QUARTERLY INVESTMENT OUTLOOK AND REVIEW

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Summary and Major Conclusions:

News of the collapse in quarterly GDP and company profits is almost certain to proliferate in the media. It is important for investors to understand that the depth of declines in quarterly GDP and company earnings is of little enduring relevance, simply because these data are temporary, artificial, and unsustainable. What is important for investors is the level of GDP and corporate profits in the fourth quarter of this year and throughout 2021. The equity market is a classic leading indicator and anticipates major events. The key message for investors is that the bear market in stocks will end well before the release of dismal Q2 data in July.

- The first quarter decline in the S&P 500 was among the worst of the past century, with a negative total return of 19.5%. The world equity index (excluding the US) registered a negative total return of 23%. The current equity market crash was the fastest in modern history.
- There were striking divergences within the domestic equity market, with the Russell Value Index (-27.5%) suffering far worse declines relative to the Russell Growth Index (-14.5%). The total return on small-capitalization stocks was a negative 30%.
- There were also notable divergences within bond markets: Investment-grade bonds posted a positive return of 3.2% in the quarter, led by US Treasuries; corporate bonds declined, including both high-grade (-3.7%) and high-yield (-12%) bonds.
- The outlook for both the global pandemic and world economy continues to deteriorate. With respect to COVID-19, the US has entered the eye of the hurricane, as measured by confirmed new cases. Maximum infection levels are expected to be reached in April before trailing off in the summer months.
- Similarly, the US economy will likely suffer its maximum pain in May and June, as measured by declines in aggregate spending and output. Assuming an improvement in public health in June, an economic recovery could begin in July or August. The steepest decline in corporate earnings is also likely to occur in the second quarter.
- The most important basic investment principle is that the equity market is a classic forward-looking indicator — a highly consistent and reliable discounting mechanism. Stock prices do not wait for announcements of important events but rather anticipate relevant developments well in advance of the news.
- Historically, the stock market leads the economy by three or four months, both on the downside and on the upside. The vicious 2008 equity bear market ended in March of 2009, three months in advance of the end of the recession in June. The equally vicious 2001 bear market ended four months prior to the subsequent bull market.
- This requires a careful and rigorous exercise of "connecting the dots" regarding relevant information associated with the economy, government policy, and corporate earnings. Currently, the most important of these dots involves a decisive peak in the number of confirmed new coronavirus cases in the US and Europe, especially Italy.
- Other vital signals to monitor include *real-time indicators* such as business surveys regarding hiring intentions and plans for capital investment. The monthly survey of homebuilders is also an accurate assessment of housing market conditions. Finally, airline bookings and openings of retail stores and restaurants are also useful.

- On the economic front, investors should monitor risk spreads in the credit markets; initial and continuing weekly jobless claims; consumer confidence surveys; port traffic; the new-orders-to-inventory ratio; and rail car loadings.

- News of the collapse in quarterly GDP and company profits is almost certain to dominate the media. It is important for investors to understand that the *depth* of declines in quarterly GDP and company earnings is of little enduring relevance, simply because these data are temporary, artificial, and unsustainable.

- What is important for investors is the level of GDP and corporate profits in the fourth quarter of this year and throughout 2021 and 2022. Of greatest relevance are the *normalized,* or cyclically adjusted, corporate profits and their *sustainable growth* rate over the next three years.

- Since 1945, there have been three equity bear markets of 50% or greater. Each occurred during the three longest recessions since the 1930s with an average duration of nearly 18 months, greatly exceeding that of the median recession.

- Since 1908, there have also been three very brief equity bear markets that persisted for only three months or less. These include the bear markets of 1980 (two months), 1987 (two months), and 1990 (three months). Similar to GDP, the current equity market decline is likely to be *steep but brief*.

- My proprietary *equity valuation model* estimates that the prospective total return for the S&P 500 could exceed 12% over a three-year time horizon. This compares with an average implied return of 3% to 5% during much of the previous two years.

- The history of equity bear markets reveals that deeply oversold conditions, depressed equity valuations, and extreme pessimism are necessary but not sufficient conditions for a market bottom.

- An ultimate bottom in stocks awaits clear improvement in the trend of new COVID-19 cases; evidence that the Federal Reserve has restored credit markets to normal functioning; and an open-ended fiscal plan aimed at the root cause of the crisis, namely the severe disruptions in cash flow for small businesses and households.

- The $2.2 trillion rescue package passed by Congress is unprecedented, but is unlikely to be of *sufficient magnitude* to effectively limit rising layoffs and bankruptcies. It is imperative that workers remain attached to the labor market.

- Financial markets are unlikely to stabilize until there is evidence of effective *execution* of the multitrillion-dollar transfer of government funds to businesses and workers, along with preliminary signals of a successful restarting of the economy.

- The outlook for the fixed-income market is mixed. Corporate bonds should easily outperform government bonds over the next several years. Similarly, common stocks should easily outperform bonds over the next one, three, and five years.

- Equity market divergences have been pronounced during the selloff. Historically, value managers have outperformed growth managers following all recessions since 1975. Cyclical stocks should also outperform defensive stocks, possibly by a wide margin.
  Small- and mid-cap value managers should perform best.

Chart 1: Equity Market Volatility Rises to Record High
The Volatility Index (VIX)
Source: Chicago Board Options Exchange

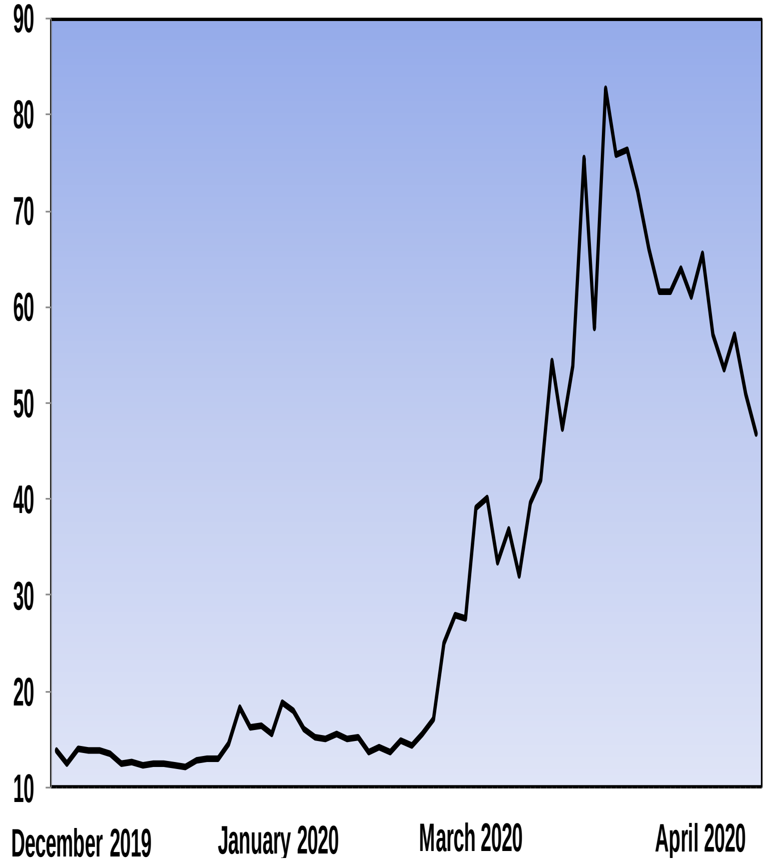
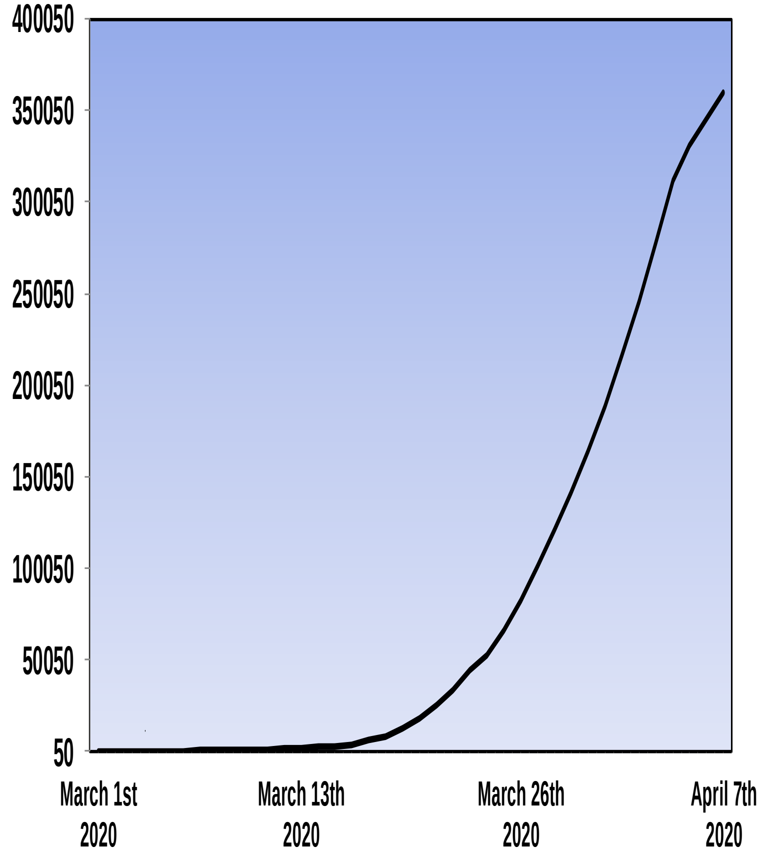


Chart 2: Total Coronavirus Cases Rising Exponentially
Number of US Confirmed Cases, COVID-19 Virus
Source: World Health Organization



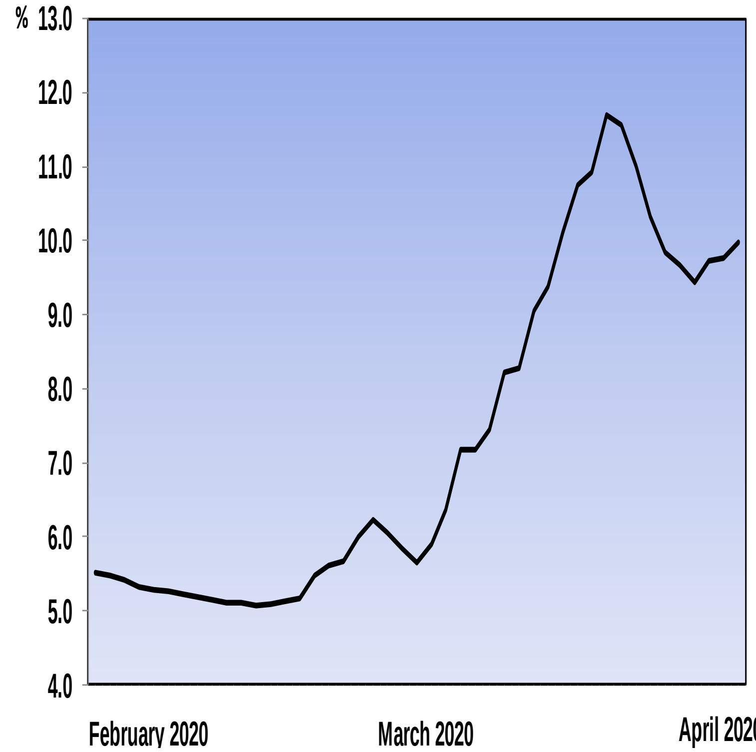
FINANCIAL MARKET REVIEW

World financial markets experienced unprecedented volatility in the first quarter, accompanied by the largest losses in many decades. The closely watch Volatility Index (VIX) rose to its highest level ever, surpassing the 1987 stock market crash and the 2008 bear market associated with the world financial crisis. The hysteria and emotional selling during March triggered circuit breakers in the New York Stock Exchange, halting trading for 15 minutes. There were an unprecedented four halts to trading during March, as stock price declines reached the 7% threshold on four separate days (see chart 1).

Uncertainty: Massive financial market losses can be attributed to uncertainty associated with COVID-19 and its *unquantifiable* negative impact on economic growth and corporate earnings. *Uncertainty is the major enemy of financial markets*: History has shown that investors tend to prefer the certainty of a very negative outlook versus total uncertainty — which causes investors to immediately assume the worst-case scenario (see chart 2).

Chart 3: The Fastest Bear Market Since 1987
S&P 500 Stock Index
Source: Standard & Poor's

Chart 4: Steep Rise in High-Yield Corporate Bond Yields
Yield to Maturity, Speculative-Grade Corporate Bond Index
Source: Bloomberg Barclays



Sea of Red: Except for US government bonds and mortgage-backed securities (MBS), all asset classes suffered major declines, led by crude oil (-68%) and commodities (-36%). The decline in the equity market in the quarter was among the worst of the past century, with a negative total return of 19.5% in the S&P 500. The world equity index (excluding the US) registered a negative total return of 23%. The current equity market crash was the fastest in modern history (see chart 3).

Massive Divergences: There were notable divergences within the equity market, with the Russell Value Index (-27.5%) suffering far worse declines relative to the Russell Growth Index (-14.5%). The total return on small-capitalization stocks was a negative 30%. There were also massive divergences among economic sectors. The worst-performing sectors in the quarter included energy (-50%), financials (-32%), and industrials (-28%); the best relative performance occurred in the technology (-12%), health care (-13%), consumer staples (-14%), and utilities (-15%) sectors.

- **Fixed-Income Market**: There were also large divergences within world bond markets. As measured by the Bloomberg Barclays US Aggregate Bond Index, US investment-grade bonds posted a 3.2% return in the quarter, while the MBS sector rose by 2.8%. Investment grade corporate bonds lost 3.7% in the quarter, while high-yield bonds lost 12%. Highly speculative triple-C-rated bonds lost more than 20% (see chart 4).

FINANCIAL MARKET OUTLOOK

The outlook for both the global pandemic and world economy continues to deteriorate. With respect to COVID-19, the US has entered the eye of the hurricane as measured by confirmed new cases, with maximum infection levels expected to be reached by the end of April. Similarly, the US economy will likely suffer its maximum pain in June and July, as measured by declines in aggregate spending and output. The maximum year-over-year decline in corporate earnings is also likely to occur in the second quarter.

Three Major Considerations: There are three critical but conflicting considerations for financial markets associated with these worrisome trends:

- **Market Sentiment**: Market psychology will remain vulnerable to high levels of volatility as conditions continue to deteriorate in coming days and weeks. A risk-off mentality is likely to persist until expectations for a trend reversal in these worrisome short-term trends becomes apparent.

- **Leading Indicator**: The equity market is the quintessential forward-looking indicator of the direction of the economy, and ***always*** leads trends in the real economy by several months.

- **Relative Valuation**: By all measures, the equity market is significantly undervalued from a long-term perspective. Moreover, as measured by the equity risk premium (ERP), common stocks are massively undervalued relative to government bonds.

Leading Indicator: *Historically, equity bear markets have ended with a consistent lead time of three to five months prior to the end of recessions*. The implication is that investors are likely to witness a powerful tug-of-war in coming weeks between ongoing bad news in the economic and public health arenas versus the equity market's basic fundamental tendency to bottom well in advance of an improving economic trajectory.

- **Most Severe Post-1945 Recessions**: The three most serious recessions since 1945 occurred in 1974, 1981, and 2008. *The lead times between the bottom in stock prices and the end of recessions for these cycles were five months, four month, and three months, respectively*. Based upon this historical experience, a *hypothetical* end to the current recession of June or July would be consistent with an equity market bottom in April.

News of the collapse in quarterly GDP and company profits is almost certain to proliferate in the media. It is important for investors to understand that the depth of declines in quarterly GDP and company earnings is of little enduring relevance, simply because these data are temporary, artificial, and unsustainable. What is important for investors is the level of GDP and corporate profits in the fourth quarter of this year and throughout 2021 and 2022.

CONNECTING THE DOTS

It is widely understood that the stock market is a classic leading indicator. *In effect, this implies that stock investors with a long-term time horizon cannot afford to wait for the arrival of good news in the headlines but must anticipate news developments in advance*.

This requires a careful and rigorous mental exercise of "connecting the dots" pertaining to key relevant information associated with the economy, government policy, and corporate earnings. The following is a list of key indicators that investors must process and connect in order to confirm a sustained recovery in world financial markets:

1. **New COVID-19 Cases**: A decisive peak in the number of confirmed new cases in the US and Europe, especially Italy. Within the US, investors should focus on trends in key urban centers nationwide once there is a confirmed peak in New York, which is expected within the next week.

2. **Asian Countries**: Health trends in China, South Korea, and Singapore should also be monitored to ensure that a second wave of infections does not occur.

3. **Public Health System**: Positive trends in public health, including much greater availability of test kits, masks, N95 respirators, and ventilators, along with improved success in identifying and containing the spread of COVID-19.

4. **Medical Innovation**: Introduction of new therapeutic (anti-viral) medicines to mitigate the illness, along with state-of-the-art diagnostic testing equipment. An effective vaccine is at least one year in the future.

5. **Additional Policy Response**: The willingness of policymakers to provide open-ended economic assistance to businesses, workers, and credit markets beyond the current phase one stimulus package.

6. **Government Execution**: There is also a lag between authorization of funds and the actual time that these policy measures gain traction. Effective execution by the US Treasury, the Small Business Administration, commercial banks, and the IRS in *ensuring the flow of funds in a timely manner to individuals, households, small businesses, and hospitals*.

Chart 5: Evidence of Stress Within the Commercial Paper Market
Credit Spread: Market Yield on Commercial Paper
Less Market Yield on Treasury Bills (measured in basis points)
Source: Bloomberg Intelligence

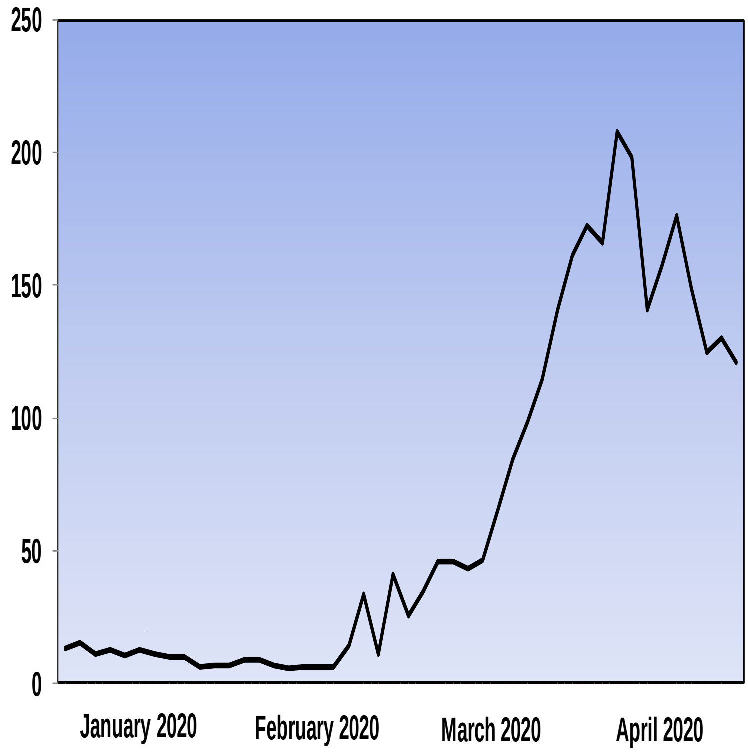
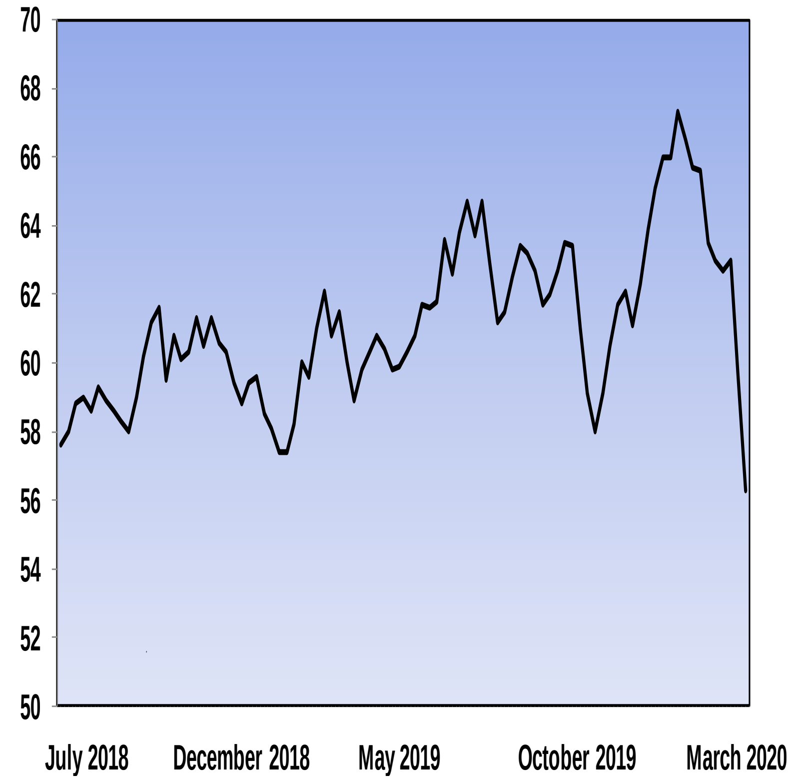


Chart 6: Sharp Decline in Consumer Confidence
Bloomberg Weekly Consumer Comfort Index
Source: Bloomberg



7. **Worker Attachment**: Specifically, the extent to which the government is successful in providing a ***bridge*** to small businesses to maintain payrolls. ***This is critical to avoid the scenario of widespread layoffs, followed by three years of rehiring, retraining, and lost productivity***.

8. **Credit Conditions**: Evidence of effective functioning of money and credit markets and maintenance of a smooth flow of credit to individuals and businesses. A sustained narrowing of risk spreads in the corporate bond and commercial paper markets would be a positive sign (see chart 5).

9. **Restarting the Economy**: When the number of new coronavirus cases reaches a plateau, the focus should shift to the real economy to gauge the speed at which businesses are able to restart the economy as furloughed employees return to work.

10. **Real-Time Data**: Investors should also focus on timely data regarding the direction of the economy, including weekly initial jobless claims, hiring intentions, consumer confidence surveys, the new-orders-to-inventory ratio, rail car loadings, and port traffic. Anecdotally, airline bookings and the pace of openings by retail stores, restaurants, and offices are also useful (see chart 6).

11. **Business Surveys**: Responses of businesses to surveys regarding hiring intentions and plans for capital investment. The monthly homebuilder survey is also an accurate assessment of housing market conditions.

12. **Asian Models**: Close inspection of economic trends in the early-infection countries — especially China and South Korea — as a possible guide or template for how quickly and smoothly the US economy might restart once the coronavirus has been contained.

13. **The Volatility Index**: An analysis of market history reveals that stock prices always rebound strongly following a prolonged peak in the closely watched VIX. On average, stock prices have rallied by greater than 35% in the 12 months following the peak month in the VIX.

14. **The US Dollar**: As the quintessential safe-haven currency, the US dollar (USD) has soared since the onset of the COVID-19 outbreak, reflecting an international flight to safety. Evidence of a sustained reversal in the USD would signal an increase in economic confidence and expectations of improving business conditions.

15. **Business Inventories**: The level of business inventories will determine the pace of the rebound in manufacturing output once there is a recovery in aggregate demand. Manufacturing surveys indicate that inventories are currently at below-average levels and are in a declining trend, implying an extra boost to factory output once final demand begins to stabilize.

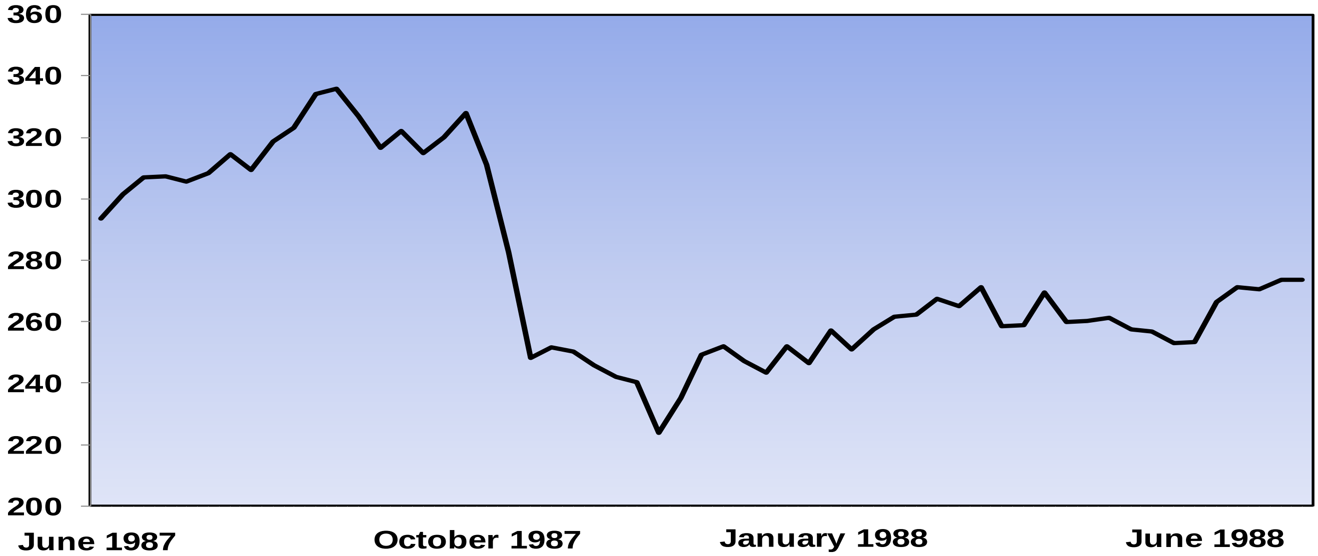
STOCK MARKET HISTORY

The most important basic investment principle is that the equity market is a forward-looking indicator, arguably the quintessential leading economic indicator. Stock prices do not wait for announcements of important events, but *anticipate* relevant developments well in advance of the news.

- **Lead Times**: *Based upon history, the stock market leads the economy by three or four months*, both on the upside and on the downside. The 2008 equity bear market ended in March 2009, three months in advance of the end of the recession in June. In my judgment, the 1987 crash most closely resembles the current equity bear market (see chart 7).

Bull Market Preconditions: The history of equity bear markets reveals that deeply oversold conditions, depressed equity valuations, and extreme pessimism are ***necessary but insufficient*** conditions for a market bottom. *An ultimate bottom and sustained advance in stock prices awaits concrete evidence of the following five developments:*

Chart 7: Many Similarities With the 1987 Stock Market Crash
S&P 500 Stock Index
Source: Standard & Poor's



I. Decisive improvement in the trend of new COVID-19 ***cases*** within the US
II. An ***open-ended*** pledge from policymakers "guaranteeing" an economic floor
III. Evidence that the Fed has restored credit markets to normal functioning
IV. Evidence of an effective ***execution*** of the multitrillion-dollar rescue package
V. Evidence of a successful ***restarting*** of the economy

Bear Market Recoveries: Following its ultimate bottom, the equity market almost always stages a powerful rebound within the first several months of the new bull market. Based upon historical averages of previous bear markets in recent decades, the average rebound in stock prices from the bear market bottom was as follows: +24% in the first three months; +36% in the first six months; +55% in the first year; and +75% during the first two years. ***From a longer-term perspective, the compound annual rate of return in the three years following steep bear markets has ranged between 18% and 28%***.

Inflation and Valuations: Investors should expect a protracted period of low and falling inflation, with implications for both bond yields and equity valuations. In principle, the most important fundamental determinants for equity market valuations are inflation and bond yields. Based upon econometric models, *a combination of inflation in the 1% to 1.5% range and US Treasury bond yields below 1.5% is consistent with a sustained price-to-earnings (P/E) ratio for large-cap stocks in excess of 20x*.

To summarize, further market losses are likely and a sustained rebound in stock prices may not occur for another several weeks. *However, while it is impossible to time the market bottom, investors should be cognizant of the indiscriminate liquidation of stocks in recent weeks and the unique buying opportunity for patient long-term investors*.

Specifically, shares of high-quality stocks in the industrial, financial, energy, and transportation sectors have collapsed, and are currently priced at nearly unprecedented discounts to intrinsic value. Overall equity market valuations could drift higher over the next several years, consistent with historically low inflation and long-term bond yields.

Credit Markets: A return to normal functioning of credit markets is a prerequisite for a sustained economic recovery and a rebound in the corporate bond and equity markets. Following a period of extreme stress, credit markets began to stabilize during the final weeks of March, assisted by a pledge of unlimited support by the Federal Reserve. Because of aggressive Fed actions, the worst of the liquidity crisis has passed, but credit markets remain far from normal.

- **Record Bond Issuance**: Issuance of high-grade corporate bonds surged to a record high of $253.5 billion in March, an increase of more than 150% from one year ago, smashing the previous monthly record of $162.5 billion. *These data are significant because they reflect improved functioning of credit markets and the ability of firms to boost their liquidity by issuing longer-term fixed-rate bonds*.

Expected Returns: The outlook for the fixed-income market is mixed. Corporate bonds should easily outperform government bonds over the next several years, while common stocks should easily outperform bonds over the next one, three, and five years.

- **Equity Valuation Model**: My proprietary equity valuation model is the most favorable since early 2016. The model estimates that the prospective total return on common stocks for the S&P 500 currently exceeds 12% over a three-year time horizon. Since the end of 2017, my valuation model has consistently projected an implied long-term expected return on domestic equities within a range of 3% to 5%.

- **Value Managers**: Equity market divergences have been pronounced during the selloff. There has been a stampede into industries and sectors perceived as safe, including consumer staples, technology, and utilities; in stark contrast, those sectors at short-term economic risk have been crushed, including small-cap stocks. Historically, value managers have outperformed growth managers following all bear markets since 1975. ***Small- and mid-cap value managers should perform best***.

- **Fixed-Income Market**: The outlook for the fixed-income market is mixed. Corporate bonds should easily outperform government bonds over the next several years. Returns in the US Treasury market could be negative over the next two years, while corporate bonds are priced to provide attractive total return opportunities over the next two years.

Robert F. DeLucia, CFA, was formerly Senior Economist and Portfolio Manager for Prudential Retirement. Prior to that role, he spent 25 years at CIGNA Investment Management, most recently serving as Chief Economist and Senior Portfolio Manager. He currently serves as the Consulting Economist for Prudential Retirement. Bob has 45 years of investment experience.

Bloomberg Barclays U.S. Treasury Inflation-Protected Securities (TIPS) Index: Measures the performance of rules based, market value-weighted inflation protected securities issued by the U.S. Treasury. It is a subset of the Global Inflation-Linked Index (Series-L).

CBOE Volatility Index: An index of implied equity market volatility, reflecting the market estimate of future volatility for the S&P 500 Stock Index over the next 30 days, using options.

MSCI Emerging Market Index: An index of equity market performance for developing markets, primarily in Asia, Latin America, and Eastern Europe. The index tracks both large-cap and small-cap stocks and is weighted by market capitalization.

MSCI World Ex US Index: Measures the performance of the large and mid-cap segments of world, excluding US equity securities. It is free float-adjusted market-capitalization weighted.

Russell 2000 Small-Cap Index: Is an index measuring the performance of approximately 2,000 small-cap companies within the United States.

S&P 500® Index: Measures the performance of 500 widely held stocks in US equity market. Standard and Poor's chooses member companies for the index based on market size, liquidity and industry group representation. Included are the stocks of industrial, financial, utility, and transportation companies. Since mid-1989, this composition has been more flexible and the number of issues in each sector has varied. It is market capitalization-weighted.

State Street Investor Confidence Index: measures investor confidence or risk appetite quantitively by compiling actual buying and selling patterns of institutional investors.

US Trade-Weighted Dollar Index: An index that measures the value of the US dollar in relationship with other currencies, statistically weighted on the basis of importance to the US as trading partners.