ARE FINANCIAL MARKETS AHEAD OF THE ECONOMY?

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...And should they be?

The S&P 500 has now rallied more than 35% off its March low. For some, considering the current economic data cataloging the wreckage of the coronavirus-induced economic shutdown, the move appears to defy common sense. It has prompted many to ask whether financial markets are ahead of the economy, and whether they should be. At the risk of spoiling the end, the answer to the first question is yes! The next question is, should they be? Again, the answer is yes! And the subsequent question should be, what economic scenario are financial markets anticipating (discounting into future cash flows)?

It is generally accepted that investors discount, or take into consideration, all available information including present and potential future events. This means security (bond and equity) prices reflect significant amounts of expectation about company earnings, defaults, inflation, and monetary and fiscal policy. A consequence of ultra-low interest rates and bond yields is that the proportion that longer term expectations contribute to current security prices is potentially higher than they traditionally would be in a higher rate regime.

While it's arithmetically correct that current security prices largely convey forward-looking expectations, they also reflect views about the current robustness of corporate liquidity and balance sheets, or the stability of the financial system generally. Admiring a building without understanding the strength of its foundation is folly.

The valuations of companies listed on the world's stock exchanges are often multiples of those companies' expected annual profits. The chart below shows the range of price-to-earnings (P/E) ratios investors have been willing to pay in various markets over multiple years. As the P/E ratio is never 1, investors appear willing to consider multiples years into the future (Exhibit 1).

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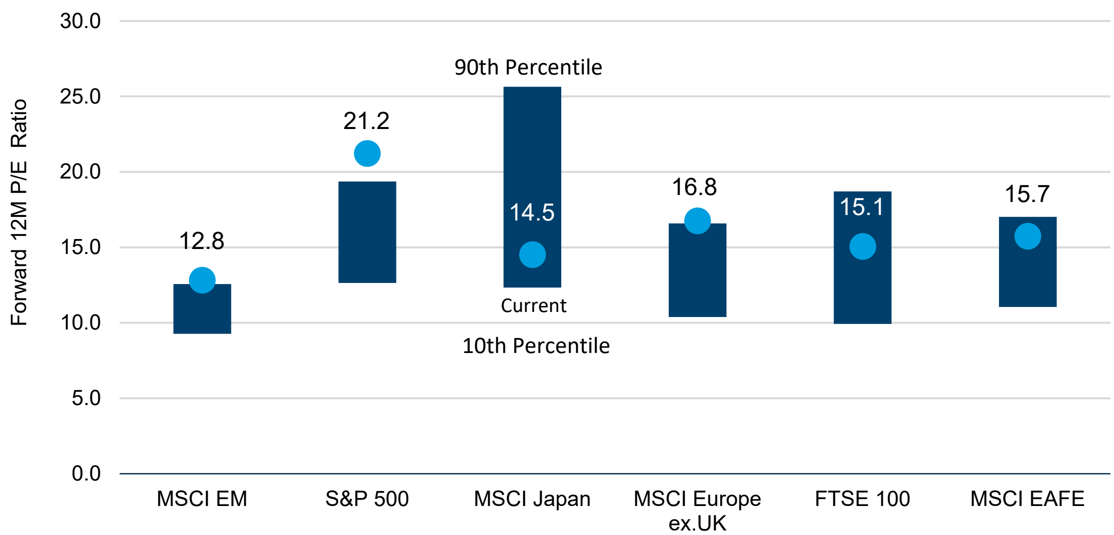
Exhibit 1: Current equity market valuations
Last 20 years: 90th percentile/10th percentile and the current forward 12 month P/E

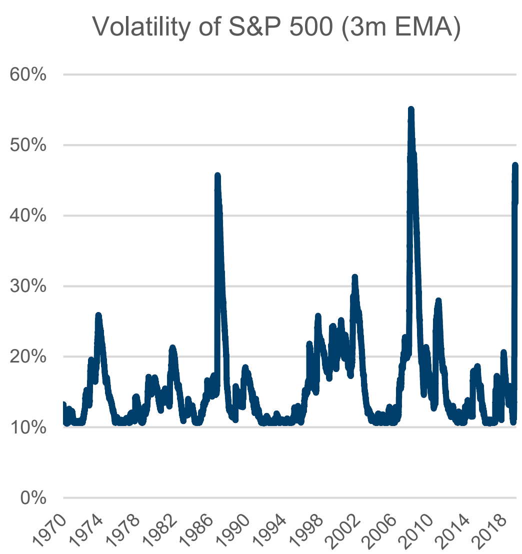


Source: I/B/E/S and Columbia Threadneedle Investments. The bar represents the 10th to 90th percentile range of forward twelve-month price to earnings (P/E) multiples over the past 20 years (through May 31, 2020) in each of the indices indicated. The dot represents the 12-month forward P/E multiple as of May 31, 2020.

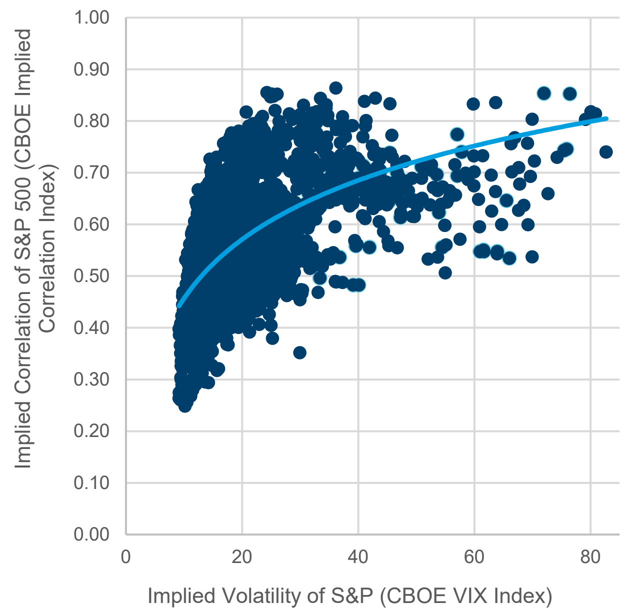
When unexpected, major developments occur, investors tend to move rapidly, attempting to incorporate the new information into security prices. The efficient market hypothesis assumes that investors as a group (the market) are a very efficient discounting mechanism. If efficiency is defined as the speedy consideration of all new, public, accurate information, then I agree that markets are efficient. As an example, when an individual company publicly announces new profit forecasts, the possible range of interpretations by investors is relatively narrow, so the adjustment to the valuation of related securities is fast and accurate. However, in a more complex situation, such as a global pandemic or worldwide financial crisis, investors act quickly, but there are a wide range of interpretations—both short and long term. Social media has facilitated a vast increase in the speed and amount of opinion and theory (though not necessarily facts) that are circulated. Consequently, it is less clear that the initial market reaction is an accurate reflection of the eventual consequences.

The speed of reaction is clear. The rapid rise in volatility, coinciding with the emergence of major unexpected events, is evident in the charts below (Exhibit 2). Technically, volatility is a statistical measure of the dispersion of returns of a security or market index over time. Practically, it is a barometer of investor uncertainty over the immediate and longer term implications. As my colleague Toby Nangle (Global Head of Asset Allocation) notes, "In the current crisis, how much of the decline in equity markets or the jump in corporate bond yields was associated with an informed rise in investor expectations of the future (deteriorating economic conditions, worsening credit metrics and rising default rates), and how much was associated with contemporaneous financial market liquidity distress that central banks have sought to offset? The two are interrelated and the allocation of causation cannot be answered easily. However, if risk premia are high because they are pricing the future collapse in economic activity that will cause businesses to declare bankruptcy en masse, security prices may very well be rich. While if risk premia reflect simply the brokenness of the financial system, there may be opportunities for medium-term investors. Because while central banks cannot obviate default risk, they can fix a broken financial system—it is part of their mandates and they have unlimited firepower at their disposal."

Exhibit 2: Volatility shocks arise quickly but can also dissipate quickly



Source: S&P Global; Columbia Threadneedle Investments; from December 31, 1970 through May 27, 2020. Exponential moving average (EMA) places a greater weight on the most recent data points.



Source: Chicago Board Options Exchange; Columbia Threadneedle Investments. Based on values for the period 1/1/2007 – 5/28/2020. Each dot represents a daily value. The CBOE VIX Index is a measure of equity market volatility. The CBOE Implied Correlation Index is a measure of the average correlation of the stocks that comprise the S&P 500 Index.

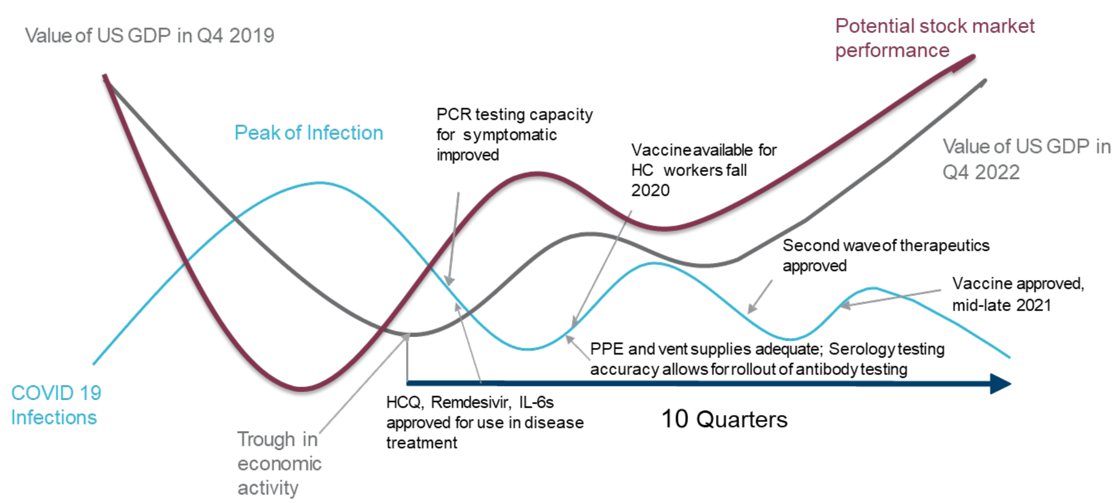
Note the speed of increase in volatility and the subsequent decline in the chart on the left above. The fast, initial response appears to reflect the level of surprise and the initial perception of the scale of the issue as it emerges. The slower decline in volatility appears to reflect time taken for consensus to emerge over the eventual outcome.

Equity market indices do not fully reflect the range of activities in the broad economy but over time we expect markets to generally move in the same direction as economic data. After all, companies (and their revenue) do not occur in a vacuum. When global economies are growing, more goods and services are sold, enhancing corporate revenues and creating the circumstances that tend to foster stock and corporate-bond appreciation. In contrast, if there's a downward trend in the economy, there is a chance that the stock market will follow suit.

However, because of the concept of discounting, financial markets may rise when there's an expectation of future economic growth, even if the current situation is dire. Investors experienced this phenomena when the stock market crashed due to the global financial crisis in 2008 but began recovering in 2009 before the economy recovered.

As noted above, investors tend to have imperfect foresight when the range of future outcomes is uncertain. The stylized chart below shows our assumptions on how the U.S. economy is most likely to recover from the COVID-19-induced economic recession. A critical element of the chart is our assumptions, informed by our healthcare research team, about developments in healthcare that will enable normalization of economic activity in aggregate. The red line illustrates how we believe the stock market will move in anticipating these economic and healthcare changes. The key point is that the market moves in advance of the economic and healthcare advances, not concurrent with them.

Exhibit 4: The interplay of infection and economic activity

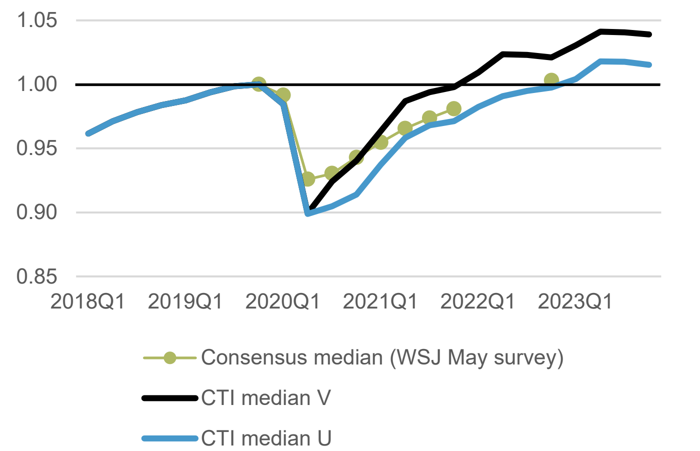


Source: Columbia Threadneedle Investments, as of June 2020.

Financial markets are, and should be, anticipating the size and growth rate of global economies in 2021 and 2022 rather than focusing on dire current economic reports that are backward-looking. In order to develop and test our recovery hypothesis, in addition to broad economic assumptions, Columbia Threadneedle will focus its macro research on the outlook for other specific factors including, but not limited to, inflation and consumer spending preferences. While aggregate demand may recover, it is vital to understand whether there will be permanent changes to what consumers purchase. Meaningful forecasts must also include a deep understanding of current corporate financial strength as well as future revenue and profit growth and the health of local authorities.

Once formed, we can test our economic/healthcare recovery hypothesis against the actual pace of economic recovery, and consequently frame the implied expectations embedded in the U.S. equity market. Using the S&P 500 Index as a proxy for the U.S. stock market, investors appear to be increasingly confident of one of two economic scenarios (either a V- or U-shaped recovery scenario) and the key assumptions on healthcare that accompany them. At Columbia Threadneedle, we attach the highest probability for the path of the U.S. economy to the stylized U shown above, although the probability attached to a slower L recovery is material. However, we are less optimistic about Europe where we attach the highest probability to the L-shaped recovery.

Exhibit 5: U.S. stylized economic growth scenarios and probabilities

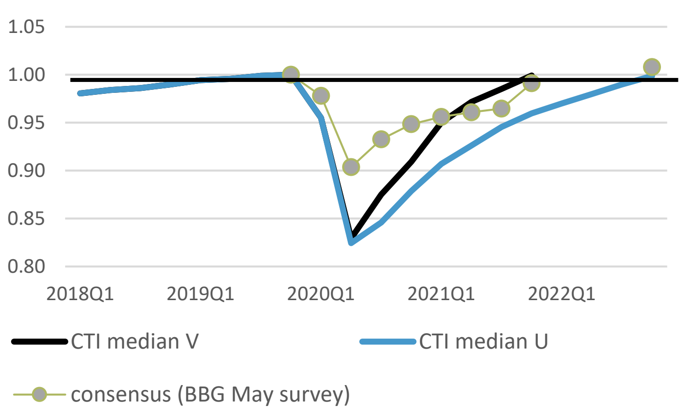


Source: Columbia Threadneedle Investments (CTI); Wall Street Journal. The Wall Street Journal surveys more than 60 economists on major economic indicators on a monthly basis. Y-axis is the level of GDP and 2019Q4 level = 1. CTI median represents an internal survey of investment strategists.

CTI U.S. Recovery Scenario Probability			
Date	**V**	**U**	**L**
13-Apr-20	13%	58%	29%
20-Apr-20	11%	56%	33%
27-Apr-20	10%	57%	33%
4-May-20	8%	58%	34%
11-May-20	4%	59%	36%
18-May-20	4%	59%	36%
25-May-20	4%	59%	36%

Source: Columbia Threadneedle Investments; represents probability of shape recovery based on weekly internal surveys of investment strategists.

Exhibit 6: Euro Area stylized economic growth scenarios and probabilities



Source: Columbia Threadneedle Investments; Bloomberg (BBG). Bloomberg surveys 70 of the nation's economists on their economic and interest rate outlook on a monthly basis. Y-axis is the level of GDP and 2019Q4 level = 1. CTI median represents an internal survey of investment strategists.

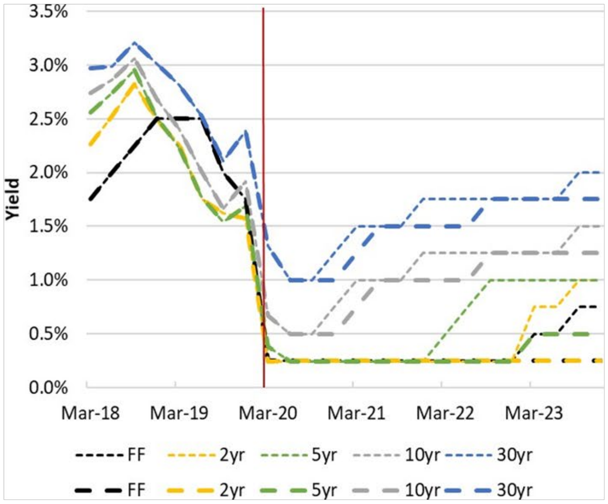
CTI Euro Area Recovery Scenario Probability			
Date	**V**	**U**	**L**
20-Apr-20	7%	46%	48%
27-Apr-20	6%	41%	53%
4-May-20	5%	42%	53%
11-May-20	2%	44%	55%
18-May-20	2%	44%	55%
25-May-20	2%	44%	55%

Source: Columbia Threadneedle Investments; represents probability of shape recovery based on weekly internal surveys of investment strategists.

Given these relatively modest probability adjusted assumptions for the path of economic recovery in the U.S. and Europe, Ed Al Hussainy, Head of Macro Research, forecasts that there will only be modest rises in interest rates and bond yields in both regions.

Exhibit 7: U.S. policy and Treasury curve expectations

US Policy rate and curve shape forecast under V- shaped and U-shaped recoveries

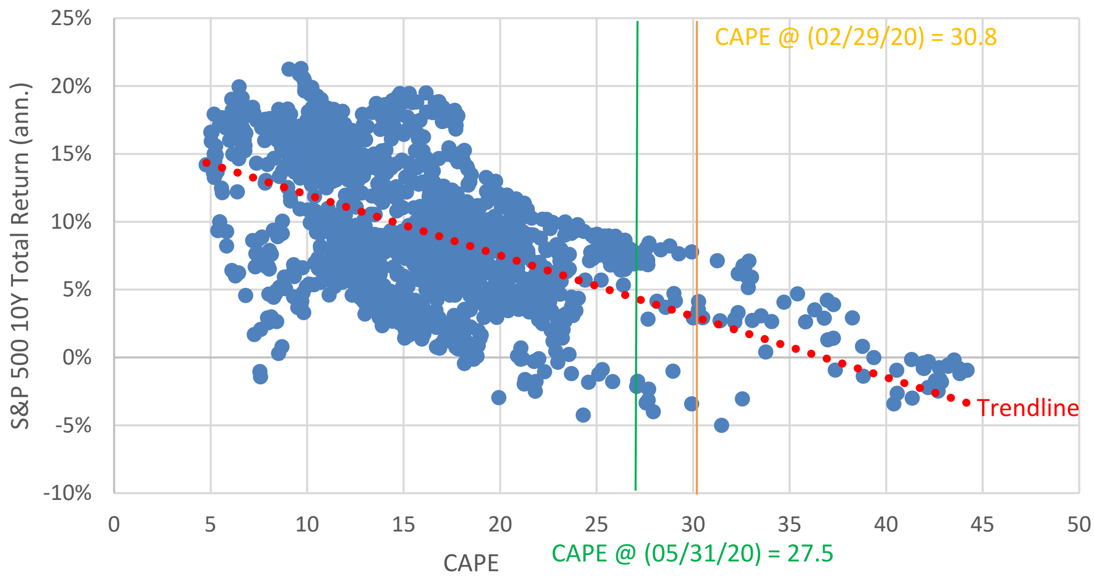


Source: Columbia Threadneedle Investments, as at April 2020.

- US Treasury curve forecasts reflect different economic expectations and policy expectations.
  - The curve is an important policy tool.
- V-shape is dotted lines, U-shaped scenario is dashes.
- FOMC retains zero interest-rate policy until Q1 2023 in V-shape, beyond 2023 in U-shape.
- 10-30yr US Treasury yields begin rising in Q3-4 2020 in V-shape; 2021 in U-shape.
- Front end of the curve is anchored for several years.

Regardless of the path of economic and financial market recovery from COVID-19, we must not forget that, prior to the pandemic, developed economies were in a long-term trend of relatively low growth caused by multi-year trends in demographics, high debt levels, etc. The pandemic may affect some trends on consumer spending, corporate globalization, higher debt levels and public policy initiatives, but it is unlikely to accelerate aggregate demand from the trend of the last few decades. If we combine the long-term economic outlook with a relatively high starting point for equity-market valuations (based on the cyclically adjusted P/E ratio (or CAPE), a measure created by John Campbell and Robert Shiller), then expected market returns may be modest compared to history. In the chart below, we can see that the CAPE was at 27.6 in early May; based on this value, forward 10-year returns on the S&P 500 have generally been below 10% and negative in some cases. We expect average returns over the next 10 years of 4% to 6% within a range of -2% to 8%.

Exhibit 8: Cyclically adjusted price earnings ratio (CAPE) vs. and 10-year forward total returns

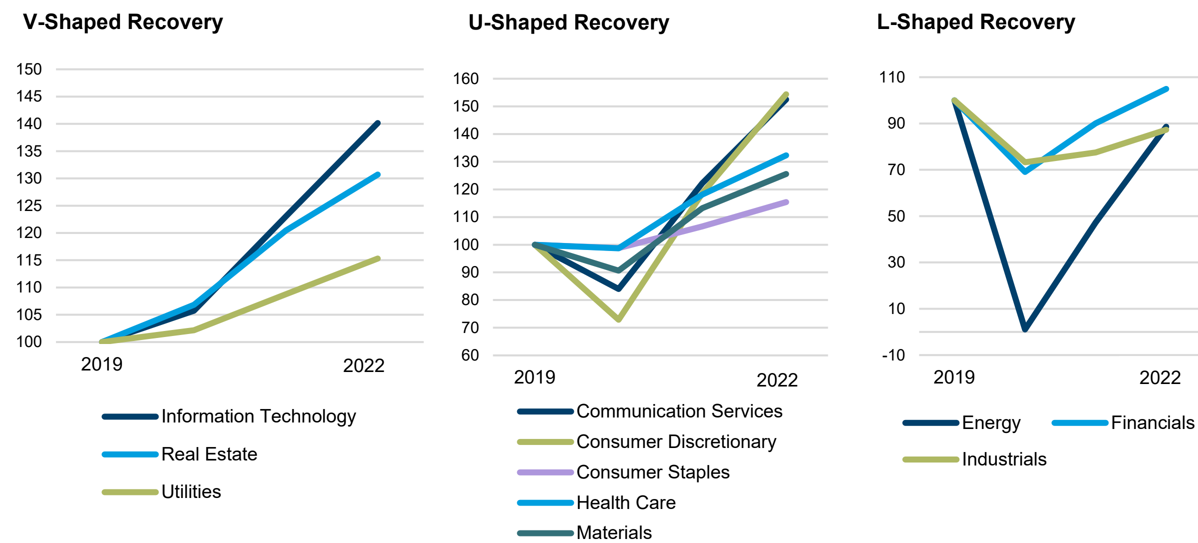


Source: Columbia Threadneedle Investments; Robert Shiller/Yale University.

However, broad market valuations can be deceiving. According to Empirical Research, "Big growers, the 75 large-cap stocks with the very best all-around growth credentials, are now trading at almost five times the market's trailing-P/E on an equal-weighted basis, a valuation last seen in December 1999. They've had an extraordinary pandemic, outperforming the market by double-digits on the way down and again on the way back up." Therefore, perceptions of market performance and valuation may be skewed by investor admiration for companies with visible growth prospects in a growth-starved world, rather than an abundance of optimism about the recovery from COVID-19. Consequently, in a U-shaped recovery, the distortions created by this skew may create greater opportunity for security selection outside these few large-cap stocks.

The charts below show that investors have differentiated in considering the future of different industries/sectors. Clearly, investors have taken a view of how the economic recovery from the pandemic-induced shutdown will affect different industries' earnings recovery, with some fitting into each of the U,V, or L scenarios. When disaggregated this way, investors appear to be acting more rationally than some observers focusing on the market averages are indicating.

Exhibit 9: S&P 500 implied recovery by industry (based on EPS estimates)



Source: Bloomberg Consensus, CTI Research

Investors may be too optimistic about which industries will experience a faster recovery, but there appears to be as much opportunity to rebalance views within the market as there is a need for market averages to fall materially.

Conclusion

The future is capricious, which is why forecasting is very hard and partly why financial markets exist in the first place. We should expect markets to try to anticipate complex future events but experience additional volatility as those expectations change with events. An irrational market would be one that does not attempt to discount the future.

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