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RAGHAVENDRAN SIVARAMAN, PH.D., CFA

Head of Systematic Strategies

REGROUP, REFRAME, RECOVER

Plotting a Course in the Post-Pandemic Environment

In the first quarter, coronavirus concerns crashed the bull market, and extreme volatility made another visit. Amid the gyrations, we observed some changes in factor leadership — quality held up relatively well during the crash, and value outperformed in the bounce back. The course of the contagion is the biggest source of uncertainty, so predicting the timing of a market recovery may be hard. But we highlight some lessons that will be useful in an eventual post-pandemic recovery.

From 2016 into this quarter, the U.S. stock market had been an unstoppable train. It chugged ahead as investors brushed off every concern — trade wars, interest rate increases, yield curve inversion, impeachment, etc. It looked like it would never run out of steam. But, in the coronavirus pandemic it found an immovable object standing squarely in its tracks. This analogy of a crash seems particularly appropriate given the drastic rate at which the equity markets sold off. The S&P 500 Index dropped nearly 35% from its February highs before bouncing back to regain some of its losses. The month of March edged out October 1987 to become the most volatile month for the S&P 500, with an average move of nearly 5% a day.

In addition to the coronavirus outbreak, the markets were also roiled by the breakdown of negotiations on oil production between Saudi Arabia and Russia. This effectively turned into a "war", with the Saudis flooding the market with additional supply. The price of Brent crude dropped from close to $60 in mid-February to the low 20s at the end of the quarter.

The return of volatility brought along some unusual activity. Gold, normally a safe haven when stock markets underperform, moved down in sync with the markets. As U.S. stocks continued to fall, U.S. bonds slid with them for a period, causing risk parity strategies that try to benefit from diversification across asset classes to have one of their worst months. Finally, the CBOE Volatility Index (VIX), which normally moves in the opposite direction to stock markets, also had many days moving in tandem with stocks. These events underscore the speed at which different asset classes had to assimilate information, causing a temporary breakdown in normally observed relationships.

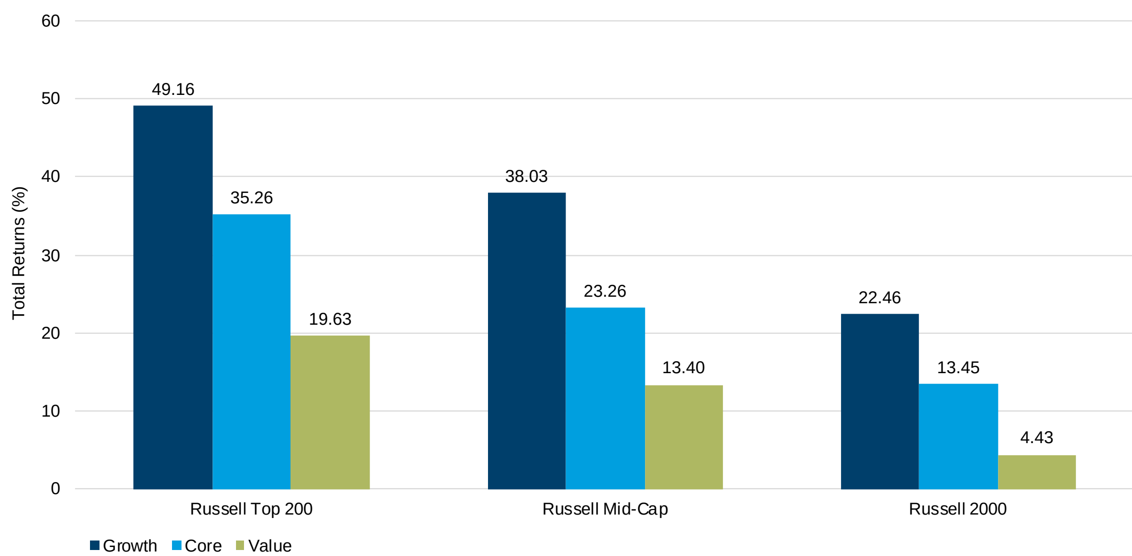
Stocks moved up from their lows to finish the quarter higher, but it is possible that they may break through their lows before a sustained recovery takes hold. The biggest uncertainty comes from the course that the virus will take, the amount of damage it will cause and the time it will take to get to the downward sloping side of the infection curve. A significant portion of the U.S. and global economy has been shuttered, and we have seen the havoc this has wreaked on the labor market in the recent weekly employment numbers. We will see earnings fall in the next quarter or two, and the increased uncertainty about future earnings and cash flows will justify an increase in the discount rate, which will keep multiples down. Given the political focus on prohibiting buybacks as a condition of fiscal support, the markets will not have what had been both a tailwind to the bull market and some resistance to downward price pressure before the crash.

But sooner or later, there will be a recovery. When that phase of the economy and stock market comes, we believe investors would benefit from reminding themselves of the following:

1. This crash could trigger a change in leadership

The last two years of the previous bull market was a very challenging period for value stocks. Large growth stocks were the leaders in that market (Exhibit 1).

Exhibit 1: Large growth stocks led the market

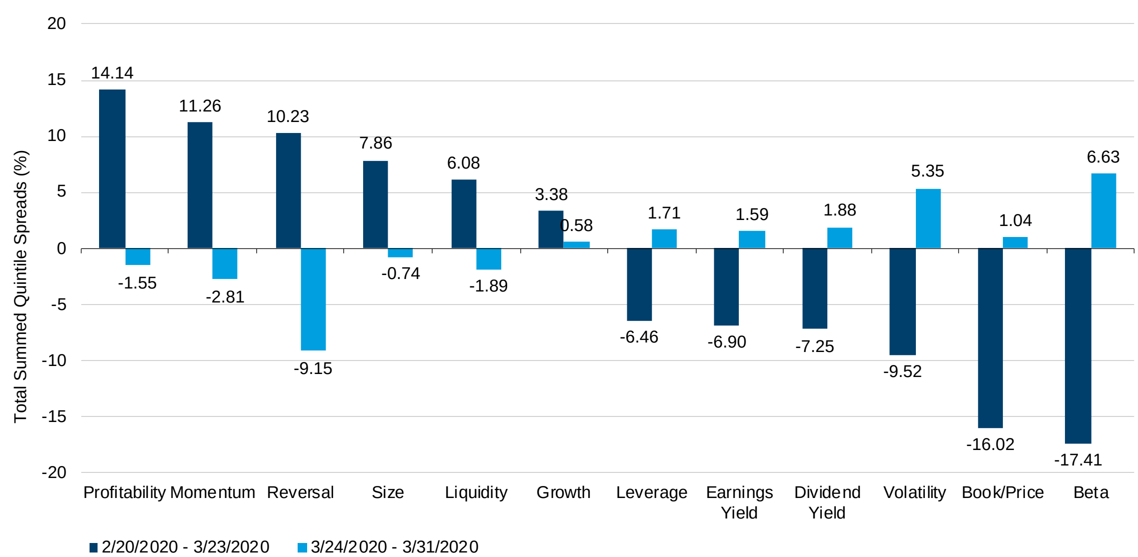


Source: Bloomberg; Period: 01/02/18-02/29/2020. **Past performance is not a guarantee of future results.** It is not possible to invest directly in an index. FTSE Russell indices are rebalanced annually.

During the precipitous market drop that began on February 20, value continued to underperform and growth continued to outperform, as many of these companies were technology companies with smaller potential revenue loss in a social distancing economy. At the same time, we also observed that companies with higher profitability and stable earnings were relatively resilient — quality worked. Finally, in the last week of March, as the market bounced back, value factors led the way up (Exhibit 2).

Exhibit 2: Flight to quality during the crash, and the return of value in the recovery

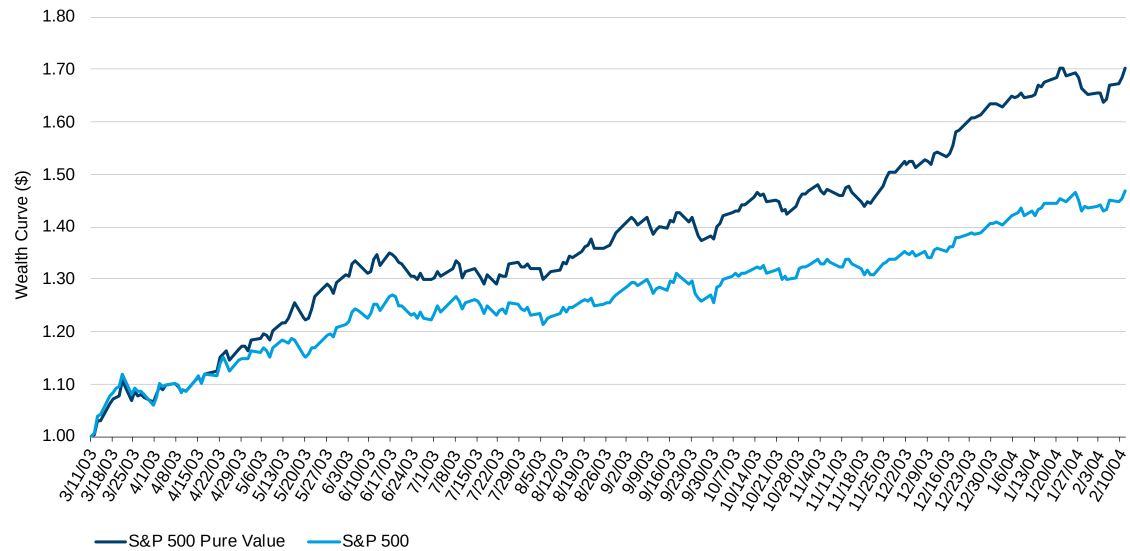
Total summed quintile spreads for Aladdin risk factors in Russell 1000



Source: Columbia Threadneedle Investments; BlackRock; FTSE Russell; Russell 1000 universe; Daily rebalancing; Square root of market value weighted; Top 20% - Bottom 20%; Sector neutral; Daily spreads are summed to compute the subperiod total spreads.

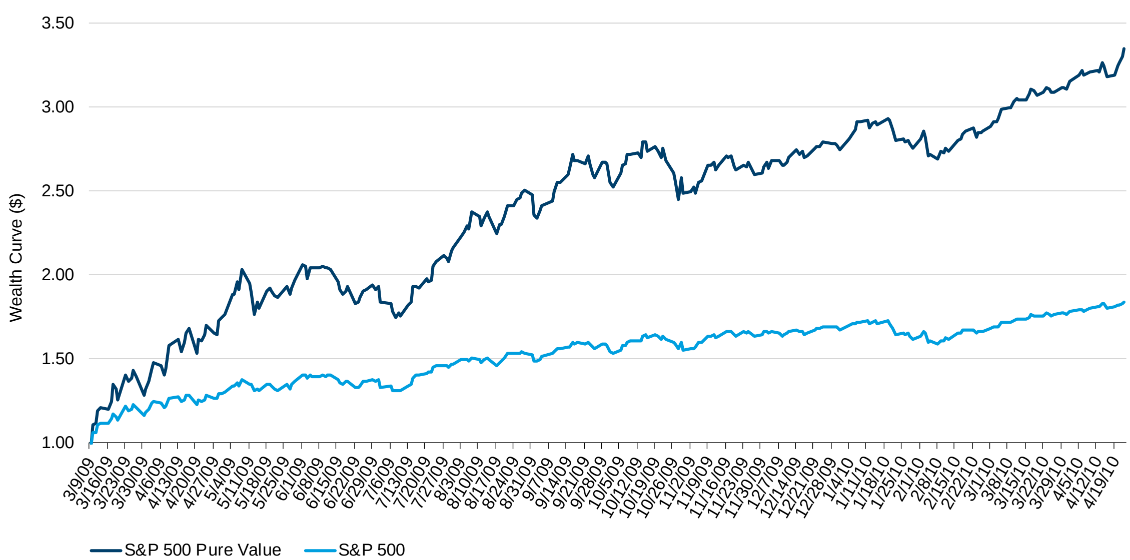
Historically, quality performs well during downturns as investors rush to safety. Eventually, when the dark clouds recede, there may be a risk-on rally (like we saw in March 2009) that rewards beta and volatility factors. But during the sustained recovery period that comes after large market downturns, value has usually outperformed. In the periods after the tech bubble, starting April 2003, and after the financial crisis, starting April 2009, we see that returns to the "pure" value portfolio were positive and in sync with the market (Exhibits 3 and 4). As many of the cheapest stocks after a crisis come with a lot of additional unintended factor exposures, it is instructive to look at this index portfolio that is constructed to diversify away all other factor exposures. Also, we are coming off a long period of value underperformance, and valuation dispersion is also historically high, so this may particularly be true this time.

Exhibit 3: Value led during the start of the sustained recovery after the TMT bubble



Source: Bloomberg. The S&P 500® Pure Value index is a style-concentrated index designed to track the performance of stocks that exhibit the strongest value characteristics by using a style-attractiveness-weighting scheme. The Pure Value index is a subset of the S&P 500 and is produced by S&P Dow Jones Indices. **Past performance is not a guarantee of future results.** It is not possible to invest directly in an index.

Exhibit 4: Value led during the start of the sustained recovery after the global financial crisis



Source: Bloomberg. The S&P 500® Pure Value index is a style-concentrated index designed to track the performance of stocks that exhibit the strongest value characteristics by using a style-attractiveness-weighting scheme. The Pure Value index is a subset of the S&P 500 and is produced by S&P Dow Jones Indices. **Past performance is not a guarantee of future results.** It is not possible to invest directly in an index.

To benefit from this historical perspective in an upcoming recovery, there will be a challenge — how will one appropriately estimate "value"? Some companies would have permanently lost some sources of revenue, and others may face an extremely delayed return, so that using past earnings and cashflows will likely be inaccurate for individual companies. Overcoming this challenge requires either an astute analysis of companies' prospects in a post-pandemic world or investing in a broad diversified basket of value stocks.

We discussed factor leadership here, but it is more generally true of industries, groups, themes, etc. that will lead the recovery.

2. Avoid anchoring to prepandemic highs

Anchoring is a behavioral bias where one assigns unduly high importance to a single observed price point in all subsequent analysis of the utility or value of the item. As investors observing and analyzing the price of stocks, we should constantly remind ourselves that the price at which a stock trades at any moment is an imperfect estimate of its value, irrespective of whether one likes the stock or not, and whether the company's prospects are attractive or not. This is particularly true of market peaks at the end of a prolonged bull market.

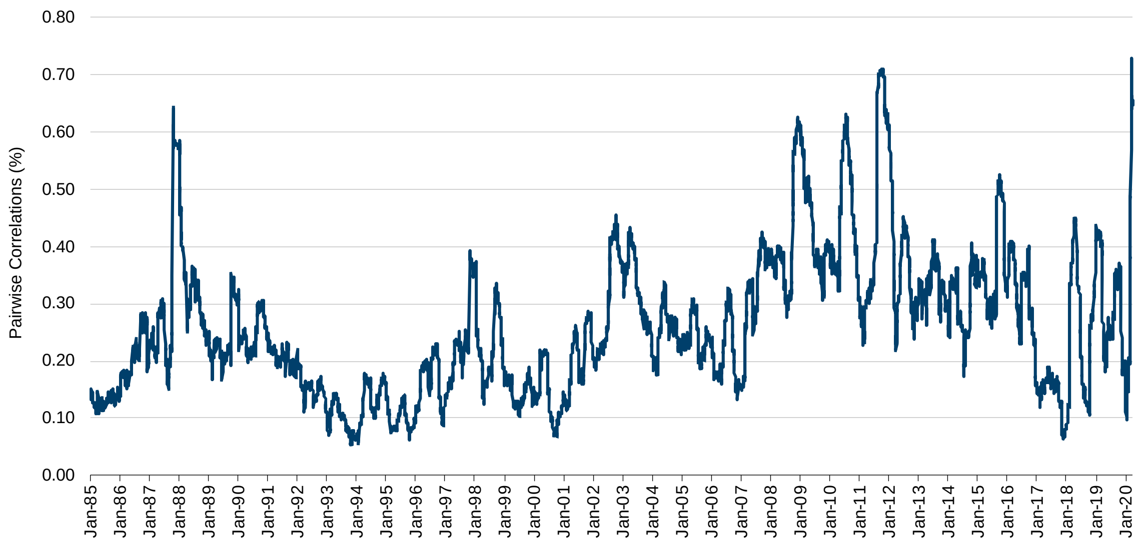
A long period of above average market returns creates excesses, and its beneficiaries are often spread unequally and sometimes undeservedly. Like a parent playing favorites with her children, a long bull market bids up its favorite stocks, and lets others languish even as they get close to straight A's in their quarterly earnings tests. There are countless examples of stocks in past crises that never regained their precrisis high during the recovery or any time after. Obvious examples are many technology stocks prior to the TMT bubble and some of the most prominent banks prior to the global financial crisis. This precrisis misvaluation could be true to varying degrees for a great many number of stocks.

As we analyze which companies have the best prospects in the post-pandemic world, we should avoid anchoring to the stock prices we saw at the peak. The past price of a stock or its peak multiples will be less relevant than its future prospects, as well as the state of the markets and the economy.

3. Risk management in a high-volatility environment

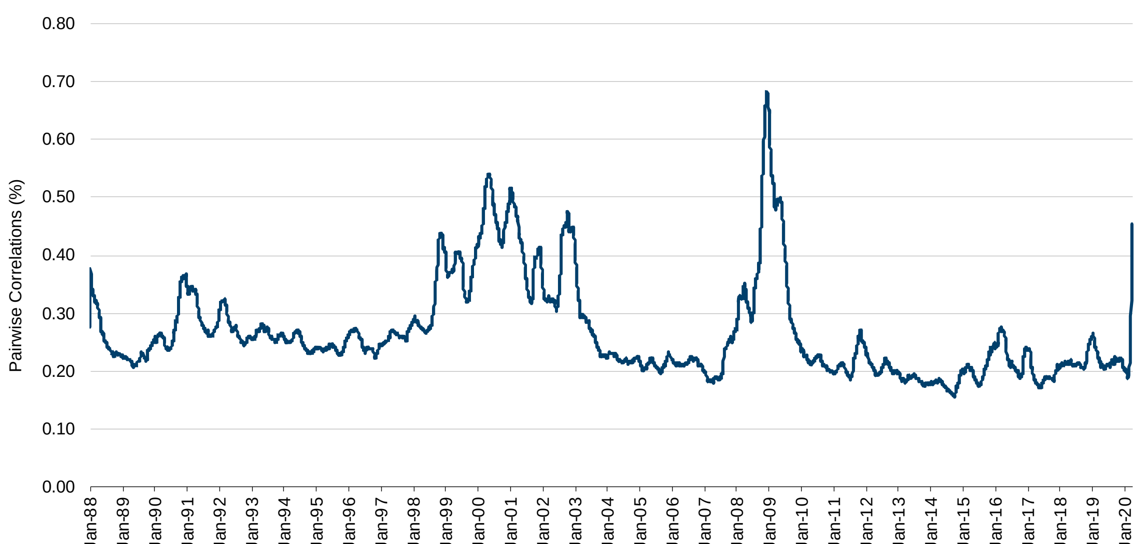
The sudden crash increased volatility significantly, both at the market level and at the individual stock level. The VIX Index, a measure of short-term expected market volatility, which remained in the teens for most of the last year, suddenly shot up to a high of 84 and settled in the still historically high mid-50s at the end of the quarter. In March, the short-term average pairwise correlation of the stocks in the S&P 500 shot up to above 70%, a level not seen in the last 35 years (Exhibit 5). While stocks' idiosyncratic risk — price movements attributable to factors unique to the company — have increased (Exhibit 6), a much larger share of increased volatility in stocks has come from the panic in the overall market.

Exhibit 5: Average pairwise correlation in the S&P 500 reached a high not seen in 35 years.
Rolling 3-month pairwise stock return correlations



Source: Columbia Threadneedle Investments; S&P Global; Correlations are computed using rolling 63-trading day daily stock returns for each stock pair. The average is over every stock pair in the S&P 500.

Exhibit 6: Idiosyncratic volatility of stocks is up, but not near peak levels of previous crises
Rolling 3-month pairwise stock return correlations



Source: Columbia Threadneedle Investments; S&P Global; Idiosyncratic risk is the volatility of the residual stock return after stripping out the returns from market beta. The average is over all S&P 500 stocks.

For active managers, this means that the tracking error of their portfolios has likely gone up significantly in a short period of time. If we expect this high-volatility environment to last for a while, there is an increased chance that their portfolio returns will vary more significantly from their benchmark. Individual names will now each contribute more to the overall risk of the portfolio. This contribution is the product of the size of the bet, the volatility of the stock and its correlation to the rest of the portfolio. As volatility and correlations have shot up, so will any individual stock's contribution to overall risk. Spreading bets over more names will help further diversify away the portfolio's idiosyncratic risk, but given that systematic risk lurks unevenly among names in a benchmark, this will still be a substantial part of the portfolio's active risk.

Finally, for portfolio managers using risk models to help them construct portfolios, there is additional risk from the models themselves. Like any other model, risk models can get things wrong in certain environments. As most risk model estimates are based on recent historical data, periods of high volatility that follow a long period of sanguine markets tend to be a particularly hard time for these models to get it right. Managers, while continuing to use these risk models as a guide, should ensure their portfolios have "fundamental" diversification — stocks that will trade differently in the future because they are levered to different combinations of economic, geopolitical, market, public health and business outcomes.

Diversification does not assure a profit or protect against

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