

Market Euphoria

How Long Can It Last?

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“When life looks like Easy Street, there is danger at your door.”

— *Grateful Dead*

Signs of market euphoria are everywhere. Speculative “story” stocks, penny stocks, IPOs, SPACs, millennial “stonk” trading, margin lending, CCC junk bonds, sports trading cards and other collectibles, Dogecoins and investor sentiment surveys are all showcasing extreme market froth. Animal spirits are running hotter now than during the last market peak just before the coronavirus-induced lockdowns began. On February 11, 2020, we published a paper titled “The Next Bear Market” while U.S. stock prices were also at all-time highs and climbing daily to new records. At that time, the prospect of a bear market seemed distant. Eight days later the steepest stock market descent in history began, with the S&P 500 Index falling 34%¹ during a five-week period. Since that time, we have been experiencing one of the sharpest stock market rallies in history. While the current stock market rally may continue for some time, it is not too early to identify the warning signs that may tip the onset of the next bear market. To paraphrase Warren Buffett, ‘Be greedy when others are fearful, and be fearful when others are greedy.’ A bear market in equities is defined as a loss of at least 20%. Some bear markets have experienced declines in excess of 80% before recovering. Evaluating current market conditions in a historical context can add perspective and help to see the forest from the trees.

There are similarities but also important differences between today’s environment and past periods of ultra-low interest rates, excessive government debt and extreme wealth inequality. Reviewing centuries of stock market history, the world has experienced numerous cycles in which wealth inequality naturally increases during periods of economic growth, becomes extreme, then contracts due to a market crash, depression, war, revolution or some combination of the above. Before the contraction, the stock market was often surging to new highs; corporate borrowing and government debt reached dangerous levels; and monetary policy had been strongly accommodative with wealth inequality often leading to political discord and a rise in populist movements.

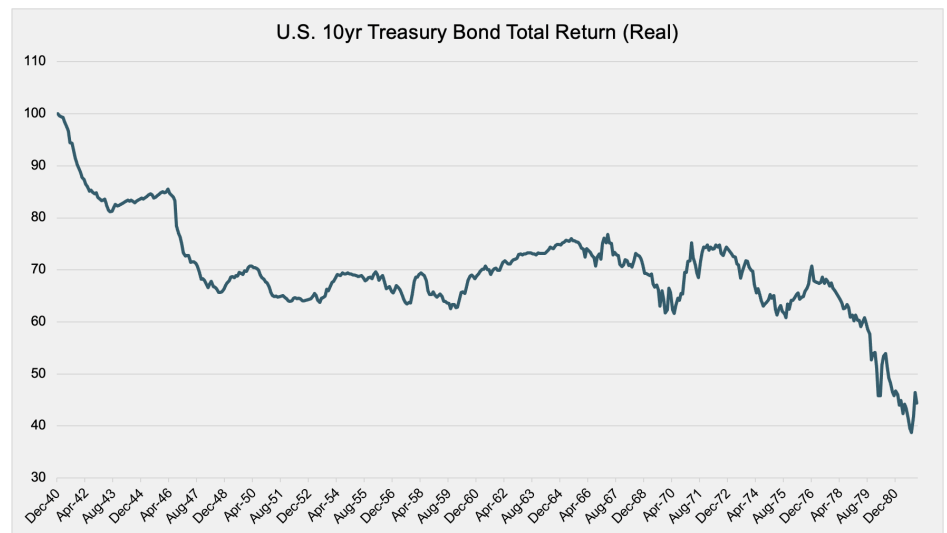
Today we have a stock market that by our estimation is exceedingly overvalued, wealth inequality is at extreme levels last seen in 1929, global interest rates are at or near all-time lows and central banks have never been so accommodative. In addition, corporate borrowing ratios are at all-time records and government debt to GDP ratios are above thresholds beyond which governments historically have been unable to pay their way out of their debt, either through economic growth or tax hikes. Short of default, the typical government response has been to inflate away its debt, often through currency devaluation.

¹ Source Bloomberg

An important difference in the U.S. between the current cycle and past cycles (pre-1971) is that the U.S. Dollar was once backed by gold. Consequently, the Federal Reserve Board (“Fed”) was more constrained in its ability to promote monetary stimulus. By confiscating investors’ gold in 1934, then instantaneously resetting its price from \$20.67 per ounce to \$35 per ounce, an immediate 69% currency devaluation was realized ending an extended period of deflation. In 1969, President Nixon broke the \$35 per ounce gold peg and let the price of gold float freely, hoping to unleash economic growth leading up to his 1972 presidential reelection bid. The highly inflationary 1970s followed, along with soaring real asset (gold and commodities) prices. In the current environment, we believe that governments/central banks will most likely decide to address the debt burden through financial repression. By attempting to reflate the economy while holding interest rates at suppressed levels, bondholders will effectively be subsidizing borrowers by being compensated with a negative investment return after inflation. This happened from World War II until the late 1970s, when Treasury bondholders lost about half the value of their investment when measured after subtracting inflation (see Figure 1 – U.S. 10yr Treasury Bond Total Return (Real) 1941-1981).

Figure 1

U.S. 10yr Treasury Bond Total Return (Real) 1941-1981



Source: Bloomberg. Jan 1941 through Dec 1981. U.S. 10yr Treasury Total Return (Real) is the U.S. 10yr Treasury Total Return Index less inflation (CPI).

So far, governments have been unable to reach their inflation targets because money velocity (the rate at which money changes hands in the real economy) has plunged, recently reaching record-low levels. However, most of the government stimulus during the last decade came primarily from monetary policy. Following the onset of the coronavirus, the unemployment rate soared, and central banks responded with the most extraordinary monetary intervention in history. While some of this stimulus helped the government offset part of the economic damage resulting from the coronavirus, monetary policy is a blunt instrument and most of the resulting monetary inflation stayed in the market system, inflating asset prices and exacerbating wealth inequality. The longest serving chairman of the Fed, William McChesney Martin, once famously quipped: “The job of central bankers is to take away the punch bowl just as the party gets going.” As the Fed fights unemployment with its blunt instruments while the stock market races to new records, this Fed is spiking the punch bowl while the party is in full swing.

There is now a renewed push to pass the baton from monetary to fiscal stimulus (government spending). This means that governments will need to spend trillions they don’t have, leading to more excessive debt. However, fiscal stimulus could find its way more directly into the real economy, potentially causing a rebound in money velocity and the long-awaited rise in inflation. While this would typically lead to a rise in long-term interest rates, governments may look to central banks to buy the newly-minted debt to constrain rising rates. Otherwise, government budgets could be crushed by soaring interest payments. This could lead to the financial repression and currency devaluation described above. Should

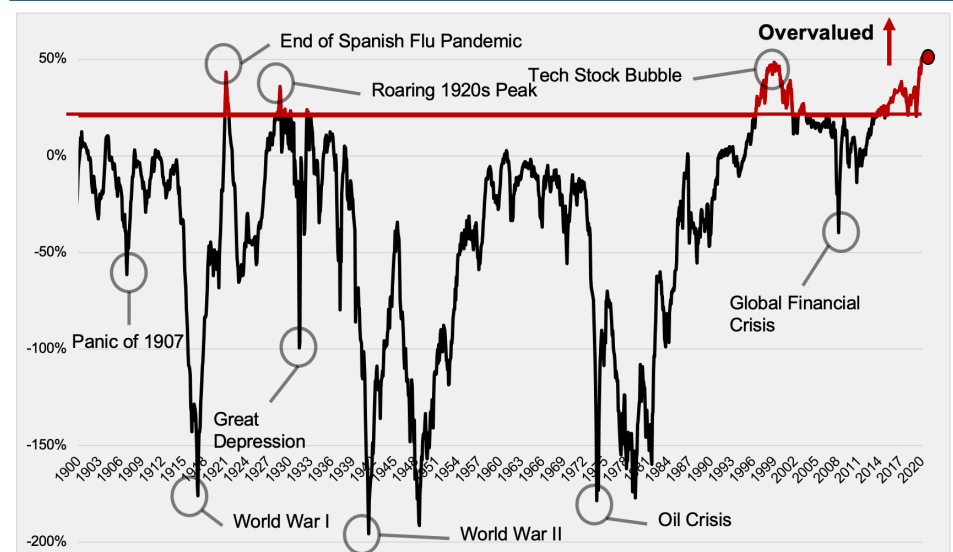
this scenario come to fruition, central banks would be in the unenviable position of having to decide for how long to continue to hold interest rates at ultra-low levels. A premature tightening of monetary policy could send stock markets into a tailspin and halt economic recovery. Suppressing rates for too long could result in accelerating inflationary expectations that become embedded and more difficult to reverse. Either outcome could harm stock market prices eventually, and the severity of a subsequent downturn could depend upon the stock market's degree of overvaluation.

Is the U.S. Stock Market Overvalued Today?

There is much debate as to whether the U.S. stock market is overvalued or fairly valued. Some argue that U.S. stocks are fairly valued because equities' earnings and dividend yields are generally more favorable than bond yields. However, this comparison is unhelpful if bonds are also excessively overvalued.

Assessing valuation depends upon making estimates about an equity market's future earnings streams and discount rates. Without a crystal ball or clairvoyant to help, reasonable assumptions need to be made about how earnings are expected to grow over time and the appropriate cost of capital or discount rate to use. After estimating earnings growth using reasonable assumptions while assuming mean reversion of profit margins over time, the valuation assessment becomes highly dependent upon the discount rates applied to the estimated earnings streams over the short and long term. Employing an equity valuation model that discounts the S&P 500 Index's earnings stream many years into the future, we have calculated that the only way to conclude that today's U.S. stock market is fairly valued is to assume that today's ultra-low corporate bond yields (among the lowest in history) remain at current levels forever. Given the unlikelihood that corporate bond yields remain at ultra-low levels forever, if we make what we believe is a more reasonable assumption that interest rates remain at ultra-low levels for the next 20 years then revert to their long-term mean, we estimate that the S&P 500 Index is about 50% overvalued today (see Figure 2 – S&P 500 Market Valuation 1900-2021). While valuation is a poor predictor of stock price behavior over the short term, it is an excellent predictor of stock market returns over the subsequent 10-year period (see Figure 3 – Expectations for Future S&P 500 Returns 1946-2021). Consequently, while overvaluation itself would not constrain the U.S. stock market from rising further in value, based on our research findings it is likely that additional gains from today's levels would eventually be given back. In contrast, the Japanese stock

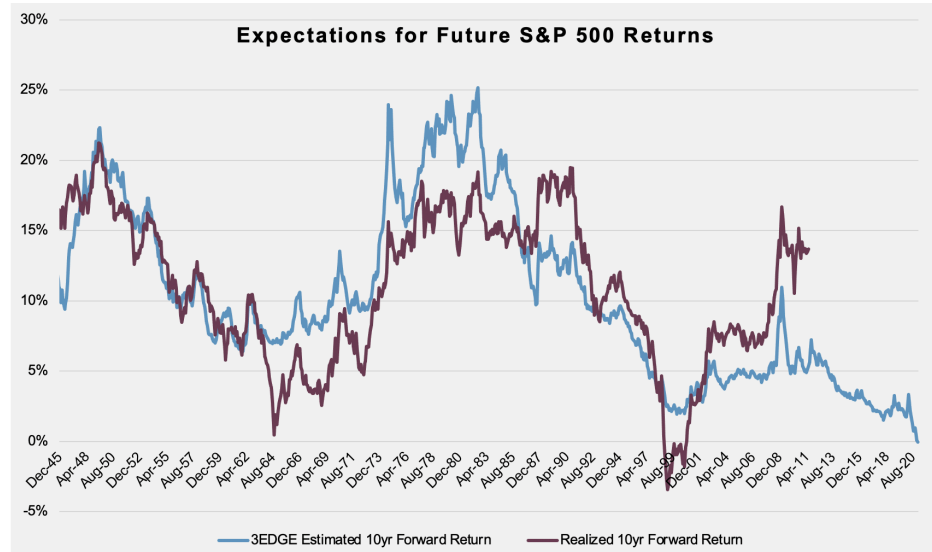
Figure 2
S&P 500 Market Valuation
1900-2021



Sources: Bloomberg, 3EDGE. Valuation series generated using 3EDGE's Valuation model that discounts a projected normalized earnings stream assuming margin mean reversion and estimates for cost of capital and implied growth rates over time. Data from 12/31/1900 through 1/31/2021.

Figure 3

Expectations for Future S&P 500 Returns 1946-2021



Sources: Bloomberg, 3EDGE. 3EDGE Estimated 10yr Forward Return derived from 3EDGE's Valuation model that discounts a projected normalized earnings stream assuming margin mean reversion and estimates for cost of capital and implied growth rates over time. Data from 12/31/1945 through 1/31/2021 since post-WWII.

market is fairly valued using the same valuation approach. This is not surprising; Japanese stocks were highly overvalued during the 1980s, peaking at the beginning of 1990. A brutal bear market ensued, dropping Japanese equities over 80% from their peak. The appetite in Japan for investing in stocks largely disappeared for decades, and Japan's Nikkei 225 Price Index is still about 25% below its peak of over 30 years ago.

Over history, there are many examples of overvalued markets continuing to climb higher for far longer than rational investors would normally expect. Price trends build upon their own momentum. Investor caution turns to irrational exuberance, investor euphoria and greed. History teaches that periods of exuberance can be self-reinforcing, and consequently overvalued markets can become yet more overvalued for an extended period of time before correcting. In fact, some of the sharpest gains in stock prices have occurred during the final stages of a bull market, just prior to the onset of the next bear market. A force in motion often remains in motion until a catalyst or exogenous event intervenes. While it's difficult to predict true "black swan" events, we explore several potential catalysts that could foreshadow the next bear market.

Warning Signs

Potential early warning signs that could trigger the next bear market include the following:

Our research model has identified the narrowing of corporate high-yield credit spreads, or the difference between yields on AAA (highest-quality) corporate bonds and High-Yield (lower-quality) corporate bonds, as a key factor supporting equity prices in the short term. Generally, the narrowing of the high-yield credit spread indicates investor confidence that lower-quality corporations have improved their ability to pay off and / or roll over their debts. However, as credit spreads narrow, the yield on the Bloomberg Barclays U.S. Corporate High-Yield Bond Index fell recently to below 4%, an all-time record low. This contrasts with 9% yields reached last March and 21% yields offered during the Financial Crisis of 2008. The Fed specifically targeted corporate bonds to be among the recipients of its extraordinary market intervention, helping to drive spreads lower and providing corporations with the ability to borrow large sums that might not have been available otherwise. Given the near record level of corporate debt in relation to GDP and corporate cash flow, a sudden rise in the corporate credit spread could trigger difficulties for companies attempting to refinance their debt. An unwinding of corporate debt could be self-reinforcing, similar in manner to how housing and mortgage debt problems cascaded into the Financial Crisis of 2008.

A sustained rise in inflation beyond expectations could alter the conventional wisdom that central banks will always ride to the rescue whenever economic growth slows or the markets correct. When expected inflation is low, central banks can more easily justify extraordinarily low interest rates to support markets and the economy, helping to support and fuel overvalued markets. Higher than expected inflation would most likely restrain central banks from adding more stimulus, removing a major prop to the bullish thesis. During the mid-1940s, inflationary expectations were similarly low, with the same lack of inflationary pressures over much of the preceding two decades. Yet after a period of financial repression, the U.S. inflation rate climbed unexpectedly from under 2% to over 9% from March 1946 to August 1946 in concert with the onset of a bear market. More concerned with avoiding deflation, the Fed has been determined to drive inflation higher, in a mirror image to the early 1980s when the Fed at that time was determined to reverse double-digit inflation. Like the Fed of the early 1980s, it may eventually succeed. Given that current stock market valuations depend upon today's ultra-low interest rates remaining low forever, any meaningful rise in interest rates caused by rising inflation could result in a contraction of corporate earnings multiples, adversely impacting the stock market.

The latest wave of coronavirus peaked in January 2021 and is now receding due to Covid seasonality as well as increasing vaccinations. As a result, many economists predict a resumption of growth especially in the latter part of 2021. However, there are at least two obstacles to achieving herd immunity: 1) the percentage of the population unwilling to be vaccinated; and 2) the possibility that Covid antibodies provide insufficient protection from variant mutations such as the b.1.351 (South Africa), b.1.1.7 (U.K.) and p.1 (Brazil) strains. As the markets anticipate relief from Covid, a new wave of coronavirus is not priced into the markets. The Spanish Flu pandemic infected the world in four waves spanning a two-year period from 1918 to 1920. The U.S. stock market soared in anticipation of the pandemic's end, peaking in 1919. Rising inflation and interest rates accompanied the end of the pandemic, and the stock market declined sharply in response, falling over 30% from its peak in 1919 to its trough in 1921.

Potential changes in tax policy present risks to the current market environment. To address wealth inequality, the current administration may seek to pass legislation by raising taxes on corporations as well as the wealthy. The 2017 corporate tax rate cut from 35% to 21% created an immediate boost to corporate earnings; likewise, a partial reversal could produce an immediate reduction in corporate earnings. Also, investors may be inclined to sell equities in advance of any changes in personal income, capital gains, estate and / or wealth taxes presently under discussion.

Occasionally, bear markets begin from what is often described as healthy profit-taking. A small negative trend becomes amplified by an increasing number of investors who are satisfied with recent gains and decide to sell before their gains evaporate. A self-reinforcing vicious cycle can follow. By the time conventional market momentum indicators detect the shift in trend, it may be too late to avoid significant losses. To address this issue, we analyze various measures of market acceleration (the derivative or rate of change of momentum) as well as other behavioral algorithms that have the potential to serve as early warning indicators of an abrupt shift in investor behavior.

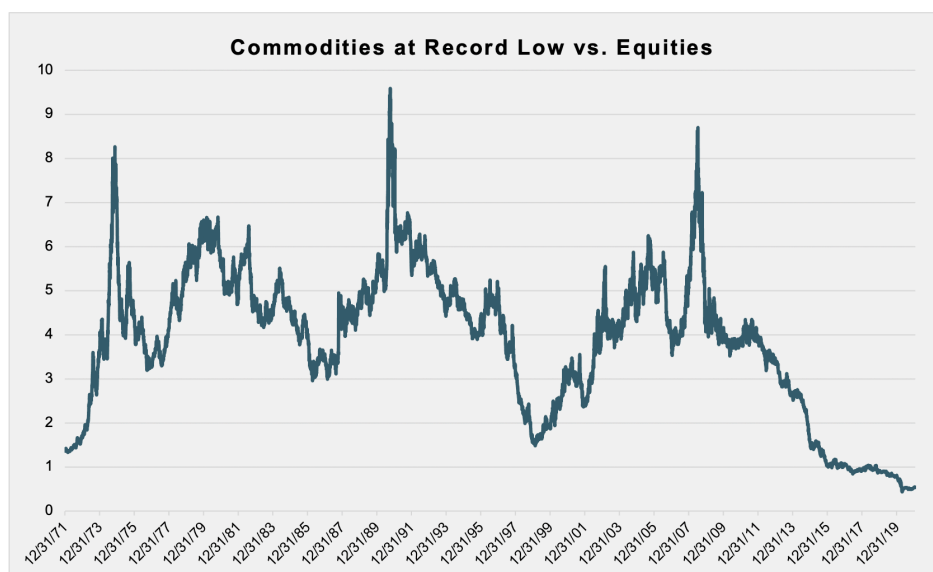
Geopolitical uncertainties including cyber threats continue to rise. A damaging cyber or terrorist attack might not only create a sense of panic and uncertainty but could also cause a shock to the economy, a condition not priced into an overvalued market. China / Taiwan, Iran, North Korea and Russia are hot spots presently, and acts of aggression can escalate into serious conflict, even if unintentional. One concern: the world's largest semiconductor chip manufacturing company, TSMC, resides in Taiwan. Taiwan is presently in China's crosshairs, and any disruption to its chip manufacturing capability could wreak havoc on technology, automotive, defense and other industries globally. Proponents of the long-wave war cycle note that over the last few centuries, there has been a major war roughly every 80 years as the war generation that swears never to enter another major war passes on. 80 years from the last major war in this series points to 2021.

Current Positioning

Since the Financial Crisis of 2008, U.S. stocks and bonds have greatly outperformed other major markets in a manner that is not supported by commensurate gains in U.S. corporate earnings or sales. According to our research, this outperformance has left U.S. stocks and bonds among the most overvalued asset classes we monitor. Yet because of past performance, many traditionally-managed investment portfolios largely consist of U.S. stocks and bonds. We believe it is highly unlikely that U.S. stocks and bonds will continue to outperform over the next several years as well as they have performed over the last several years. Our focus has been to favor relatively undervalued equities (e.g. Japan) and to reduce our allocation to what we believe are highly overvalued equities (e.g. U.S.). Given the ultra-low interest rates that government and corporate bonds currently yield, especially when compared with inflationary expectations, bonds represent sources of negative after-inflation return with the potential for capital depreciation should interest rates rise. An exception would be if we were to enter a period of deflation. Alternatively, real assets such as gold and commodities offer the potential for appreciation while the opportunity cost for holding assets that don't produce interest income such as gold is particularly low at this time. Gold serves as a hedge against unconstrained monetary inflation since unlike fiat currencies, the supply of gold cannot be manipulated by central banks. Commodities experienced a severe bear market from 2008 through mid-2020 and underperformed equities to a greater degree than any time during the last five decades (see Figure 4 – Commodities at Record Low vs. Equities 1971-2021). Our model research has identified commodities as poised for appreciation given their relative undervaluation, the prospect for U.S. dollar weakness, the potential for increased demand from Asia and overall supply disruptions.

Figure 4

**Commodities at Record Low
vs. Equities 1971-2021**



Source: Bloomberg. Graph shown is ratio of S&P GSCI Total Return Index divided by S&P 500 Price Index. All available data shown - start date 12/31/1971.

Summary

History shows that it can be notoriously difficult to predict precisely when a market euphoria or stock market bubble reaches its tipping point. However, it is easy to predict based on history that all market bubbles eventually burst as overvalued markets find their way back to fair valuations. We employ our research model of the global capital markets to analyze economic, valuation and behavioral factors to project risk-adjusted market returns and to identify when the risks of a correction are heightened.

After greatly outperforming the rest of the world since the Financial Crisis of 2008, U.S. equities have become exceedingly overvalued by our estimate. Overvalued markets can

continue to rise for far longer than rational investors would normally expect until a catalyst intervenes, heralding the next bear market. Our model research identifies several potential catalysts including: a widening of the corporate credit spread; a sustained rise in inflation and interest rates beyond expectations; failure to achieve herd immunity resulting in a new Covid wave; corporate and personal tax hikes; profit-taking which amplifies into a vicious cycle; geopolitical conflicts including cyber-attacks; and exogenous “black swan” events. To position for the current environment, we have reduced exposure to overvalued equities, increased exposure to fairly-valued equities and rotated allocations away from fixed income in favor of real assets that can act as a hedge against excessive monetary inflation. Should the risk of a global bear market in equities become elevated, we are prepared to reduce overall equity exposure and portfolio risk.

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