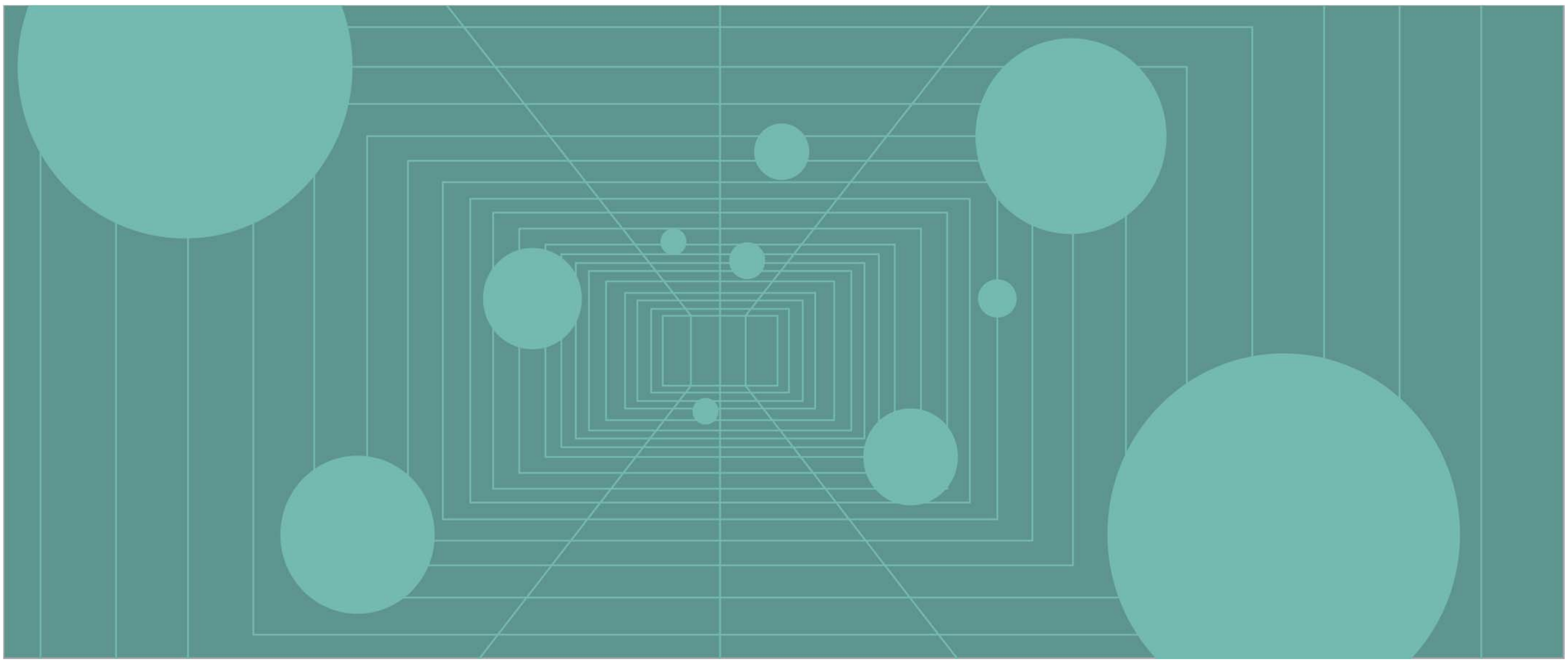
BEAR MARKET INDICATORS

WHERE ARE WE IN THE US CYCLE?



CAMBRIDGE ASSOCIATES

AUGUST 2018

It's Getting Late; Diversification is Becoming More Valuable

Economic and market signals today are mixed, but generally portray a modestly expanding global economy with solid earnings growth. Economic growth in major developed markets was tracking at unsustainably high rates at the start of the year, but has now downshifted and appears to have stabilized at a more sustainable trajectory. Most economists believe the US economic cycle is relatively advanced, and is moving into later stages that are often marked by slowing growth, rising inflation, and tightening liquidity and credit conditions. Risky assets tend to generate low positive returns as economies move into late stages, but with increased volatility and pressure on valuations, even as earnings grow. The end of the late stage is the worst period for risky assets, as the economy shifts into recession, earnings contract, defaults increase, and valuations decline—reflecting dimmed prospects. Our analysis of data for the United States (the economy that is the furthest along in the economic cycle) is consistent with the consensus that its economy is in the early part of the late cycle, and reinforces the difficulty of reading such data.

For each bear market we evaluate three areas: VALUATIONS, ECONOMIC CONDITIONS, and CORPORATE FUNDAMENTALS. To understand where each bear market stands relative to past cycles, we show the percentile of the most extreme metric (e.g., highest valuation, lowest unemployment rate, most inverted yield curve, highest corporate leverage, and profit margins); the lead or lag time between when the peak was reached and when the equity bear market began; and the current percentile ranking of the metric. Percentiles are based on an expanding window, using only data available at the time of the peak reading, so that we don't introduce hindsight bias into the analysis. We also evaluate ECONOMIC SECTOR CONCENTRATION by looking at the relationship between dominance of one sector and timing of bear markets.

In short, the available data suggest that it is getting late in the cycle, but there is nothing to indicate a recession is imminent. These factors, combined with still strong global earnings and economic growth, provide reasonable support for markets. Although late-cycle periods tend to feature modest returns as discussed above, risky assets should still be expected to outperform more defensive assets (such as cash and high-quality bonds) in this environment, provided that incipient stresses, especially monetary policy tightening, USD strength, the risk of another slowdown in China, and trade frictions, don't accelerate the end of the cycle.* On balance, neutral risk positioning remains sensible. However, the potential for forces to shorten the cycle must be monitored. Maintaining appropriate levels of diversification and liquidity to meet cash requirements during periods of stress is becoming increasingly important.

* For more on these potential market and economic stressors, please see our third quarter 2018 edition of *VantagePoint*, published July 23, 2018.

The most severe bear markets tend to occur around recessions

S&P 500 PRICE INDEX DECLINES IN BEAR MARKETS AND RECESSIONS
January 31, 1980 – June 30, 2018 • Price Index Level (Log Scale)

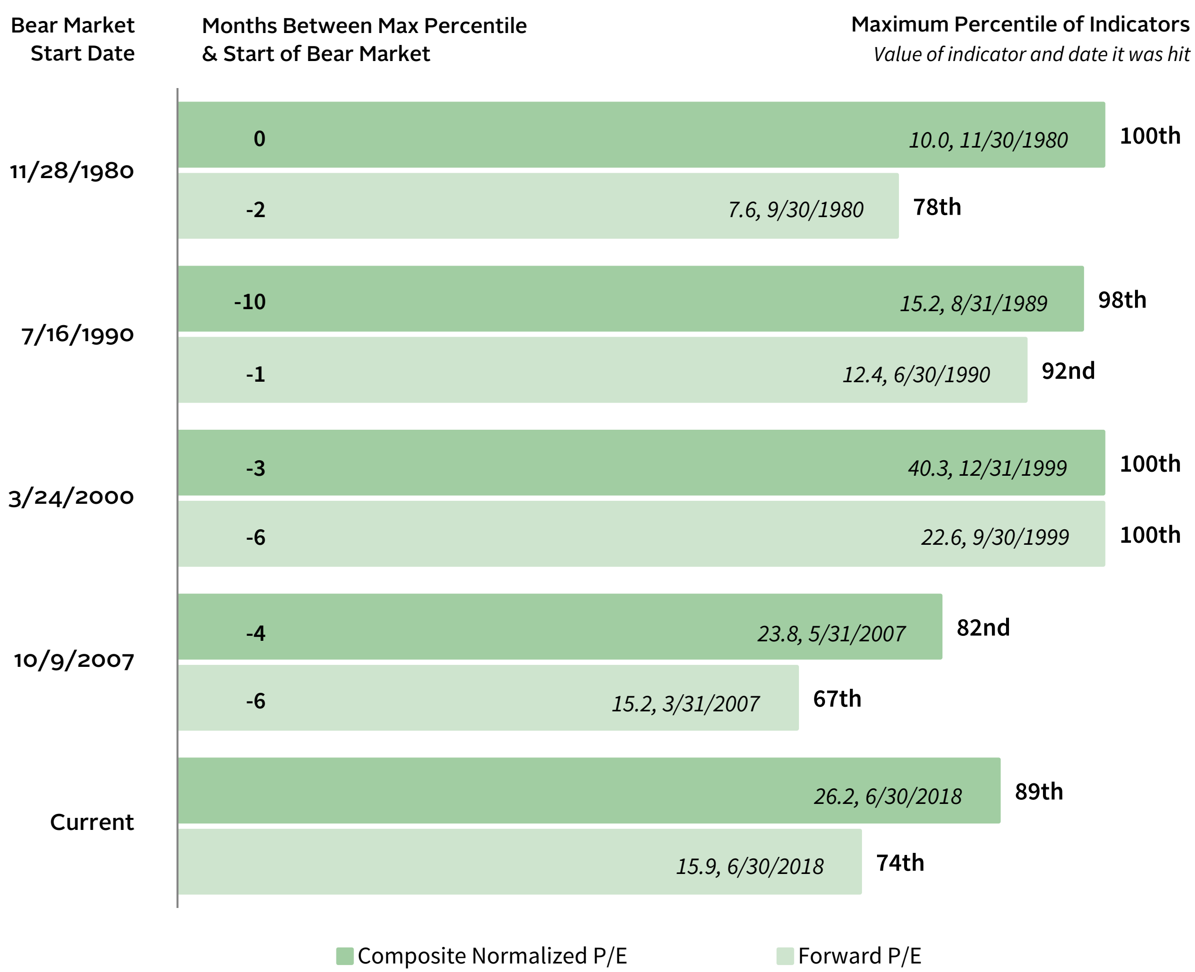
We look at bear markets with declines in the S&P 500 of roughly 20% or more that are associated with recessions, as these tend to be the most severe and/or prolonged equity bear markets.

Sources: National Bureau of Economic Research (NBER), Ned Davis Research, Inc., Standard & Poor's, and Thomson Reuters Datastream.
Notes: Bear markets are based on a peak-to-trough percentage change in the S&P 500 Price Index of at least 19% (USD terms). Shaded areas indicate NBER-defined recessions.
* Bear market is shown in aggregate despite multiple component sell-offs greater than 19%.

US equity valuations are approaching levels experienced leading into prior bear markets

VALUATION INDICATORS: MAXIMUM PERCENTILES PRIOR TO OR DURING BEAR MARKETS

As of June 30, 2018 • Percentiles (Expanding Window)



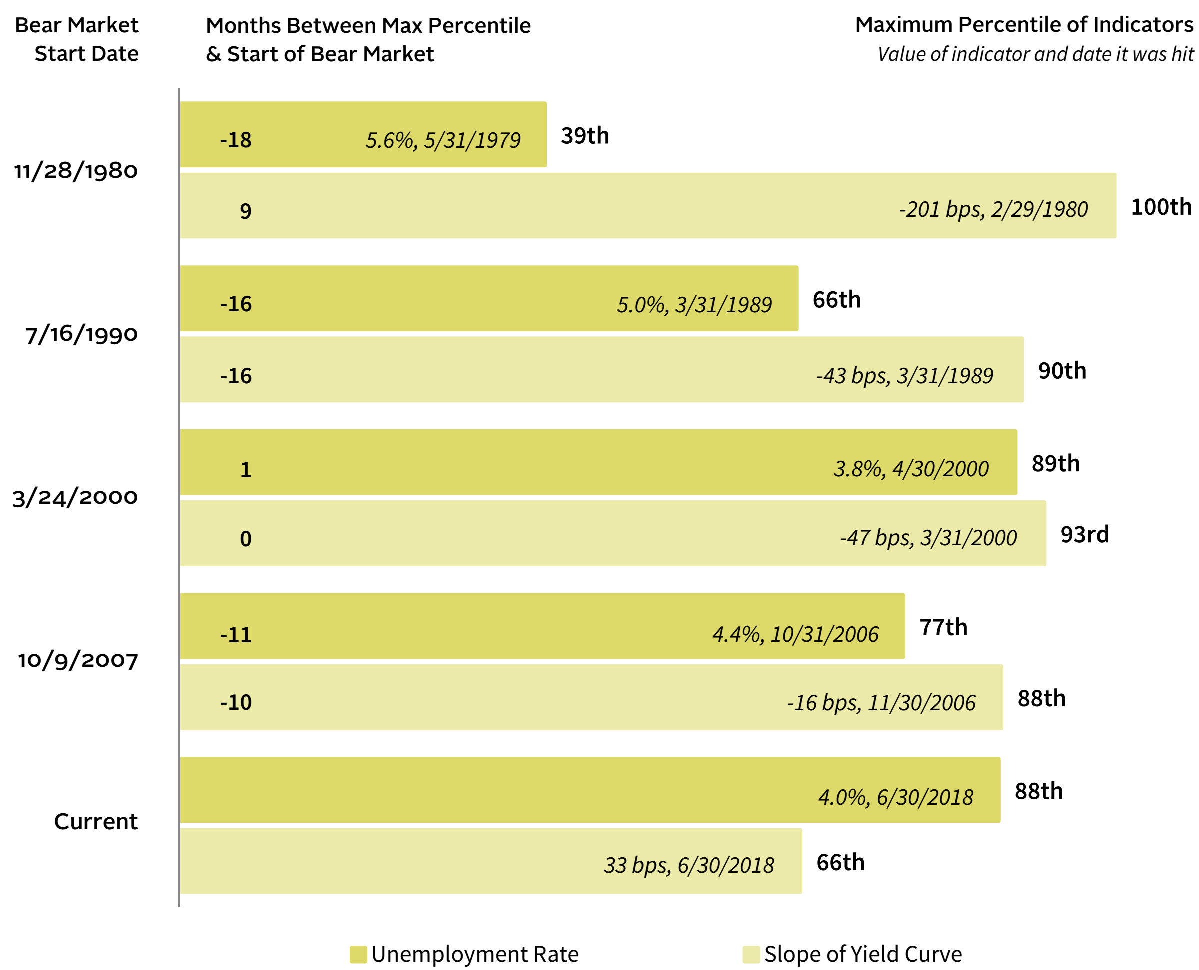
Peak valuations lead bear markets, but levels vary for different periods. Though not shown here, valuations can remain high for a very long time before markets correct. Today, valuations are elevated in absolute terms; only peak valuations in the 2000 bubble period are higher. In percentile terms, based on our expanding window methodology, valuations remain below where they were at most prior market peaks.

Sources: AltaVista Research LLC, MSCI Inc., National Bureau of Economic Research, and Standard & Poor's. MSCI data provided "as is" without any express or implied warranties.
Notes: Only bear markets that coincide with recessions are included in the chart. Bear markets are based on a peak-to-trough percentage change in the S&P 500 Price Index of at least 19% (USD terms). Percentile calculations are based on data that start on December 31, 1978; however, only bear markets in 1980 or later are shown on the chart. Time between maximum percentile and start of bear market is negative when indicators peaked in advance of the bear market start and positive when the indicator lagged the bear market start.

Unemployment rate very low, but yield curve not inverted

ECONOMIC INDICATORS: MAXIMUM PERCENTILES PRIOR TO OR DURING BEAR MARKETS

As of June 30, 2018 • Percentiles (Expanding Window)



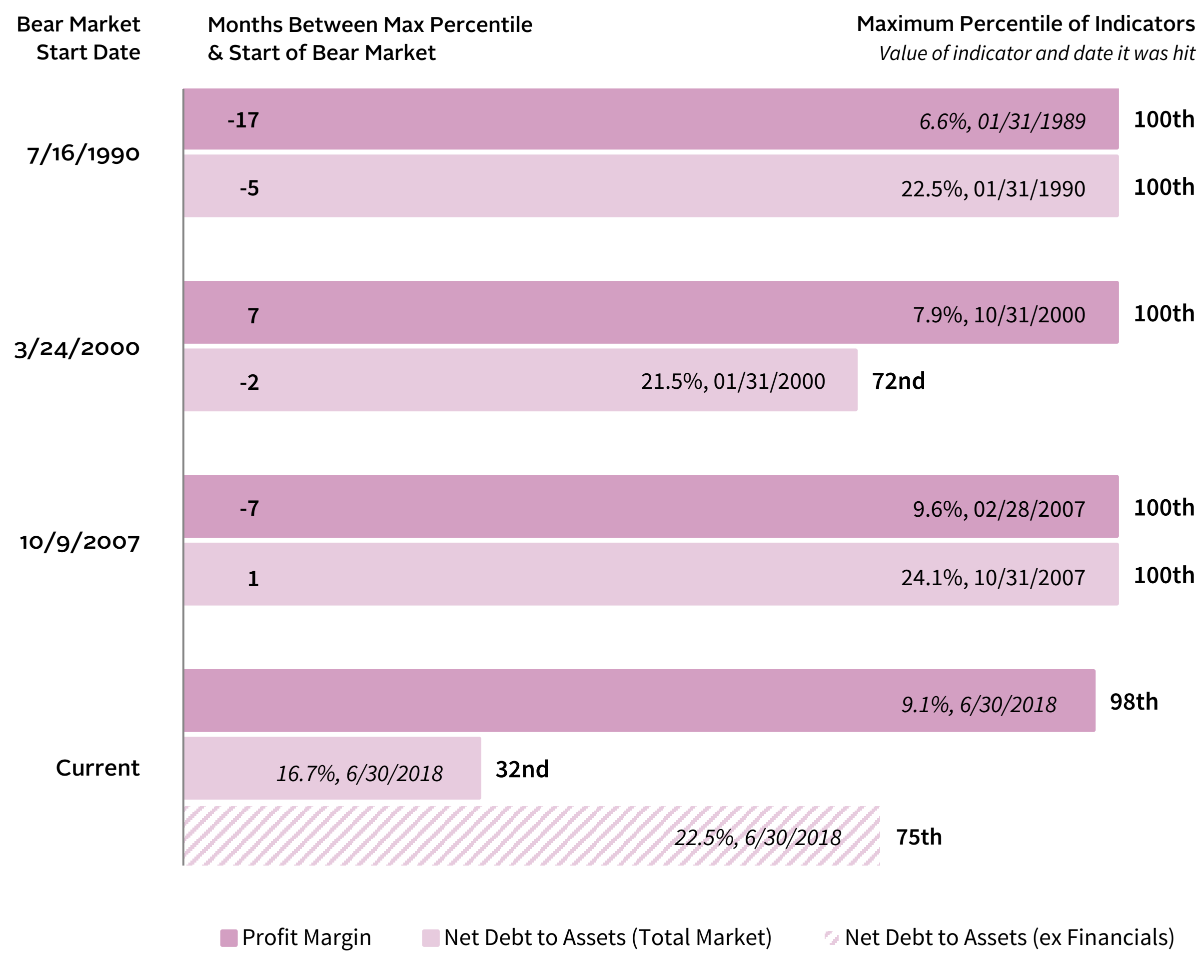
Unemployment rates at the start of each bear market differ. But, the key isn't the rate, rather the direction. Once unemployment starts to increase, recessions typically follow. The 4.0% US unemployment rate is very low (88th percentile) suggesting there isn't much room to decline further. Similarly, the yield curve has always inverted around recessionary bear markets, coincident with or roughly 12–18 months in advance of recessions. The yield curve today is flattening, but still positive. As of June 30, it was at the 66th percentile (33 bps separated the yields of the 10- and 2-year Treasury notes), and it has come down further in July. We have seen a similar slope before in the United States and it held roughly that level for many years (1994–99) without a recession.

Sources: National Bureau of Economic Research, Standard & Poor's, Thomson Reuters Datastream, US Department of Labor - Bureau of Labor Statistics, and US Department of Treasury.
Notes: "Slope of Yield Curve" represents the difference between the yield on benchmark 10-year and 2-year US Treasuries. Only bear markets that coincide with recessions are included in the chart. Bear markets are based on a peak-to-trough percentage change in the S&P 500 Price Index of at least 19% (USD terms). Percentile calculations are based on data that start on January 31, 1948; however, only bear markets in 1980 or later are shown on the chart. Time between maximum percentile and start of bear market is negative when indicators peaked in advance of the bear market start and positive when the indicator lagged the bear market start.

US corporate fundamentals are mixed

FUNDAMENTAL INDICATORS: MAXIMUM PERCENTILES PRIOR TO OR DURING BEAR MARKETS

As of June 30, 2018 • Percentiles (Expanding Window)



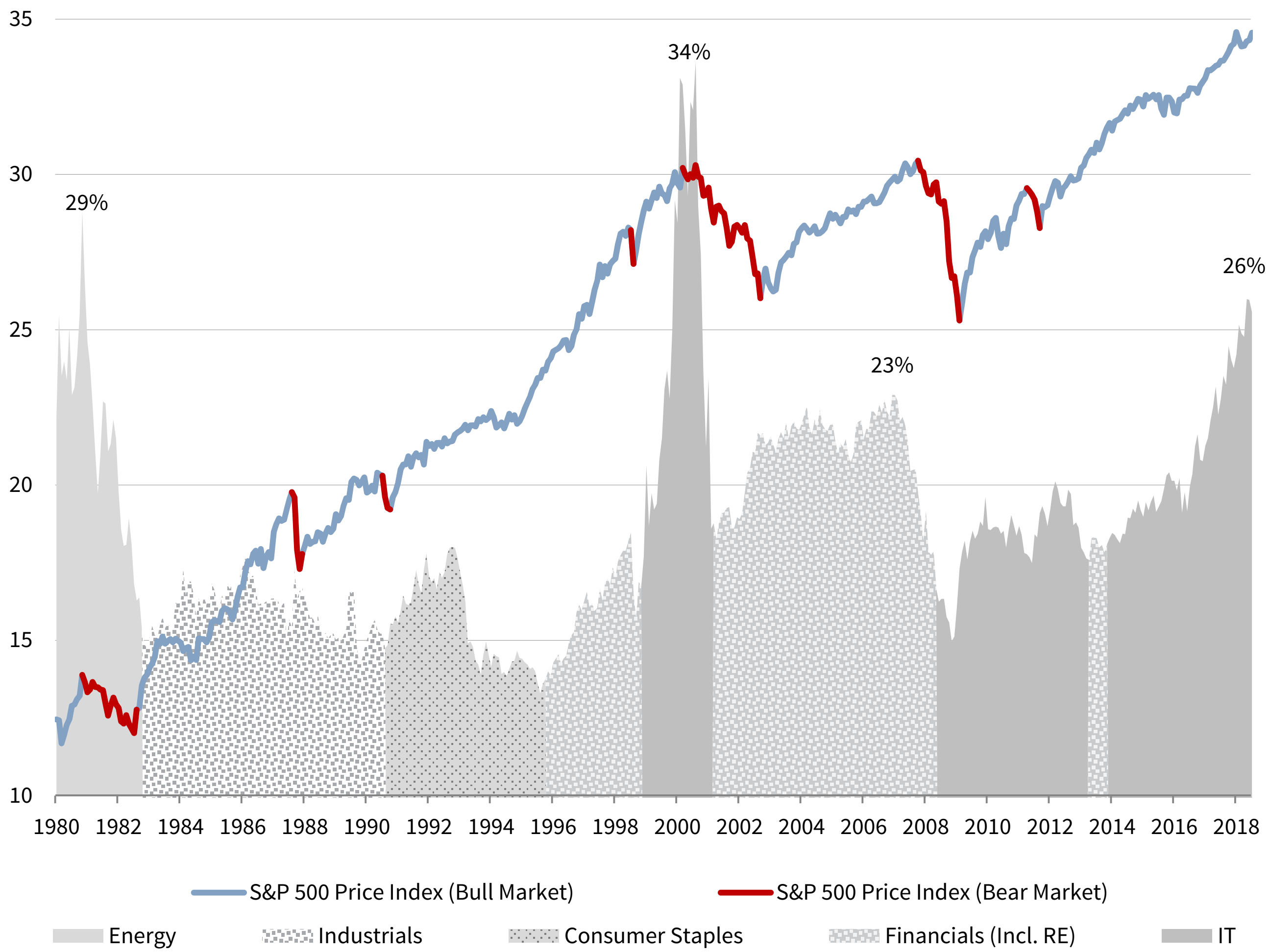
Profit margins tend to peak around the start of bear markets (with leads and lags) and are quite high today, suggesting little room for further improvement. In contrast, corporate leverage (defined as net debt to assets) has varied ahead of bear markets. Leverage today is quite low for this late cycle, largely because financial sector leverage has remained muted due to post-crisis regulatory constraints that were not in place in prior cycles. Excluding financials, corporate leverage is quite a bit higher, consistent with late-cycle levels, but not extreme (especially considering still-low interest expense and relatively long debt maturities).

Sources: National Bureau of Economic Research, Standard & Poor's, and Thomson Reuters Datastream.
Notes: Data are based on the Datastream US Total Market Index. Only bear markets that coincide with recessions are included in the chart. Bear markets are based on a peak-to-trough percentage change in the S&P 500 Price Index of at least 19% (USD terms). Percentile calculations are based on data that start on December 31, 1980; however, only bear markets in 1990 or later are shown on the chart. Time between max percentile and start of bear market is negative when indicators peaked in advance of the bear market start and positive when the indicator lagged the bear market start.

Economic sector concentration can be a harbinger of bear markets

S&P 500 INDEX PERFORMANCE AND LARGEST SECTORS BY MARKET CAPITALIZATION

January 31, 1980 – June 30, 2018 • Price Index Level (Log Scale) and Weight of Largest S&P 500 Sector (%)



When a sector grows to be more than 20% of the market, a bear market in that sector sometimes drags down the broader market. Three of the last four major bear markets were preceded by sector concentration greater than 20%. However, high sector concentration can persist—as we saw in the oil shock of late 1970s, the TMT bubble of the late 1990s, and the financial sector excesses of the 2000s. Today, the tech sector has crossed this 20% threshold, suggesting that the end of tech dominance may presage the next bear market.

The big question is when.

Sources: Global Financial Data Inc., Ned Davis Research Inc., Standard & Poor's, and Thomson Reuters Datastream.

Notes: The chart shows the GICS sector with the highest weight in the index at each point-in-time, on a monthly basis. A sector must maintain the highest weight for at least six months to be included. Bear markets are based on a peak-to-trough percentage change in the S&P 500 Price Index of at least 19% (USD terms).

Celia Dallas, Chief Investment Strategist

Joe Comras, Senior Investment Associate