

WHERE ARE WE IN THE STOCK MARKET CYCLE?

A Look at Bear Markets from 1960 to the Present

By Ricardo L. Cortez, CIMA®

The current bull market cycle is now almost a decade old and, although mature by historical standards, an old Wall Street maxim reminds us that “bull markets do not die of old age.” A change in macroeconomic factors and/or internal market dynamics typically precedes or accompanies a change in the trend of the stock market. The stock market goes through cyclical ups and downs, but there is little historical consistency to length of expansions and subsequent bear markets. Most recently, the stock market declined 10 percent in early 2018 after several years of rising prices and low volatility. We will have to wait to see if this is merely a normal correction or the start of a more meaningful decline.

On the negative side, valuations are now at historically elevated levels, investor sentiment has reached new highs of optimism (negative from a contrary point of view), and interest rates are rising. On the positive side, we have not yet seen the signs of an economic contraction: Earnings remain strong, credit spreads remain narrow, and the yield curve is still positive. Nonetheless, there is historical precedent for significant market setbacks in the absence of a recession: 1961–1962, 1966, 1976–1978, 1987, and 1998, for example.

As of March 2018, there have been 14 significant stock market declines since 1960.¹

- For the total 14 declines, the average decline was 29.2 percent.

- Nine of these declines have been associated with recessions; the average decline in these recessions was 30.5 percent.
- Five other declines of 19 percent or more were not associated with recessions; the average decline in these cases was 26.9 percent.

Four major factors—three qualitative and macroeconomic and one quantitative and technical—historically have provided repeatable signals at market extremes.² The four factors are: valuation, monetary policy and credit conditions, investor sentiment, and momentum.

In this article, we apply a four-factor investment process to stock market peaks before the bear markets of the past half century. We also offer a perspective of where we are in the current investment cycle as compared with previous cycles.

First, let’s briefly review the four factors.

Valuation. Historically, at high points in the stock market cycle, valuation levels are elevated; at low points in the stock market cycle, valuation levels are low. We look for extremes in valuations to tell us when to be cautious and when to be more optimistic about future returns. Many metrics are available to assess equity valuation levels, including the median price-earnings (P/E) ratio of the S&P 500, Robert Schiller’s cyclically adjusted P/E (CAPE) ratio of 10-year normalized earnings, the U.S. Federal

Reserve (Fed) model, the price-book ratio, the price-sales ratio, and various dividend discount models.

Monetary policy and credit conditions.

Monetary policy and credit conditions are among the most important factors in the determination of the long-term direction of the U.S. stock market. As the stock market and economic cycle mature approaching a peak, the Fed usually begins to tighten monetary policy through interest-rate increases and other monetary tools at its disposal. During the current cycle, for example, one of the tools that the Fed used to provide liquidity to the system was quantitative easing (QE). Currently in 2018, the Fed is reversing this process by a systematic reduction in its balance sheet, or quantitative tightening (QT).

A variety of indicators are used to assess monetary policy and credit conditions. The rate of change of interest-rate movements; the difference between short rates and long rates (the yield curve); the spread between the yield on Treasury securities and corporate, municipal, and high-yield bonds (credit spreads); free reserves; and indicators of inflationary pressures are among the many indicators that we use. In addition, the past decade has shown that global markets can have a major impact on the U.S. stock market. Therefore, indicators of the actions of global central banks—in the United Kingdom, Japan, China, and Europe, among others—that could affect U.S. policy and the U.S. stock market are important in this analysis.

Investor sentiment. In our analysis, investor sentiment should be assessed from a contrarian point of view. When investors are very optimistic, it is usually the time to be cautious. When investors are selling heavily, it is usually time to increase market exposure. One measure of investment sentiment is the bullishness or bearishness of stock market investment letters written by market pundits, portfolio strategists, and individual investors. Put-call ratios, short interest, margin debt, and stock market capitalization as a percentage of gross domestic product (GDP) are among the many indicators that provide perspective on extremes in investor sentiment.

Momentum. Healthy markets are distinguished by a high percentage of stocks participating in the advance. During these times, measures of volume and market breadth confirm new highs in the major market indexes. As

the stock market and economic cycle near a peak, there are usually decreasing levels of participation in terms of both breadth and volume, which creates negative divergences. Models that are important in this analysis include the percentage of stocks above their 10- and 30-week moving averages, cumulative on-balance volume and breadth, measures of institutional flow of funds, and divergences between the broad list of stocks and the major market indexes.

HISTORICAL PERSPECTIVE ON STOCK MARKET DECLINES AND RECESSIONS

Most, but not all, stock market declines occur in advance of U.S. and/or global economic recessions. Table 1A shows all nine stock market declines since 1960 that were associated with U.S. or global recessions. There is also historical precedent for significant stock market corrections of 19 percent or more that

have occurred without a corresponding recession, as shown in table 1B. The average of these 14 market declines was 29.2 percent lasting 325 days.

FACTORS AT PREVIOUS MARKET TOPS VALUATION

In our process, equity valuations must be assessed within the prevailing economic and interest-rate environment. There is always a competition for funds among stocks, bonds, and other asset classes: If the expected return on bonds falls, greater valuation will be accorded equities; if the expected return on bonds rises, equities will be valued lower. Valuations therefore must be adjusted for this competition for funds.

One way to adjust P/E ratios for the general level of interest rates is to combine the current level of trailing 12-month P/E ratios with the year-to-year change in the Consumer Price Index (or CPI, see figure 1). This adjustment shows that the high P/E ratios of the late 1940s ushered in a period of more regular valuation cycles.

Historically, when P/E ratios reach 24x, it is often a warning sign. This level was very useful in signaling the stock market declines of 1960, 1968-1970, 1987, 1990, 2000-2002, and the financial crisis of 2008-2009. As of January 31, 2018, this measure stands at 24x, indicating overvaluation. But as figure 1 shows, this valuation is not as great as either 2000 or 2008 when adjusted for interest rates.

Another way of looking at equity valuations is stock market capitalization as a percentage of GDP, which is historically similar to the median P/E ratio in that it was lower in the 1960s-1980s than in the past 30 years (see figure 2). This measure indicates that we are nearing the high dot-com bubble valuation levels of 2000. Applying a least squares regression analysis to this indicator to see the underlying trend of the data shows that valuation peaks have risen higher during each cycle over the past

Table 1

SIGNIFICANT STOCK MARKET DECLINES SINCE 1960

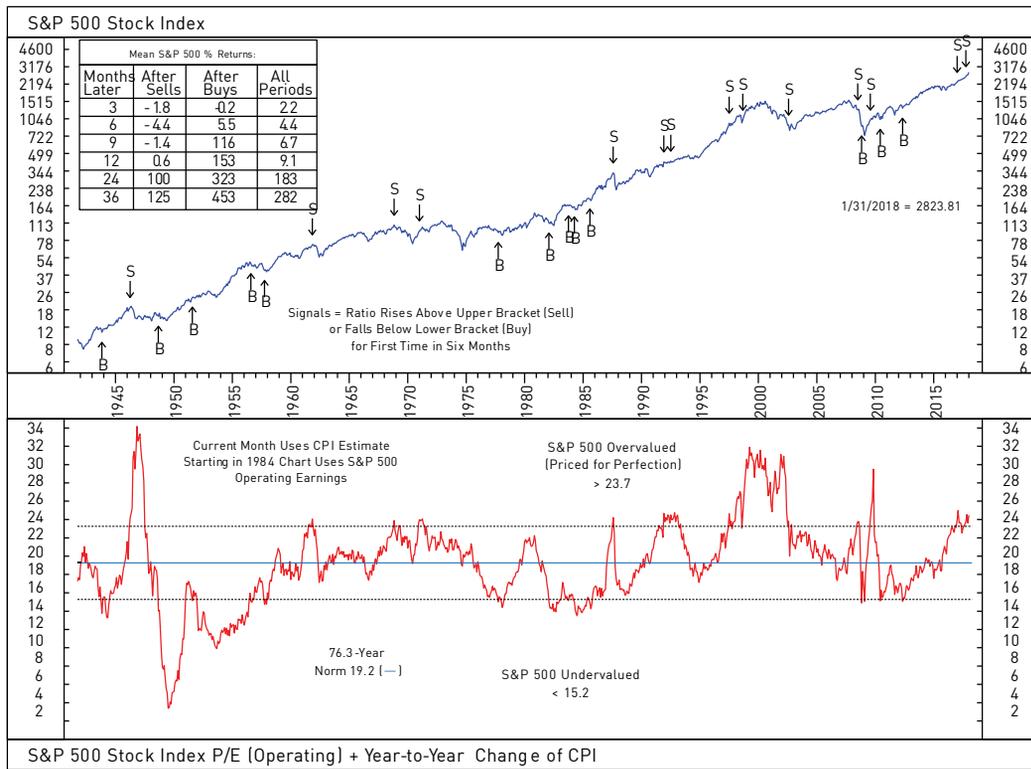
Year(s)	Decline	Duration (Days)
A: Declines Associated with a Recession		
1960	17.4%	294
1968-1970	35.9%	539
1973-1974	45.1%	694
1980	15.9%	68
1981-1982	24.1%	472
1990	21.2%	87
2000-2001	29.7%	616
2002	31.5%	204
2007-2009	53.8%	517
Average	30.5%	388
B: Declines Not Associated with a Recession		
1961-1962	27.1%	195
1966	25.2%	240
1976-1978	26.9%	525
1987	36.1%	55
1998	19.3%	45
Average	26.9%	212

Source: Ned Davis Research (NDR) Group. Based on Dow Jones Industrial Average declines associated with a recession (table 1A) or those with a decline of 19 percent or more (table 1B) since 1960.

Past performance is not indicative of how the index will perform in the future. The index reflects the reinvestment of dividends and income and does not reflect deductions for fees, expenses or taxes. The index is unmanaged and is not available for direct investment.

Figure 1

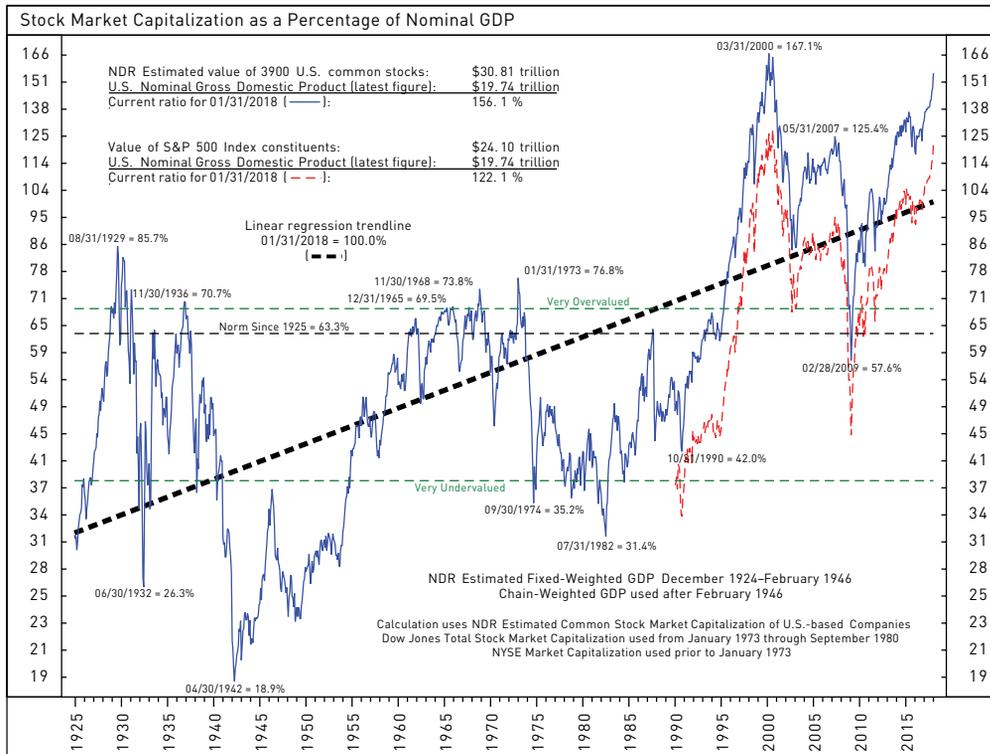
EQUITY VALUATIONS ADJUSTED FOR INTEREST-RATE LEVELS



Sources: Ned Davis Research, Standard and Poor's, Bureau of Labor Statistics. Monthly data, 10/31/1941-01/31/2018 (Log Scale). Past performance is not indicative of how the index will perform in the future. The index reflects the reinvestment of dividends and income and does not reflect deductions for fees, expenses or taxes. The index is unmanaged and is not available for direct investment.

Figure 2

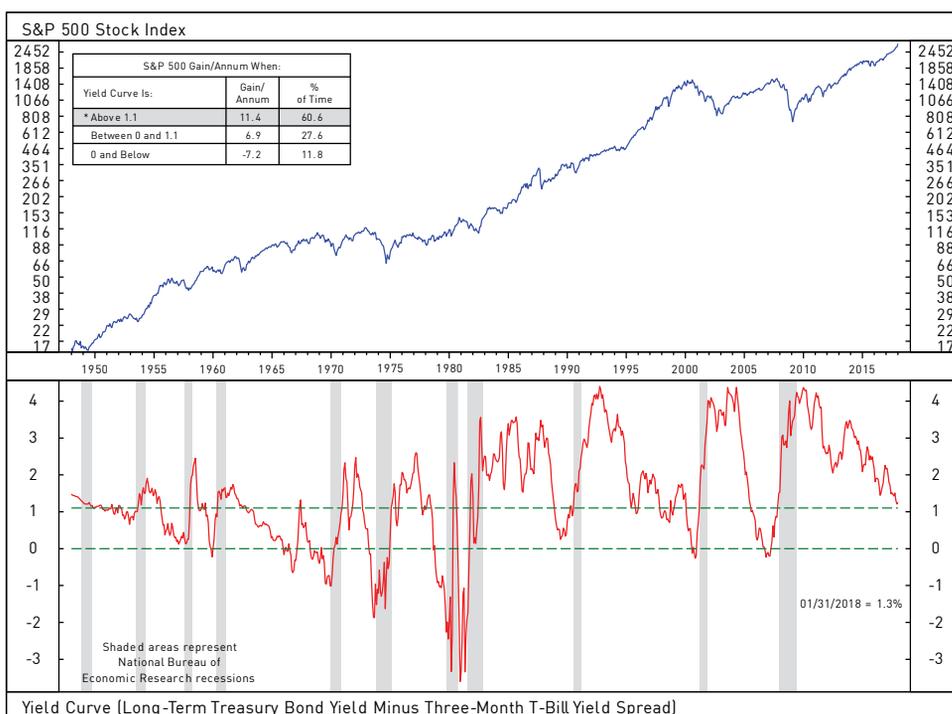
VALUATIONS TRENDING UPWARD



Source: Ned Davis Research. Monthly data 12/31/1924-01/31/2018 (Log Scale). Concept courtesy of Jim Bianco.

Figure 3

THE YIELD CURVE

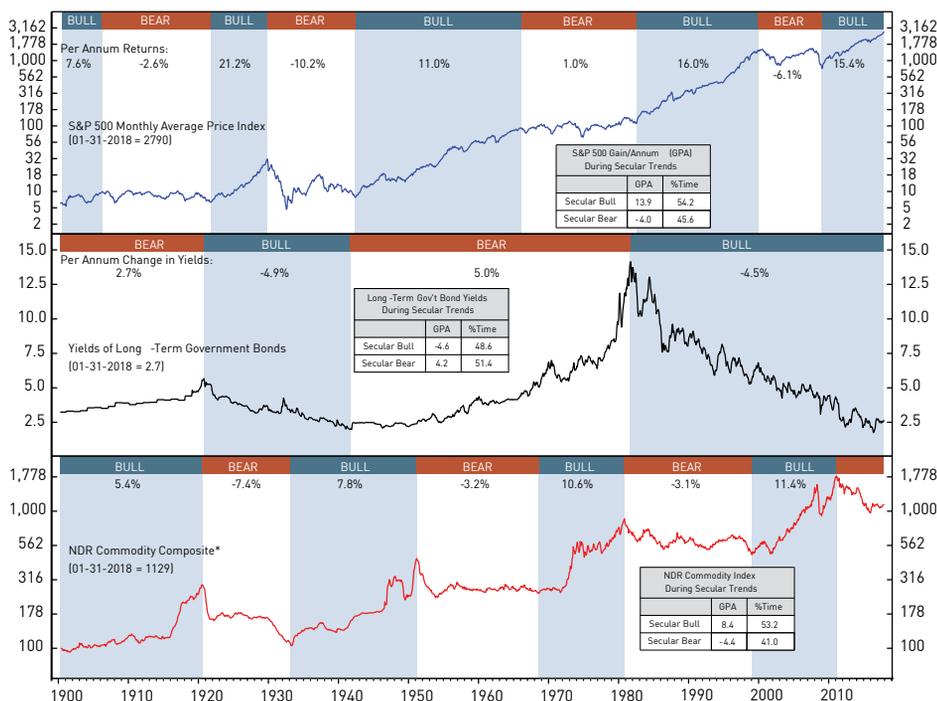


Sources: Ned Davis Research, S&P Dow Jones Indices. Monthly data 01/31/1948-01/31/2018 (Log Scale).

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Figure 4

ASSET CLASSES AND SECULAR TRENDS



Sources: Ned Davis Research, S&P Dow Jones Indices. Monthly data 01/31/1900-01/31/2018 (Log Scale). Yields sources: pre-1919 - A History of Interest Rates by Sidney Homer and Richard Sylla, 2005, 4th edition, Hoboken, NJ: John Wiley & Sons, Inc. (Annual Average); from 1919 to present - Federal Reserve (Annual Close).

Past performance is not indicative of how the index will perform in the future. The index reflects the reinvestment of dividends and income and does not reflect deductions for fees, expenses or taxes. The index is unmanaged and is not available for direct investment.

century. Therefore, it follows that valuations may eclipse the 2000 levels before a significant market peak and downturn in the current market cycle.

In summary, although nominal valuations are high by any measure, interest rates are extremely important in assessing the relative level of equity valuation. Higher interest rates, in our opinion, are the key to signaling the next bear market, according to this analysis. As of this writing, short-term interest rates are at their highest level since 2008 and the 10-year U.S. Treasury note recently has climbed to its highest level since the spring of 2014. We would therefore rate equity valuation to be negative with respect to future valuation levels.

MONETARY POLICY AND CREDIT CONDITIONS

We believe in the principles of pioneering market analyst and investor Marty Zweig, including the principle of “don’t fight the Fed.” When the Federal Reserve is easing monetary policy and credit conditions are accommodative, it provides a healthy environment for equities. A tightening of Fed policy eventually creates a poor environment for equities and sometimes indicates an economic recession.

An inversion of the yield curve—which we define as the spread between the yield on the long-term U.S. Treasury bond and the yield on the three-month U.S. Treasury bill—often has preceded or accompanied both a recession and a stock market decline of 19 percent or more. Figure 3 shows the yield curve since the late 1940s. The yield curve has inverted—i.e., moved below zero, as seen in figure 3—before all recessions since 1960 except for 1990. The 1990 recession was short—only 87 days—as was the subsequent stock market decline. One of the shortest stock market declines without a recession was 1987, which lasted only 55 days, but it was also the steepest decline without a recession, at 36.1 percent. Before 1960, it is interesting to note that there were three

recessions (1949, 1954, and 1957) where the yield curve did not invert. The short and sharp declines of 1962 and 1987 also had neither an inverted yield curve nor a recession. A negative yield curve is usually a good indicator of a recession and subsequent stock market decline. On the other hand, significant declines have happened in the absence of an inversion.

One factor that is common to most important stock market declines is a rise in interest rates. Before virtually every stock market top and subsequent decline, with or without a recession, there has been a rise in interest rates before the market top. Figure 4 is a long-term look (since 1900) at the S&P 500, the yield on long-term U.S. government bonds, and commodities prices. Longer-term secular trends in interest rates are evident in the data, but there was an increase in interest rates before virtually every stock market decline of 19 percent or more, including the non-recessionary events. No one knows how high interest rates must rise before they negatively affect economic activity, but rising interest rates are a negative factor in our process. Growing credit spreads coupled with rising rates might be an indication that we are nearing the end of this economic cycle.

INVESTOR SENTIMENT

We look at investor sentiment from a contrary point of view. As of early 2018, the level of bullish investor sentiment is the most optimistic it has been in many years, which is a negative indicator for the stock market.

One indicator of investor sentiment is the level of cash in mutual funds. A high cash position indicates that investors are fearful of the market, which is positive for the stock market from a contrarian point of view. A low cash position indicates that mutual funds have put most of their cash to work already, which is usually negative for the stock market. As with valuation measures, it is important to adjust cash positions for the general

level of interest rates because the holding of cash positions will, at least in part, be influenced by the prevailing level of the yield on short-term securities.

Figure 5 shows the level of U.S. stock mutual fund cash adjusted for interest rates for the past 50 years. During the 1960s, cash levels were generally high. Nonetheless, the lowest relative levels of cash were evident at the stock market peaks of 1960, 1962, 1966, and 1968–1970. As inflation and stagflation increased in the 1970s, cash levels declined again before the stock market tops of 1973–1974, 1976–1978, 1982, 2000–2002, and 2008–2009.

As of February 2018, this indicator is in neutral territory despite the fact that virtually all other measures of sentiment (not adjusted for interest rates) are negative. We believe that a cautious market view should be maintained due to the current high levels of investor optimism. The last piece of the puzzle is likely to be a general increase in interest rates, which then would likely precipitate an interest rate-adjusted low level of cash in mutual funds.

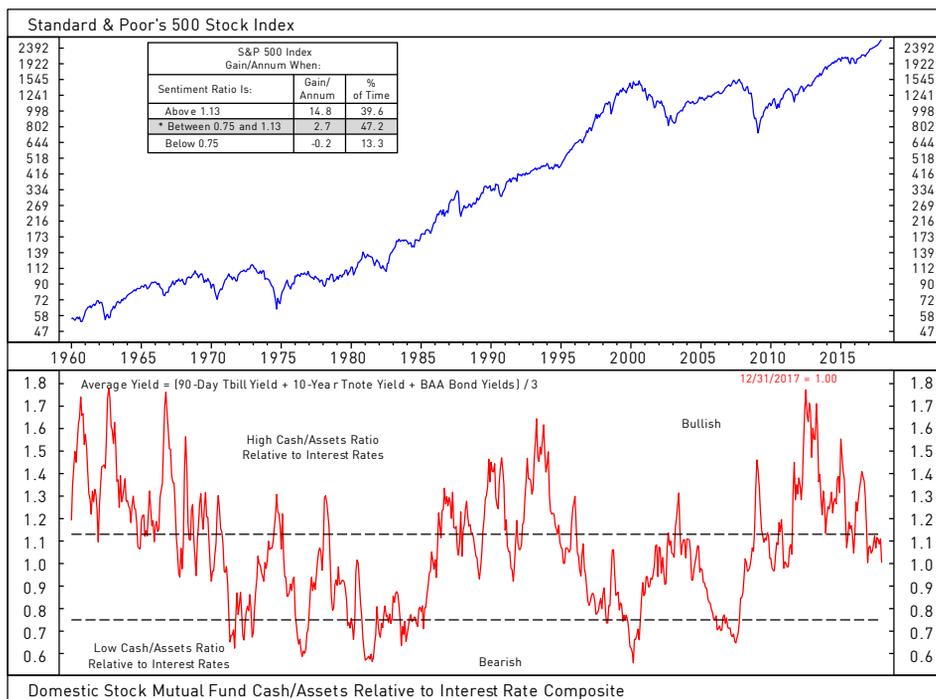
As is the case with valuation, investor sentiment measures must be seen in a broader economic context. A rise in interest rates would push these indicators, which are already in negative territory, to levels that would indicate a more significant market top. Interest rates appear to have begun this climb already. Investor sentiment therefore must be judged to be in negative territory.

MOMENTUM

Another key tenet from Marty Zweig is “don’t fight the tape.” When momentum is strong, the market’s advance is broad-based with the majority of sectors participating in the advance. On the other hand, when the major market averages are rising but the rest of the market is not confirming the new highs, it is usually a sign of impending weakness for the market as a whole. Virtually all

Figure 5

LEVEL OF U.S. STOCK MUTUAL FUND CASH ADJUSTED FOR INTEREST RATES

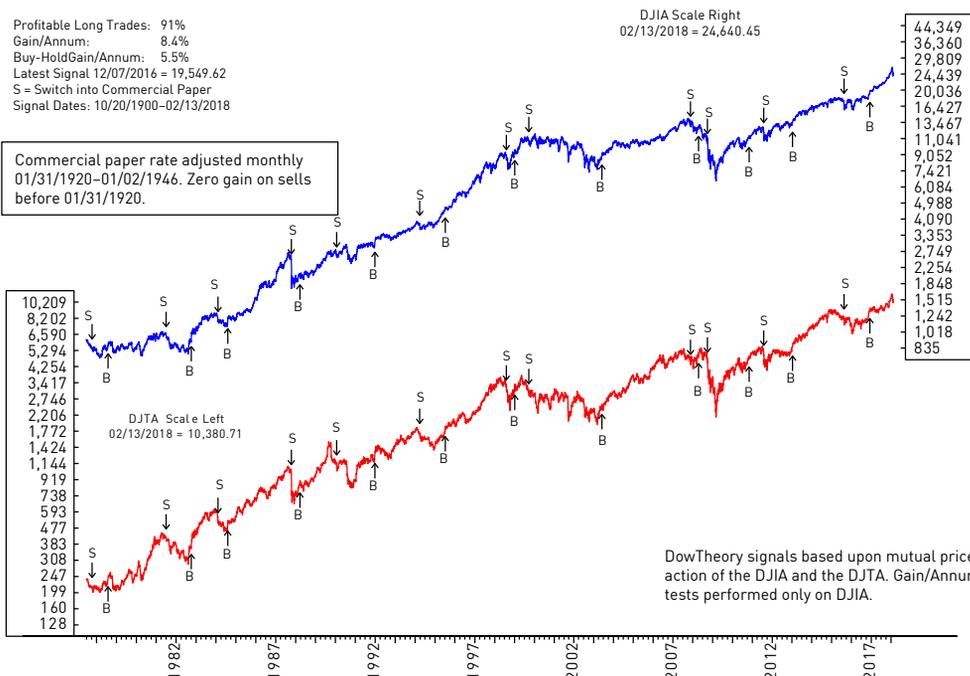


Sources: Ned Davis Research, S&P Dow Jones Indices, Investment Company Institute. Monthly data 01/31/1960-12/31/2017 (Log Scale).

Past performance is not indicative of how the index will perform in the future. The index reflects the reinvestment of dividends and income and does not reflect deductions for fees, expenses or taxes. The index is unmanaged and is not available for direct investment.

Figure 6

DOW THEORY SIGNALS (HISTORICAL PERSPECTIVE)



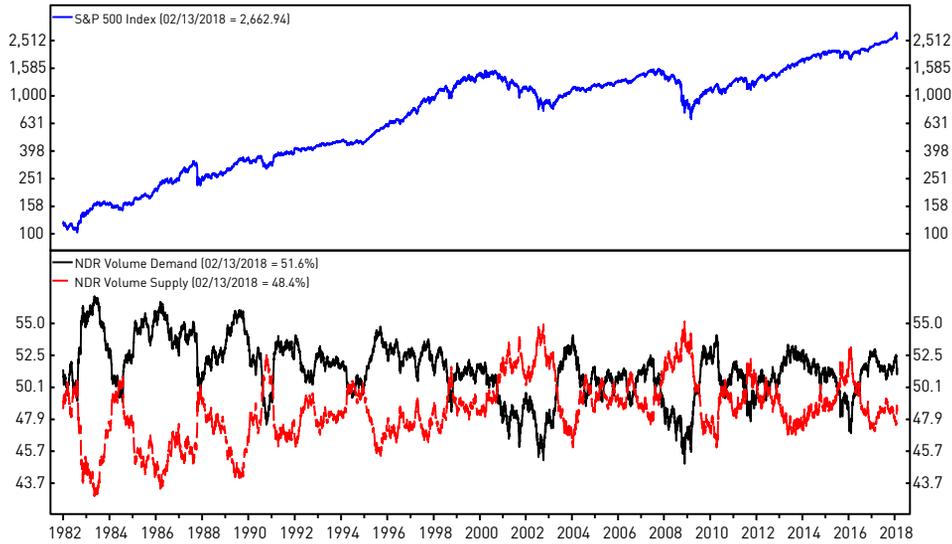
Sources: Ned Davis Research, S&P Dow Jones Indices. Daily data 06/23/1977-02/13/2018 (Log Scale).

Past performance is not indicative of how the index will perform in the future. The index reflects the reinvestment of dividends and income and does not reflect deductions for fees, expenses or taxes. The index is unmanaged and is not available for direct investment.

This chart is provided to show the historical performance of suggested Dow Theory signals. The determination of a signal is subjective and is often determined after the signal date by a consensus of sources and opinions. This chart should not be used in real time for market guidance.

Figure
7

VOLUME SUPPLY AND DEMAND



Sources: Ned Davis Research, S&P Dow Jones Indices. Daily data 12/31/1981-02/13/2018. Past performance is not indicative of how the index will perform in the future. The index reflects the reinvestment of dividends and income and does not reflect deductions for fees, expenses, or taxes. The index is unmanaged and is not available for direct investment.

major market declines, including all 14 periods noted previously and most market corrections of 10 percent or more, have been preceded by some divergences between the major averages and the broad list of stocks.

There are many ways of looking at momentum and divergences. One of the simplest methods is the Dow theory, which was derived from 255 editorials in the *Wall Street Journal* written by Charles H. Dow (1851-1902). Following Dow’s death, several of his colleagues gave the theory a more formal structure (Dow himself never used the term “Dow theory” nor did he ever present it as a trading system). The Dow theory measures the divergence between the performance of the Dow Jones Industrial Average (DJIA) and the Dow Jones Transportation Average (DJTA). When one average hits new highs and the other does not, a divergence is created. The divergences between the averages create buy and sell signals, but, despite Dow’s colleagues’ rules, these signals are often subjective. Nonetheless, divergences are important, and this simple rules-based method of measuring them demonstrates the type of divergence we look for to determine

the health of the market (see figure 6). Based upon the (subjective) rules presented in figure 6, the history of buy and sell signals is helpful. Since 2016, both averages have been in sync and therefore have indicated a healthy market.

Another important factor in assessing the underlying strength of the market and potential divergences is through an analysis of up and down volume in the market (see figure 7). “Volume supply” is the smoothed total volume of declining issues and “volume demand” is the smoothed total volume of advancing issues using Broad Market Equity Series (BMES) All-Cap Volume data. The results in table 2 represent the performance of the S&P 500 when the volume demand crosses above and below volume supply.

When volume demand is greater than volume supply, which suggests that investors are enthusiastic about the market, the S&P 500 historically has a higher gain per annum. When volume demand is less than volume supply, which suggests that investors are cautious about the market, the S&P 500 historically has a lower gain per annum.

The bottom portion of figure 7 plots the ratio of the 10-day total of the number of advancing issues to the 10-day total of the number of declining issues. When advancing issues outnumber declining issues by a wide margin over a 10-day period, it generally indicates a significant shift in market momentum and tends to be followed by further gains. The NDR Multi-Cap Institutional Equity Series universe, which uses only common stocks drawn from all U.S.

Table
2

S&P INDEX PERFORMANCE (DECEMBER 31, 1981 TO FEBRUARY 13, 2018)

NDR Volume Demand is	% Gain/Annum	% of Time
Above NDR Volume Supply	11.57	78.80
Below NDR Volume Supply	-0.52	21.20
Buy/Hold	8.89	-

Sources: Ned Davis Research, S&P Dow Jones Indices. Daily data 12/31/1981-02/13/2018. Past performance is not indicative of how the index will perform in the future. The index reflects the reinvestment of dividends and income and does not reflect deductions for fees, expenses, or taxes. The index is unmanaged and is not available for direct investment.

exchanges (i.e., excluding non-common issues such as closed-end funds, preferred stocks, etc., and including non-NYSE stocks), is designed to give a clearer view of true market breadth.

When the models of upside and downside volume cross, it often signals a change in the trend in the market. For example, the last time downside volume rose above upside volume was in late 2015. The S&P 500 subsequently declined 14.5 percent into February 2016. As of February 2018, upside volume remains above downside volume. If supply rises above demand in the future, it would indicate further caution.

SUMMARY AND CONCLUSION

Although nominal equity valuations are historically high after adjusting for interest rates, they are still below their 2000–2002 and 2008–2009 levels. Nonetheless, equity valuations must be deemed to be negative by any historical standard. Further interest-rate increases, even without any corresponding rise in stock prices, would drive this indicator further into negative territory.

The monetary and credit picture is more mixed. The recent swift rise in interest rates, anticipated hikes in the fed funds rate, and continuing reduction in the Fed's balance sheet all indicate a definitive move toward a tightening monetary policy, which is typically negative for stocks. On the other hand, credit spreads remain narrow. Credit spreads usually widen before more significant declines, which has not happened yet. Also, although an inverted yield curve is not always a precursor to larger stock market declines, the yield curve is still positive, which buttresses the argument that the stock market has not yet begun to discount a recession. It is important to note, however, that a continuing rise in interest rates likely would move these indicators closer to negative territory.

Investor sentiment is at historically elevated levels of bullishness, which is negative from a contrary point of view.

As an example, mutual fund cash levels adjusted for interest rates show that this measure of investor sentiment is negative, but not quite as negative as it was in 2000–2002 or 2008–2009. Nonetheless, rising interest rates would likely move this metric in a negative direction for the stock market. Indeed, this indicator is now falling to levels that are the most negative in a decade.

... although an inverted yield curve is not always a precursor to larger stock market declines, the yield curve is still positive, which buttresses the argument that the stock market has not yet begun to discount a recession.

Finally, market momentum has been strong in recent years with broad participation. The DJIA and the DJTA have been in sync, and therefore bullish, since 2016. If the DJTA begins to significantly underperform the DJIA (or vice-versa), it would be a negative signal. Likewise, measures of volume have not yet indicated that selling pressure has overcome buying pressure, although they are moving in that direction.

In summary, our analysis indicates that we are in the late stages of the economic and stock market cycle. Valuation and sentiment are negative and, although the monetary and credit picture is still mixed, a continuation of the recent rise in interest rates likely would have a negative impact on our monetary and credit factors as well as valuation and sentiment. Momentum has been positive for the past few years. The market's recent early 2018 weakness could create divergences. Utilities and real estate investment trusts already are beginning to weaken as the result of higher interest

rates, yet more-serious divergences have yet to arise. If more serious divergences arise in 2018, such as the major market averages outperforming the broad market and an increase in downside volume, it would turn our momentum models negative. Coupled with the negative readings in valuation, monetary policy, and sentiment, these factors would complete the picture of a high probability of economic weakness and accompanying stock market decline in the next 12–24 months in our view. ●

Ricardo L. Cortez, CIMA®, is the co-chief executive officer of Broadmark Asset Management, where he is responsible for day-to-day business activities and sales and marketing; he is a member of the investment team and serves as the firm's chief risk officer. He co-manages the Salient Tactical Growth Strategy. He earned a BA cum laude from Queens College, City University of New York. Contact him at rcortez@broadmarkasset.com.

ENDNOTES

1. These include all declines associated with recessions and all other declines of 19 percent or more since 1960.
2. Our investment process was created in the 1980s by Chris Guptill, chief executive officer of Broadmark Asset Management, and builds upon the work of Marty Zweig, Ned Davis, Robert J. Farrell, Edson Gould, and others.

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