the border for seasonal jobs – primarily picking vegetables and commodities. The program peaked in 1956 with close to 500,000 Mexicans crossing the border for temporary US work. Similar to the current H-2 Visa Program[4], an employer needs to petition on behalf of the temporary worker with the claim that there are not enough US based workers with the ability to do the job.

One can apply all of today's political stances to these international programs and come quite close to the discussion in the 1960s that resulted in the end of the program.

When the program ended, wages predictably jumped in the affected areas. As an example, the first table grape contract won by the United Farm Workers Union following the end of the Bracero Program resulted in a 40% increase in wages from $1.25 an hour, the minimum wage at the time, to $1.75. How did the farmers react? They accelerated efforts to mechanize hand tasks – similar to what Tyson Foods is doing today.[5]

[1] Though still worlds better than The Jungle - Wikipedia, which may illustrate a hopeful upward trajectory for humankind
[2] Chicken Plant Annual Salary ($36,121 Avg | Dec 2021) - ZipRecruiter
[3] Tyson Foods Ramps Up Meat-Plant Automation Plans - WSJ
[4] H-2A, H-2B, and H-3 Visa | USCIS
[5] Mexican Braceros and US Farm Workers | Wilson Center

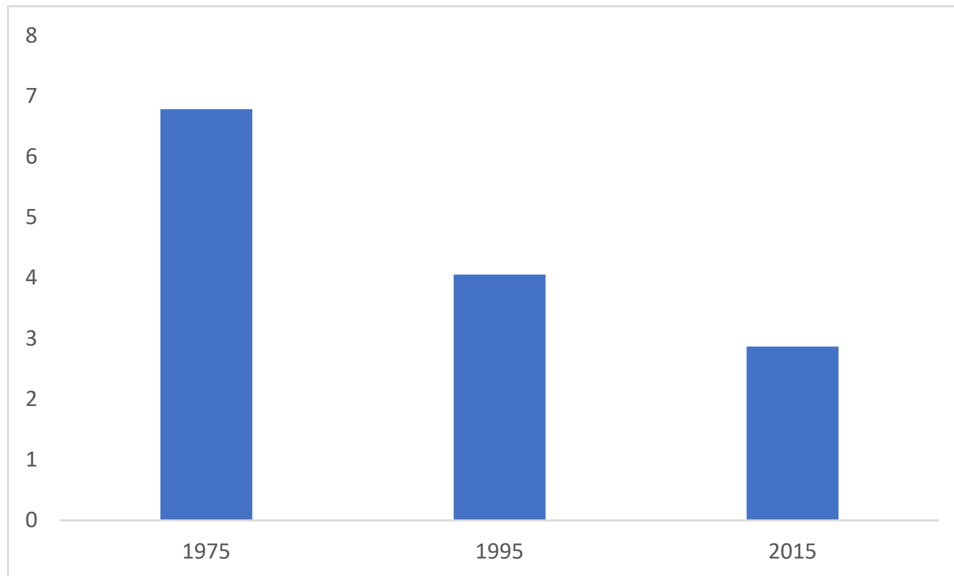
Prior to Covid, trends changed slowly – or at least predictably. Consumers, workers, and commercial enterprises were in a routine. The amount of chicken purchased weekly, while having elements of seasonality, was consistent. Despite movements towards vegetarianism and faux meat, consumption had been increasing on a per capita basis[6]. With predictable outputs, large enterprises focused on consolidation and resulting efficiencies.

Tyson Foods knew with high confidence (1) how many workers would show up daily, (2) how many chickens they would sell each year, and therefore (3) how many chickens they needed to produce, (4) how much seed/grain those chickens would need, (5) how many drivers they would need to ship their product, and so on.

The world was efficient. And between technology and other innovations, it was becoming increasingly efficient.

It was so efficient that it was, in retrospect, fragile. Managers pushed boundaries in how many workers were necessary for a task, how much inventory was necessary to get by in a pinch.

Hospital beds per thousand people – US[7]



As evidenced from the graphic to the left, America was quite content and feeling safe. After all, we reduced our hospital bed count by 35% (From 1.46 million beds in 1975 to 900 thousand beds in 2015) despite an increase in population of 50% (From 215 million to 320 million people). Admittedly, some of this reduction was most likely due to significant medical advances resulting in less time necessary in hospitals. The point though is that our capitalist approach necessitated no safety net – it simply cuts into profits.

So, when this perfectly efficient but fragile system was materially stressed by a once-in-a-century event, the system buckled. Between historically "easy" money due to massive government assistance[8] and the aforementioned system buckling – known as supply chain disruptions – inflation was introduced into the system. Like in financial bear markets, risks that were not evident prior to a material disruption are exposed, creating both upheaval and opportunity.

Increasing Innovation

We have written about automation replacing jobs in the past. It is an interesting subject to us for a variety of reasons. The two primary questions are (1) what does the future of jobs actually look like given the pace of innovation and (2) how may government play a role in this future landscape?

[6] Meat processors wrestle with worker shortages as US economy reopens from COVID-19 | Food Dive

[7] • Hospital beds number U.S. 1975-2019 | Statista, • Population United States 2020 | Statista

[8] Which we believe was necessary for a variety of reasons, one being that Covid was initially a massively deflationary event which has its own issues.

Every indicator we review points to further efficiencies and less wage power over the long term for employees. That means longer term deflationary pressures despite current inflationary characteristics.

In our view, innovation is happening at a faster pace than ever. Just note the resources and speed of the vaccine programs, as well as other defenses, in effectively fighting Covid – a vaccine constructed in a weekend with government approvals within a year. This compared to the previous record of around 4 years for a mumps vaccine[9] and over a thousand years for smallpox!

We expect disruption brought on by Covid to increase the pace of innovation for the following reasons:

- Companies reacting to new risks and realities. Tyson Foods' automation initiative is a good example.
- Employees rethinking priorities and becoming increasingly entrepreneurial.
- General displacement in society resulting in new opportunities: For example, given the new realities of working remote, how will our homes, towns and cities get reconfigured?

Innovation will also play a role in declining globalization.

Declining Globalization

Our thesis of declining globalization is based on three main beliefs:

- In our Q3 2019 What is Really Happening with Global Trade Explorations we noted that increased innovation will reduce the need to build product overseas. The ultimate manufacturing objective is to simply move raw materials around the globe as needed with production occurring on site. We showed the picture below highlighting a vertical warehouse constructed by Amazon adjacent to a city, with the top floor devoted to just-in-time manufacturing.
- The eroding willingness of the US to continue to police international waterways, combined with the increasing rancor between the US and China, points to a national goal of moving more resources locally – note recent stated investments in chip manufacturing stateside[10].
- Risks of sourcing and shipping products globally have become more evident given the start and stop nature of the Covid pandemic. This has resulted in businesses increasingly seeking business redundancies and alternatives as a necessary hedge to existing business practices.

Declining globalization can be viewed as mildly inflationary, especially in the shorter term, given China's dominant position in manufacturing and provided how the global supply chain was positioned largely around their capabilities. Companies will have to spend significantly to find alternative manufacturing centers and build the necessary global supply chain infrastructure to support it. While there are a number of potential winners, there are no obvious replacements for China, which has established necessary specialty and know-how and is endowed with a huge working population.

Prologis Georgetown Crossroads, a three-floor 590,000 square-foot industrial warehouse in Seattle. PHOTO: WOODY WELCH/PROLOGIS

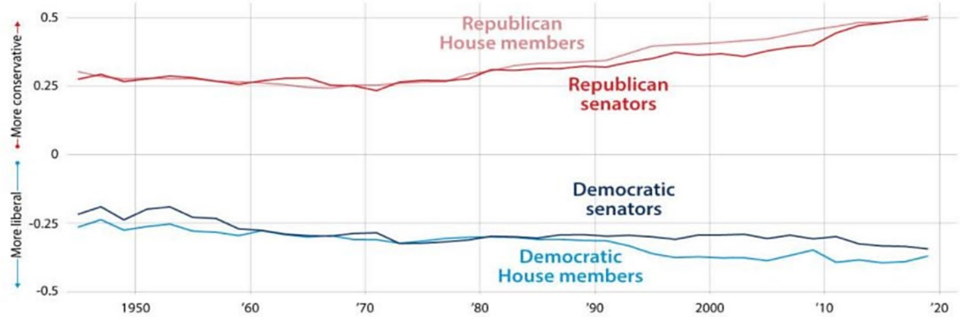
General global relations are also materially assisted by globalization. Despite the rhetoric around Taiwan and other

[9] How a New Vaccine Was Developed in Record Time in the 1960s - HISTORY
[10] More Chips Will Be Made in America Amid a Global Spending Surge - WSJ, How the global chip shortage is boosting US manufacturing - CNET

flash points, the US and China are tremendous trade partners with each other, and neither should want to dent that relationship – a marked difference from US – Russia relationship where there are very few dependencies[11].

Cracks in Our Empire / Government Debt

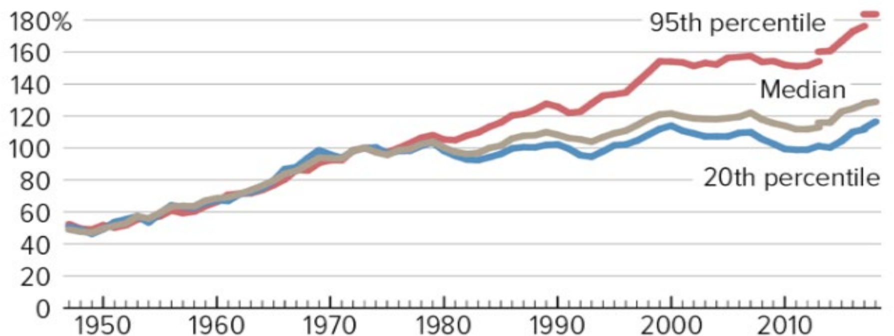
As noted in Declining Globalization, the world feels increasingly hostile, with America trending towards its default historical isolationist position. We are gifted in our natural resources which provides us tremendous advantages over every other country in the world. However, a significant portion of our citizenry have seen eroding lifestyles over the last few decades.



Earlier, we had mentioned two primary reasons for our interest in jobs being replaced by automation. A close third is the traditional power struggle between the worker and employer which has historically created conflict. Note today's political environment and increased partisanship. We believe a significant loss of wealth and power by the middle and lower middle class compared to past generations has resulted in frustration and anxieties pushing this population to more extreme political positions. When combined with the ability of social media to amp up emotions and harden opinion, it is hard not to see things getting uglier from here – note a couple of the risks here: Eurasia Group | Top Risks 2022 – a well-respected geopolitical strategist

We had covered some other concerns in our Q4 2020 Is Our Empire Crumbling? In that Explorations, we had highlighted debt as a potential long-term issue for the US. It is the one longer term inflationary characteristic we had flagged when analyzing whether inflation was fleeting or structural.

Since 2008, the Fed has used a multitude of tools in attempting to increase annual growth rates to a 2% - 2.5% level to no avail. With the Covid-related shutdown of the economy being a massive deflationary event, the Fed had no choice but to act with enormous fiscal stimulus, supporting its affected citizens. While the Fed is now looking to tighten policy, the long-term trend prior to Covid was worrisome – low productivity and an aging demographic are bad trends for growth, with Japan being the posterchild.



One of the most important ways of combatting inflation is for the Fed to take it seriously regardless of whether their view is that inflation is transitory, intransigent,[12] or structural. The way inflation enters a vicious cycle is when citizens do

[11] Unfortunately for Europe and the US and fortunately for Russia, Europe is very dependent on Russia for energy…
[12] A recently introduced term used by the Fed!

not have confidence in the cycle being averted, which compels them to spend money as quickly as possible before it loses value. Increasing rates is therefore important primarily to combat inflation – regardless of whether the Fed is truly concerned about it—as well as, at least in our view, to have more wiggle room to combat future economic woes of our nation.

How Interest Rates Affect Equity Market Valuations

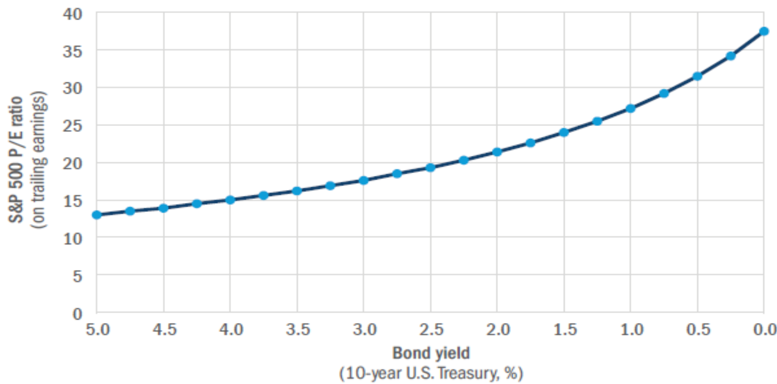
Investors are regularly analyzing the return vs risk of different types of investments. When lending money to a company, an investor typically receives a fixed coupon and eventual return of principal. If the company defaults, the lenders are among the first in line to receive company collateral (e.g., equipment and inventory which is sold to raise cash and cover a portion of principal losses). When investing in the equity of a company, the investor may receive distributions (dividends) as well as an increase of value in their ownership stake. If the company goes bankrupt, an equity investor is last in line to recoup losses. For example, Lehman Brothers bond holders recouped 21% of their bonds' principal while equity holders recouped 0%[13]. In short, equity demands a premium over fixed income (known as a "spread"). Given a 3% premium spread for equity over fixed income, an investor who can receive a 5% annual yield from a bond would demand an 8% annual expected return from an equity investment. However, if yields were only 1%, then equity investors would only need a 4% annual expected equity return to equate the investments.

A price over earnings (P/E) ratio is a method of standardizing valuations within the market. A 30 PE means that the stock is trading at 30 times its annual earnings (e.g., stock price = $30, earnings = $1). If investors need a 4% return over the next 5 years, the expected forward price (in 5 years) would be $36.50 ($30 * 1.04% ^ 5). However, if yields increase 1% and investors now require a 5% return, then given the expected forward price of $36.50, the current stock price needs to reset to $28.60 ($36.50 / (1.05 ^5)) resulting in a decline of the PE to 28.6![14]

Hypothetical (though directionally accurate) P/E – Yield relationship[4][15]

Are stocks cheap or expensive? It depends.

Looking at interest rates and bond yields can help us understand whether P/Es make sense.



There's an inverse relationship between interest rates and price-to-earnings (P/E) ratios. Understanding this relationship can help investors gauge the relative value of P/E levels and whether the stock market is cheap or expensive.

When bond yields drop, stocks can look more attractive, drawing in investors who are willing to pay more. As a result, the S&P 500 tends to have a higher P/E multiple when interest rates are lower — that's the key point we are at today. If interest rates rise, stock P/Es should head lower.

Source: Bloomberg, as of 03/31/21. The calculation for P/E ratio takes into consideration the average spread (from June 2003) of 267 basis points between the S&P 500 Index earnings yield and U.S. 10-year bonds. A basis point is 1/100th of a percent. The S&P 500 Index tracks the performance of 500 widely held, large-capitalization U.S. stocks. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

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[13] Creditor Recovery in Lehman's Bankruptcy - Liberty Street Economics (newyorkfed.org) – I worked for Lehman Brothers post-bankruptcy and still remember quarterly meetings reviewing expected vs communicated capital raised on behalf of bond holders.

[14] A further characteristic of increasing yields that negatively affects valuations – especially for growth stocks – is that the discount rate increases. There is less value in future cash flows the higher the interest rate applied. Discounted cash flow and discounted terminal value is a primary method of calculating present values of companies.

[15] https://www.columbiathreadneedleus.com/blog/chart-understanding-the-relationship-between-rates-and-p-e-ratios

Conclusion

Two of my cousin's children are temporarily living internationally. Both have been able to keep their job in America (remotely) rather than search for one in their temporary country. Between people (1) reassessing their life and career choices, (2) being unshackled from geographies and (3) more likely to work from home, a trend begun during Covid will most likely accelerate over the next decade: More movement of people, reconfiguration of cities and towns and living spaces. What will occur in real estate? In cities? How will we choose to entertain ourselves? And how will tomorrow's innovations affect and hopefully better the world – all given current risks like partisan politics and high debt level hopefully recede.

It is a rapidly changing world, an innovative world, an exciting world with both risks and rewards – we continue to review all we can in appropriately positioning for tomorrow.

Investment Initiatives:

Equity: As innovation accelerates, we continue to analyze thematic investment opportunities within the equity space that align with the longer-term trends shaping the future of markets and society. The goal is to integrate pointed thematic exposure into our portfolios to introduce additional innovative areas of the market into our models.

Fixed Income: Our primary focus within fixed income right now is to shift some of our passive core bond allocation into active management. As the current rate environment continues to evolve, we see even greater potential in utilizing an active manager who can robustly navigate the market. We are constantly evaluating our fixed income positioning, particularly the two biases that exist within our fixed income allocation: (1) short duration bias, and (2) US debt bias.

Alternatives: The alternatives space continues to grow in terms of the variety of exposures and the types of structures in which to access those exposures. Two areas of focus for our group here are (1) access to more private equity in a structure that is most beneficial for our clients, and (2) Increasing our education on emerging markets and technologies such as cryptocurrencies and web3.0.

One of the objectives of our alternatives investment allocation, specifically our most liquid allocations, is to provide a similar risk/return profile to traditional equity and fixed income while decreasing the correlation and overall risk of our portfolios. This means our analysis of this space is done in close concert with both traditional equity and fixed income analysis to ensure our portfolios are positioned thoughtfully.

We continue to monitor markets closely and look for opportunity on your behalf from both a risk mitigation and return perspective.

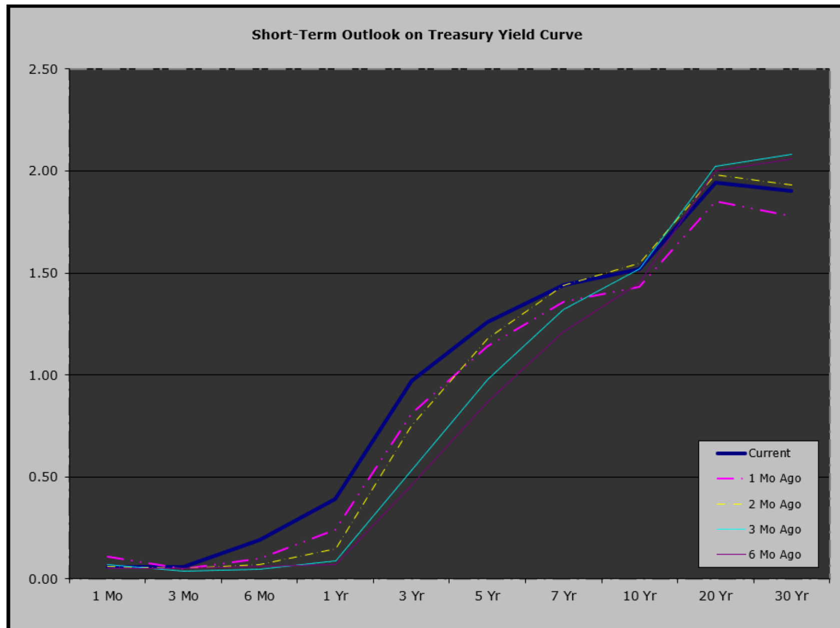
General Market Review and Positioning:

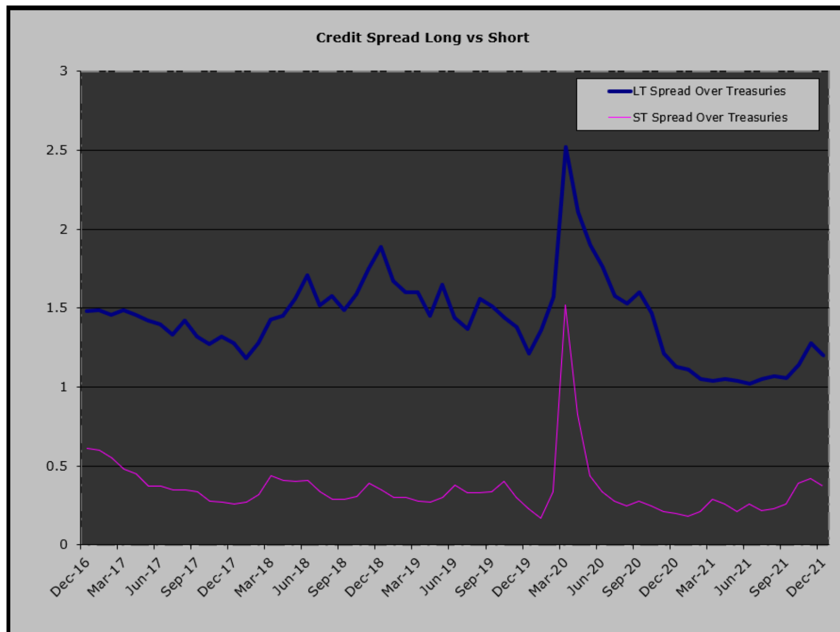
Regardless of one's view on inflation, most agree that we have and will continue to see yields move, and that the Fed will raise rates in 2022. As such, the positioning of our fixed income allocation continues to be top of mind.

A summary of our recent positioning: We have historically had some element of a barbell approach: shorter duration exposure combined with some high yield fixed income, which our benchmark does not have. Prior to the 2020 election, we temporarily removed our high yield investments due to an imbalance between the upside potential (low) and downside potential (high) of a contested election. Once the dust settled, we rotated back into high yield. Fast forward to the summer of 2021 – yields were at historical lows, and credit spreads were historically tight. This means that not only is the income from fixed income unattractive from a historical context, but that investors are receiving relatively little compensation to take on additional risk by investing in high yield. For those reasons, we reallocated our high yield exposure to defensive oriented alternatives exposure – event driven/merger arbitrage strategies. We determined these had a similar risk/return profile to historical high yield investments, provided additional diversification to our portfolios, yet did not face the yield and risk/reward challenges that high yield currently faces.

We also have a bias to US debt. Given the aforementioned perceived risk/reward of credit given historically low yields and risk spreads, we have been confident and happy with our overall tilts within the fixed income portion of our portfolios. We did not put on any of these biases with the intention of timing the market – they were simply the result of our evaluation of risk/return profiles over time. As we stand today, our allocation is still lower risk and shorter duration relative to our benchmark, the Bloomberg Barclays Global Aggregate Bond Index.

The considerations top of mind for us include an eventual shift towards longer duration from our current positioning (though not necessarily longer than or even as long as our benchmark), as well as adding back on some additional risk as we see the market process impact of upcoming interest rate hikes. We continue to monitor the charts below (yield curve shifts & credit spreads) as we evaluate our allocation.





On the equity front, we saw another strong run up in 2021. That being said, we continue to have some concerns around valuations – specifically surrounding growth companies (note last quarter's Exploration, where we showed a chart of historical equity valuations). As discussed above, interest rate increases should negatively impact companies with high relative valuations due to a repricing of future expected returns relative to yields. While we do have some concerns here, we are not market timers and do not believe it is warranted at this time to introduce a bias relative to our benchmark towards value-oriented exposure. Note below chart which shows the strong finish of equities in Q4 despite some volatility focused on those growth style equities:

We expect Fed policy to contribute to market volatility this year as inflation and interest rate environments continue to evolve. On a positive note, we are optimistic that Covid will soon be evolving from a pandemic to an endemic which means it is something society will comfortably live with (similar to the flu) as the medical community continues to create tools to combat it (vaccine, medicine) and as symptoms of the virus (hopefully, as in Omicron) become milder.

Suffice it to say, financial markets are and will always be incredibly complex. We continue to monitor markets closely and look for opportunity on your behalf from both a risk mitigation and return perspective.

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