Economic & Market Outlook

Executive Summary

~ For stocks, it has been a near V-shaped recovery despite a crippled economy and on-going pandemic

~ For the time being, policymakers have successfully placed a safety-net under individuals, corporations, and investors via government subsidies and loose monetary policy

~ An odd externality of COVID-19 and government subsidies has been retail investors flooding into the markets

~ While headline index returns suggest stocks are near breakeven for the year, performance for the average stock is quite worse

~ COVID-19 has been the perfect storm for the "value" factor. This year, what is expensive has grown more expensive and what is cheap has become cheaper

Introduction

Year-to-date, global equity markets have fallen a mere -6.0%, and large-cap US equities have fared better at -3.1%. Who would have predicted this result given the current state of affairs? US industrial production has been cut in half. 12.9% of the US labor force, over 18.0 million Americans, are receiving unemployment insurance. Surveys indicate 32% of Americans have yet to make their full July housing payment (i.e. rent or mortgage). In layman's terms, our economy and many other economies are operating at a small fraction of their potential. And to make matters worse, the spread of Coronavirus is accelerating as municipalities attempt to reopen their economies. Against this backdrop, who would have forecasted stocks within arm's length of their all-time highs? What gives?

The S&P 500 Has Already Recovered Most of Its Losses

Source: Bloomberg

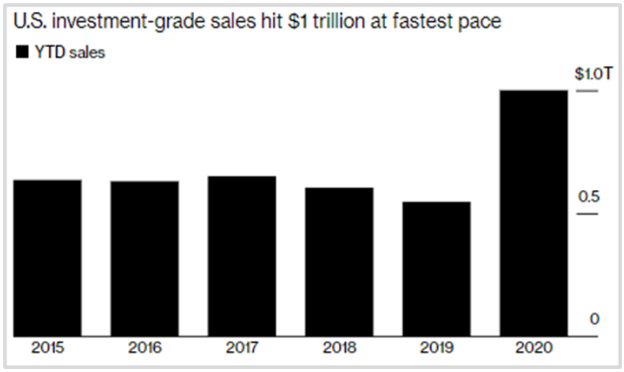
Explanation #1: Goodbye Free Markets

The most common rationalization we hear is that free markets are dead, and that the policy interventions enacted by the Federal Reserve and Congress have provided a safety net for corporations, individuals, and even investors, propelling equity prices higher.

The Federal Reserve, by design, has intervened in the financial markets for decades, but recent policy announcements have taken matters to a new level. On March 23rd, the nadir of the sell-off, the US Federal Reserve pledged unlimited quantitative easing, a policy designed to suppress interest rates and inflate the supply of money. Emphasis on unlimited. The Federal Reserve also announced programs to purchase other forms of debt, like municipal and corporate bonds, directly in the open market, for which they have no precedent of doing. Simply put, Chairman Jerome Powell has shown a willingness to use every possible tool in his kit to help our economy weather the shutdown.

Regarding our second point, the shuttering of our economy has halted the cash flows for most US corporations. Without access to the financial markets, corporations lacking ample cash reserves and/or credit lines face the real risk of bankruptcy. By restoring liquidity to the corporate bond market, the Federal Reserve has made it easier for these corporations to issue debt, where proceeds can be used to bridge the funding gap created by the economic shutdown. To that end, both investment grade and non-investment grade corporations have gone on a borrowing binge. During the first half of 2020, US investment-grade corporations borrowed over $1.2 trillion in debt, more than double the level borrowed in all of 2019.

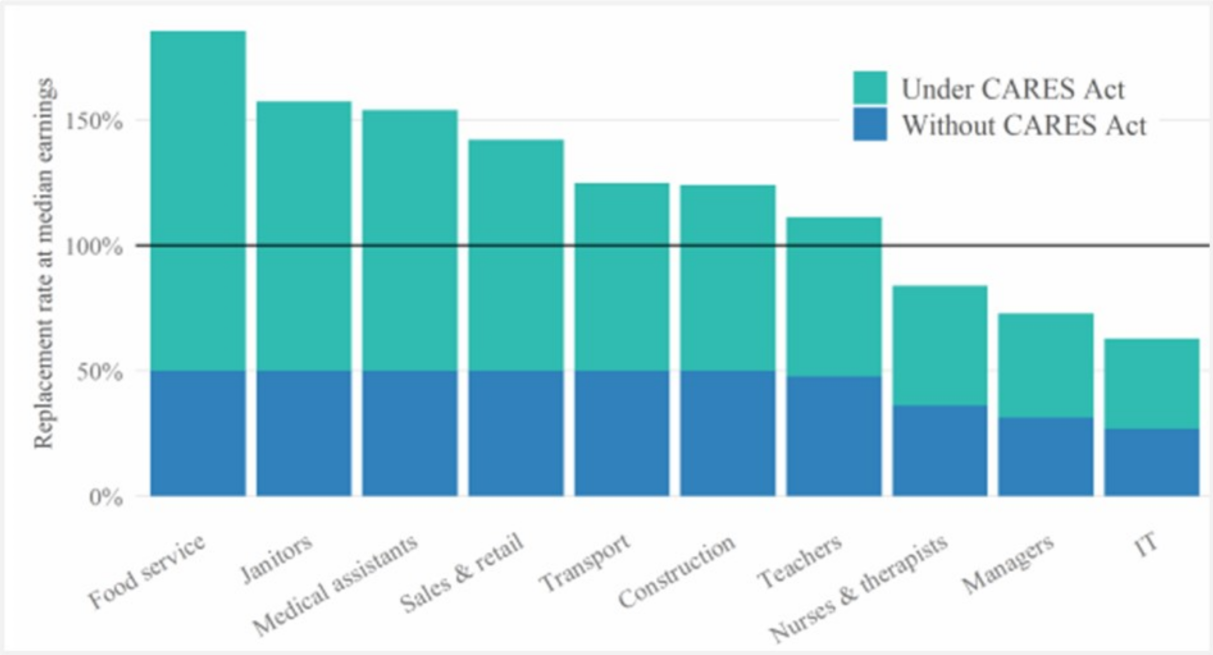
Corporations Borrowing at Record Pace



Source: Bloomberg

Large corporations were not the only parties in need of a cash flow bridge. To that end, the CARES Act passed by Congress accomplished two significant objectives. Through the Paycheck Protection Program, the US Treasury has approved over $521 billion in loans to almost 5 million entities. Bear in mind that if certain conditions are met, these loans are forgivable i.e. free money. On top of that, Congress supplemented unemployment insurance with an incremental $600 per week. For May, state unemployment benefits averaged $321 per week, implying the average individual on unemployment was collecting $921 per week (roughly $48,000 annualized).

Many Unemployed Workers Have Higher Earnings Under the CARES Act



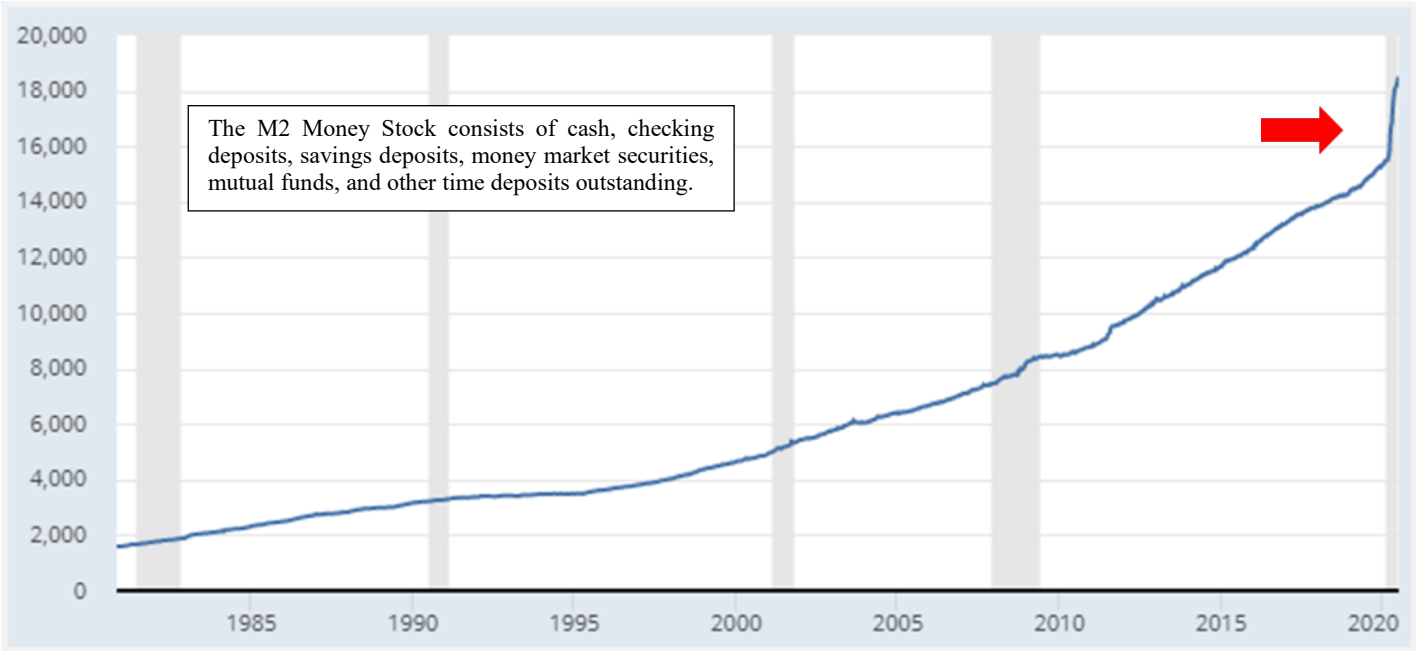
Source: Ganong, Noel, & Vavra

Disposable Incomes Have Actually Grown During the Crisis Thanks to Government Transfer Payments

Source: Federal Reserve Bank of St. Louis

The COVID-induced shutdown created a dangerous gap in cash flows for both corporations and individuals. Thanks to the Federal Reserve's actions, large corporations have been able to bridge the gap with ample amounts of low-cost debt. Smaller businesses and individuals have been saved by direct cash infusions in the form of forgivable loans and enhanced unemployment benefits. The amount of money being injected directly into our economy is unfathomable.

US Money Supply Surges Following Government Intervention



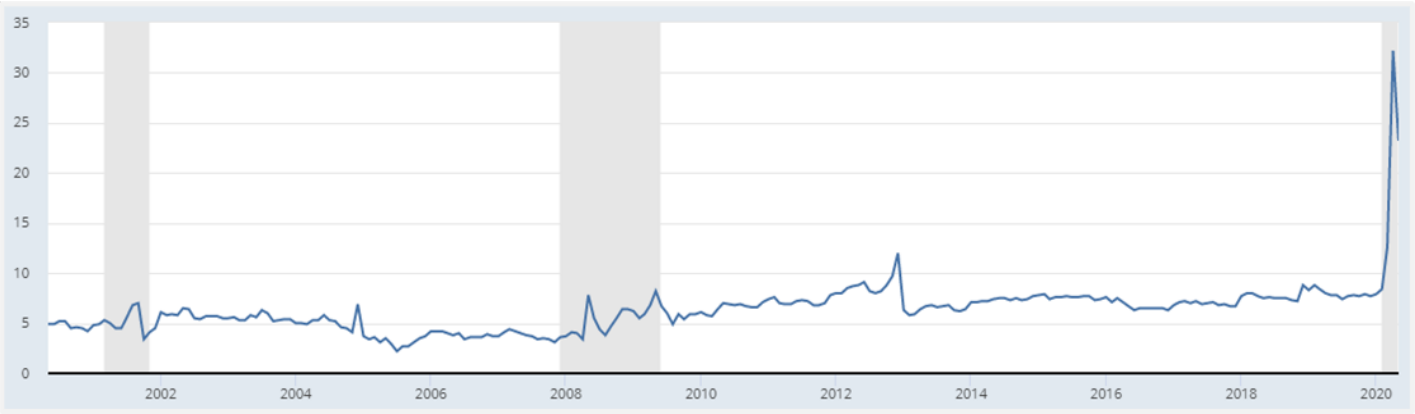
Source: Federal Reserve Bank of St. Louis

Explanation #2: The Return of Day Traders

Another popular explanation for the market's recent ebullience is the return of the individual investor. The basic argument is as follows. Stuck at home without the typical outlets, shopping, sports, or even gambling, individuals have

taken to day-trading. Commission-free trading and the ability to buy fractional interests in securities has helped fuel the fire, and as we have previously mentioned, many individuals (even the unemployed) are sitting on excess cash.

Household Savings Rate Reaches Unprecedented Levels



Source: Federal Reserve Bank of St. Louis

Rigorously testing this hypothesis is difficult, and at first, we were skeptical. We witnessed several irrational stock-specific events that could only be explained by ill-informed retail trades, but these (a few listed below) were merely anecdotes.

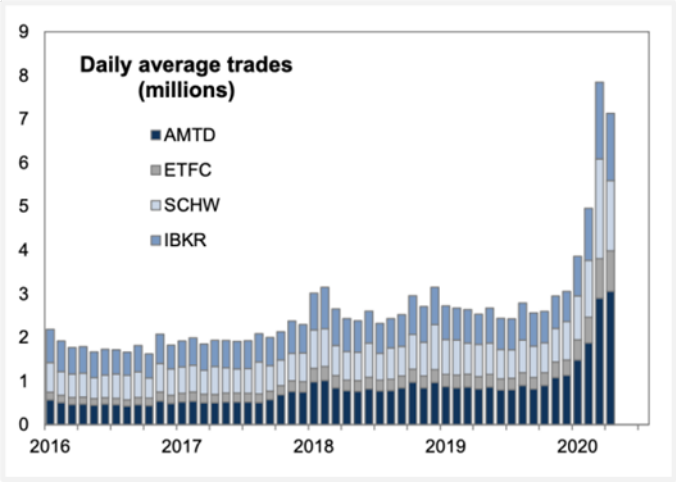
~ Forum Merger Corporation (FMCI) was a blank check company or SPAC formed to acquire another company in the specialty food space. What makes this case study interesting is the entirety of its balance sheet consisted of cash and equivalents until it consummated a transaction, making it incredibly easy to value the company. At one point, before announcing the identity of its target, investors were paying a 50% premium for the cash & equivalents.

~ During the first half of June, the stocks of bankrupt and/or near-bankrupt companies rallied significantly to levels that implied considerable equity value remained. From June 1st to June 8th, Chesapeake Energy's market value climbed from $127 million to $684 million. JC Penney, who had filed for bankruptcy in mid-May, saw its equity value jump from $68 million to $202 million over that same period. The most interesting example though is Hertz who after witnessing its equity market value jump from $126 million to $786 million convinced a bankruptcy judge to approve a secondary stock offering. Unfortunately, for Hertz creditors, the Securities and Exchange Commission prevented the offering to protect smaller investors from purchasing additional shares that were most likely worthless.

~ The Nikola Corporation (NKLA) is the most notorious example, a pre-revenue electronic truck manufacturer, whose equity value at one point had appreciated over 9,000% eclipsing $28 billion in market value. To put that number into perspective, a company that has yet to deliver a truck was temporarily valued higher than the likes of Ford and Nissan.

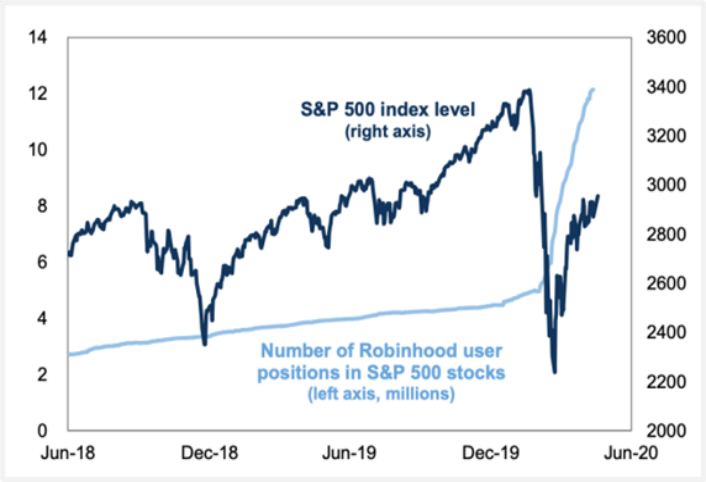
When we began to explore the actual data, we were quite surprised. The evidence extended beyond our anecdotes. Discount brokerage firms are reporting record numbers of new account opening and record trading volumes. At Charles Schwab, daily average revenue trades ("DARTs") have increased 10-fold over the last quarter. Within the options market, over 13% of all trades are for a single contract. According to Citadel Securities, a clearing and execution firm, retail trading accounted for only 10% of market activity in 2019. That figure climbed to 15% in early 2020 as brokerage firms eliminated commissions, and post-shutdown Citadel estimates retail trades make up as much as ~25% of market activity on the busiest days. Simultaneously, we have seen a drop in the level of stock turnover attributable to foreign investors and mutual funds. While we would not attribute the equity market recovery to the rise of retail trading, particularly in its entirety, we can also no longer dismiss the significance of retail trading in pricing equities.

Reported Retail Trading Activity Surges



Source: Goldman Sachs

# of Stocks Held by Robinhood Grows Exponentially



Source: Goldman Sachs

Explanation #3: The Market's Return is Misleading

You might find this hard to believe, but we would argue stocks have not recovered as much as you think; that the headline index returns are not emblematic of the broader market's performance. Indices, like the S&P 500, weight their constituents by market capitalization. When the index weighting gets heavily concentrated in a sector and/or a handful of individual stocks, that index becomes a poor proxy for the broader market's performance.

Before our economy shut down, the information technology and healthcare sectors were the two largest S&P 500 sectors at 27.5% and 14.6%. Combined they comprised 42.1% of the market. Coincidentally, these two sectors are also the biggest benefactors of a pandemic and economic shut-down: health care for obvious reasons and information technology (particularly software) benefits as individuals transition to working from home. During the first half of the year, these two sectors returned +15.8% and -0.8%, respectively. This implies the other 57.9% of the market eroded -12.7% in value. Financials, one of the most cyclical sectors, is still off -23.6% from where it started the year, and the Energy sector has fallen -35.3%.

You will draw similar conclusions if you slice the index by size. To date, the S&P 500 has fallen a mere -3.1%, but the average S&P 500 constituent has fallen -11.6%. This effect is largely being driven by the S&P's top constituents, Microsoft, Apple, Amazon, Facebook, and Google, which together account for 19.5% of the index. As a group, these holdings have averaged a return of +21.0% helping support headline returns. Without these holdings, the index would have fallen -9.6%. The smaller you go in size, the worse matters get. The Russell 2500, an index of mid-capitalization stocks fell -11.1% and the Russell 2000, an index of smaller capitalization stocks, -13.0%.

S&P 500 Becomes Heavily Concentrated in Top 5 Holdings

Source: Goldman Sachs

Explanation #4: Back to Basic Financial Theory

It is easy to get caught up in all the noise of the market; to worry too much about the economy; to ponder the implications of retail trading, and to dissect equity market returns every which way. But, in doing so you risk missing the most basic explanations, which can be found in the fundamental building blocks of finance. A stock is an ownership interest in a business that produces a stream of earnings, and the "true" value of that business is a function of those future earnings. To that end, we know that earnings will be depressed in 2020 and likely in 2021, but how much weight should that carry?

For illustrative purposes, imagine a hypothetical investment opportunity to buy a business that will pay out $100 per year into perpetuity. Assuming you wanted to earn a 10.0% rate-of-return, you would pay no more than $1,000 for this investment. Shortly after investing, you are informed the first year's check will not arrive because of COVID-19. How much did the value of that business fall assuming you still require a 10.0% rate-of-return? I.e. had you known year one's distributions would not come, what would be your new appraisal of value? The answer is $909 a decline of 9.1%. If two years of distribution checks are withheld, then the fair value declines only 17.4% to $826.0. To justify a 25.0% decline in valuation you must assume three years of distributions are completely wiped out.

In our hypothetical, we made the simplifying assumption that distributions never grow, but in the real world, corporate earnings and, in turn, shareholder distributions grow. Had we assumed a 3.0% distribution growth rate into perpetuity our fair value changes would have been less drastic. Here is the rubric under this scheme. Eliminating the first year's distribution causes the fair value to fall by only 6.4%. Eliminating the first 2-years of distributions causes the fair value to fall by 14.9%. Eliminating the first 3-years of distributions leads to a 22.6% decline in fair value.

As unsophisticated sounding as it may be, bedrock financial theory tells us wiping out a year or two of cash flows does not dramatically change the value of a cash flow stream that grows over the long run, which an ownership interest in the domestic or global stock market is. Maybe the market has it mostly right given the average stock (not index) has fallen -11.6%.

Valuing the Market

The intrinsic value of an asset varies from person to person because individuals discount future cash flows at different rates. In other words, the required rate of return (or discount rate) I demand from an investment might be different than your required rate of return. If I demand at least a 10.0% rate of return and you demand only 5.0%, you would be willing to pay considerably more than me for any given investment. Conversely, if my discount rate was only 5.0% and yours was 10.0%, I would be the higher bidder for that asset.

In our previous discussion (see Explanation #4: Back to Basic Financial Theory), we assumed investors required a 10.0% rate of return. We needed to hold our discount rate constant to derive the percentage moves and our conclusions would not have changed had we used something slightly higher or lower. However, when it comes to valuing the market (i.e. deriving an index price target) choosing an accurate discount rate is very important. This poses a problem for opining on the value of the stock market. Recall every investor requires a different rate of return. So not only do we have to make a guess or prediction about the market's future cash flows, but we also must estimate the market's discount rate. We have two major unknowns, two chances to err in our estimation of value.

But there is a very eloquent way to handle this problem. Rather than solve for the market's value, we can solve for the market's required rate of return or discount rate. In lieu of calculating a fair market value, we can use today's market value (or price), a known, which captures the collective expectations of the market. The beauty of this method is that it leaves us with only one unknown to estimate, the future level of cash flows.

For our discussion, we will utilize two sets of cash flow assumptions (right). The first set of assumptions reflects analyst estimates of earnings for the next three years. These numbers can best be described as a V-Shaped recovery. The second set of assumptions reflect a deeper and longer recovery period, three years to be specific. In year one (2020), the S&P 500 generates only 70% of last year's earnings, in 2021 85%, and in 2022 100%. The financial media has coined this recovery pattern the "Nike Swoosh." After 2020, we assume a range of perpetual growth rates, i.e. the assumed long-term earnings growth, which mathematically cannot exceed the long-term growth in our economy. The output from this exercise (below) is a distribution of discount rates or the market's implied rate of return, which we can compare to the market's historical returns.

Assumptions: S&P Earnings

	Analyst Consensus "V Shape"	Slower Recovery "Nike Swoosh"
2019 Actual	$ 157	$ 157
2020 Estimate	$ 125	$ 110
2021 Estimate	$ 162	$ 133
2022 Estimate	$ 190	$ 157

Source: Annandale

Output: Market Implied Rates of Return

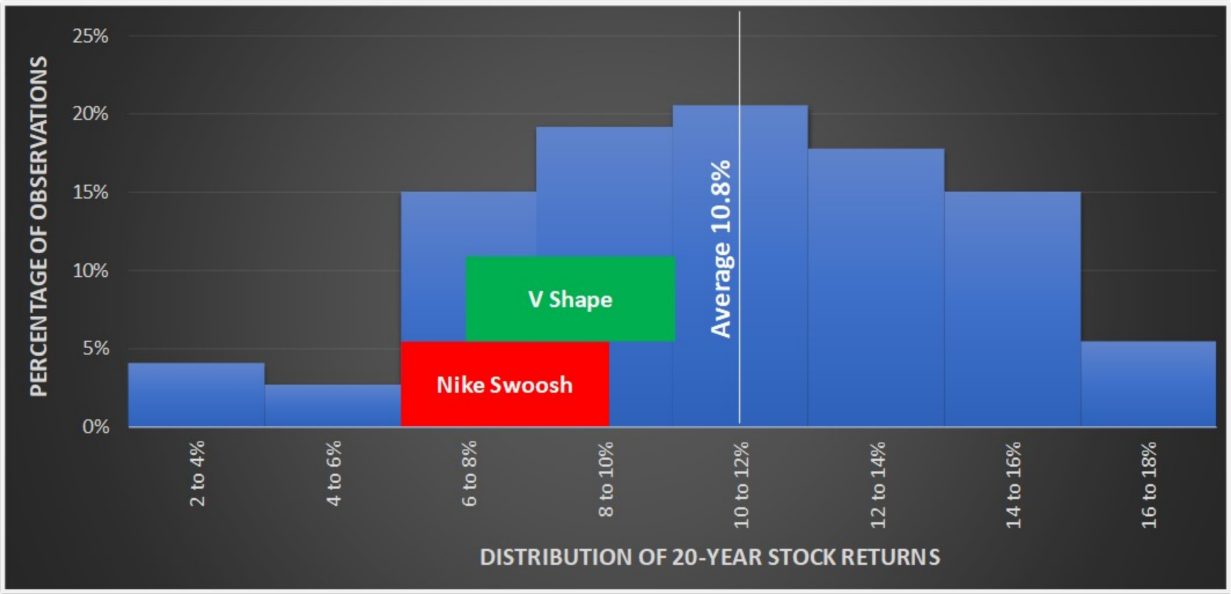
Perpetual Growth Assumption ->	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%	5.5%	6.0%
Analyst Consensus "V Shape"	6.9%	7.4%	7.9%	8.3%	8.8%	9.2%	9.7%	10.1%
Slower Recovery "Nike Swoosh"	6.1%	6.7%	7.1%	7.6%	8.0%	8.5%	9.0%	9.4%

Source: Annandale

As you can see in the table above, the long-term implied rates of return, given our assumptions, vary from 6.1% on the low-end to 10.1% on the high-end. If you forced us to bet, we would argue a slower recovery (i.e the "Nike Swoosh") is more likely and that the long-term prospects for earnings growth are lower given our country's population demographics and the maturity of our economy. That said, we gave you a range of outcomes because we would prefer to be approximately right rather than precisely wrong. Maybe a technological revolution is around the corner that will reinvigorate US productivity levels and, in turn, long-term earnings growth.

To help you contextualize these estimates we have provided a distribution of nominal stock returns over rolling 20-year periods. Dating back to the Great Depression, the worst 20-year return generated by US markets was 2.4% annualized. The best 20-year return was 17.7% annualized, which occurred if you held stocks from 1980 and sold in 1999. The discount rates we derived imply future returns will be below historical averages, but that should be expected given the valuations at which equities trade and the absolute level of interest rates. And for those with a glass half full mindset, long-term returns in the mid-to-high single digits look decent with the universe of investment-grade debt yielding only 1.2%.

Implied Rate of Return Compared to Historical Rolling 20-Year Market Returns

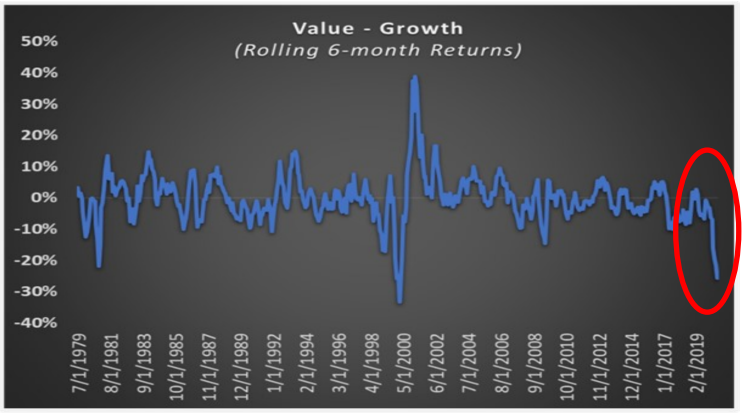


Source: Annandale

The Perfect Storm for Value

Earlier in the commentary, we argued the market's returns were misleading, that the headline returns were not indicative of the median or average stock. Our principal observation was a select group of large stocks was buoying returns at the index level. These stocks fall almost exclusively into a category known as "growth" stocks. For years, there has been a growing chasm between the performance of growth stocks and their counterpart, value stocks. This year, that chasm has widened at an alarming rate, and to be frank, has hampered our equity performance.

Last 6-Months Tied for Worst on Record

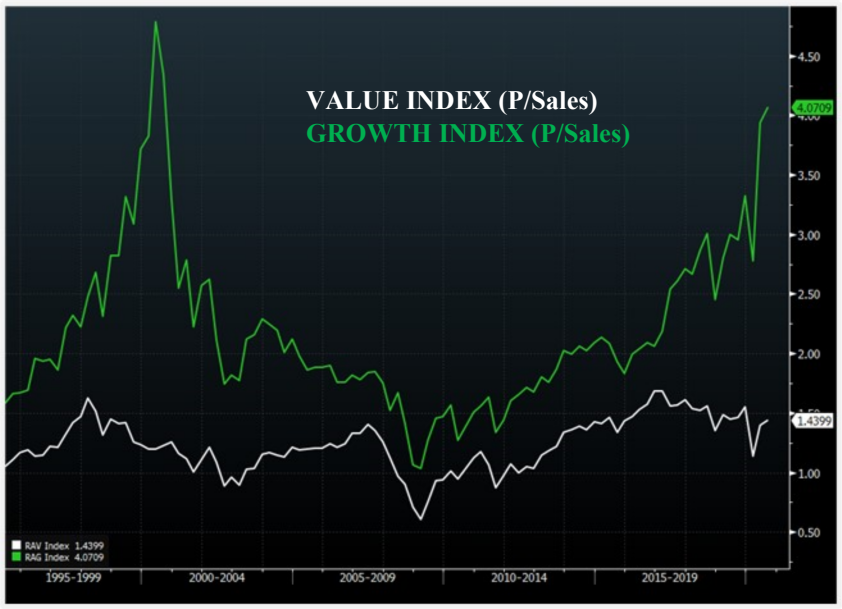


Source: Annandale, Bloomberg

Value stocks, in the academic sense, are those that trade at low multiples relative to their earnings, book value, sales, etc. The sectors and securities that make up this group change over time, but currently, the value indices are heavily populated with bank, insurance, healthcare, consumer, and industrial stocks. Growth stocks represent the other side of the coin, stocks that trade at higher multiples of earnings, book value, sales, etc., and "theoretically" grow faster. At present, the technology sector accounts for 43.2% of the growth index, and of course, it holds the current stalwarts, Apple, Microsoft, Amazon, Facebook, and Google.

Before the year began, our portfolios were tilted towards value stocks because that is where we saw the most opportunity. The universe of growth stocks is generally of higher quality and offers faster earnings growth, but we believe (and still do) that the price is too expensive, even after accounting for these attributes. Conversely, select value stocks had become heavily discounted, and in many cases, investors began pricing in pessimistic outcomes. The spread in relative valuations between the two groupings was already approaching levels last seen during the dot.com bubble.

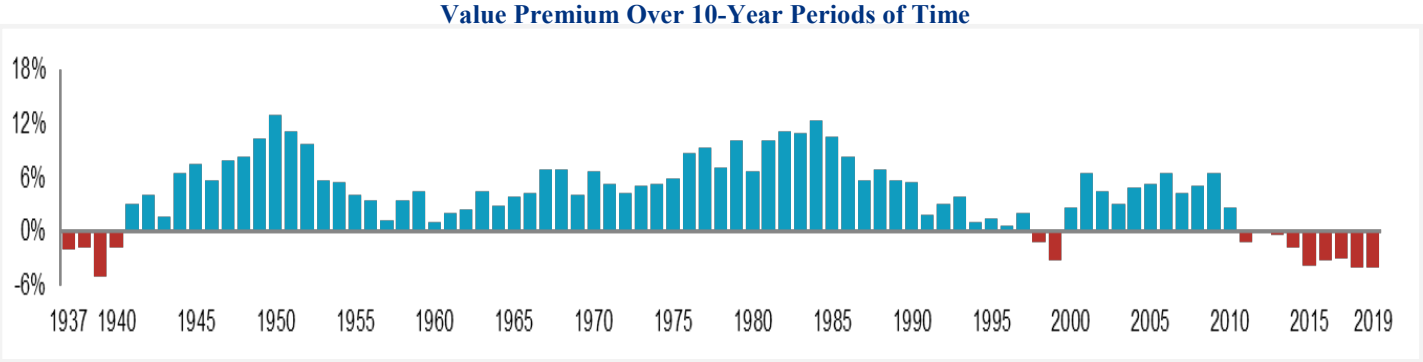
Relative Valuation (P/S) of Growth Stocks Approaches 1999 Record



Then the perfect storm hit, COVID-19, leading investors to sell already inexpensive stocks and buy fully priced growth stocks. Intuitively we get it. The revenues of the average growth stock are less cyclical, and a handful of large growth stocks, like Microsoft, Amazon, and Netflix might benefit from sheltering-in-place. That said, the marginal investor buying these securities seems to be doing so without regard to price.

At present, the index of value stocks trades at only 15.0x trailing earnings, while the universe of growth stocks trades at 37.0x. If you assume both groups paid out 100% of their earnings in the form of a dividend, the index of growth stocks would need to compound earnings, and in turn dividends, 4.0% faster than value stocks to generate the same internal rate of return. This raises the question, how much faster do growth stocks grow? The answer is they do not, at least not in the long run. A wonderful study conducted by O'Shaughnessy Asset Management found that value stocks over 10-year periods have historically grown earnings per share faster by 1.2% per annum. This observation and similar ones regarding dividend growth rates have been documented in multiple peer-reviewed studies. The conclusion is that investors consistently overestimate, and as a result, overpay for high growth stocks. This is why over longer time horizons value has outperformed growth, and it is one of many reasons we currently favor value stocks. While our tilt towards value has hurt in recent years, especially this year, we invest looking forwards not backwards.

Value Premium Over 10-Year Periods of Time



Source: Dimensional Fund Advisors

Conclusion

Looking forward, we see far more opportunities in beaten-down cyclicals (mostly value stocks) than we do in the tech names individuals have retreated to. It is impossible to know when odds will turn in their favor (it may take an economic recovery), but when they do the rewards should be plentiful. Regarding our immediate outlook for the market, your guess is as good as ours. If you polled any random individual in our office, you would likely find a sense of skepticism towards the market's most recent rally. Watching the market fall 33.9% in a matter of only 23 days, and then quickly climb its way back just does not feel right. Statistics about the state of our economy are terrifying, and we take zero comfort that retail investors are rushing into the market. But we also know there is wisdom in crowds, and that in the long-run corporate earnings will continue to grow, making equities an asset we must own. If anything, the actions of late are a great reminder of how hard short-term prognostication is. Who would have predicted the onset of a pandemic? Who could have foreseen the magnitude of monetary and government stimulus backstopping our economy? And above all, who would have guessed hordes of small investors would flood the market when over 18 million Americans are unemployed?

As always, thanks for the trust and confidence you have placed in us.

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