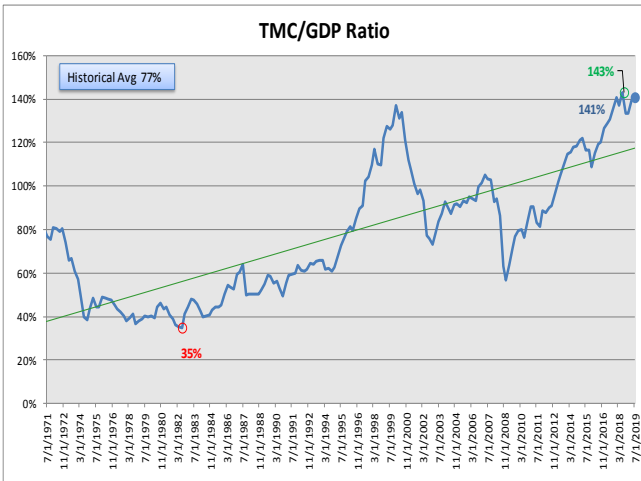


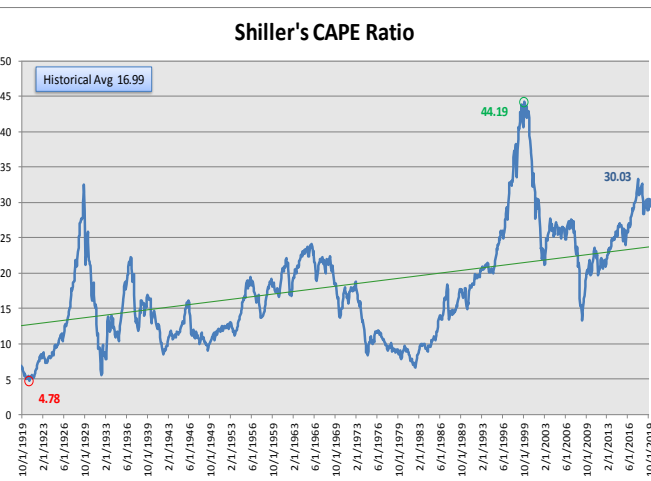
## Market Value Indicators

TMC/GDP Ratio



Called “probably the best single measure of where valuations stand at any given moment” by Warren Buffett, this is the ratio of the total market value over the GDP. A ratio of over 100% indicates significant overvaluation while less than 50% implies undervaluation. This indicator is updated monthly utilizing quarterly GDP data.

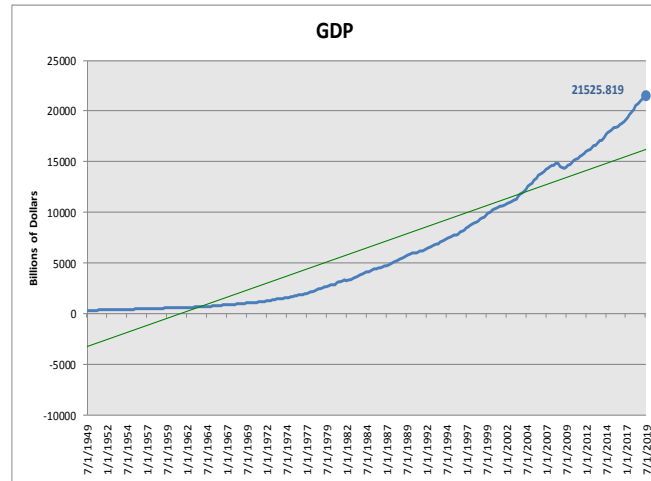
Shiller's CAPE Ratio



Suggested by value investor Benjamin Graham and developed by Yale Economist Robert Shiller, the ratio averages earnings over 10 years (adjusted for inflation) and compares that with the price of the S&P 500. This can then be used to determine if the market is over or undervalued using the historical average of about 16 as a reference point. This value is updated monthly.

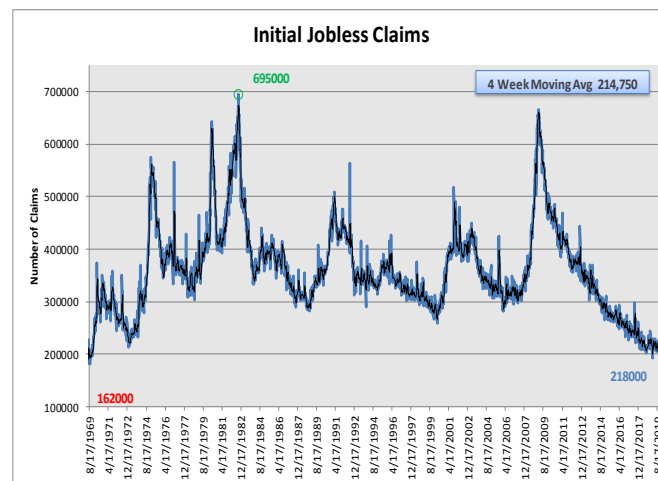
## Economic Indicators

GDP



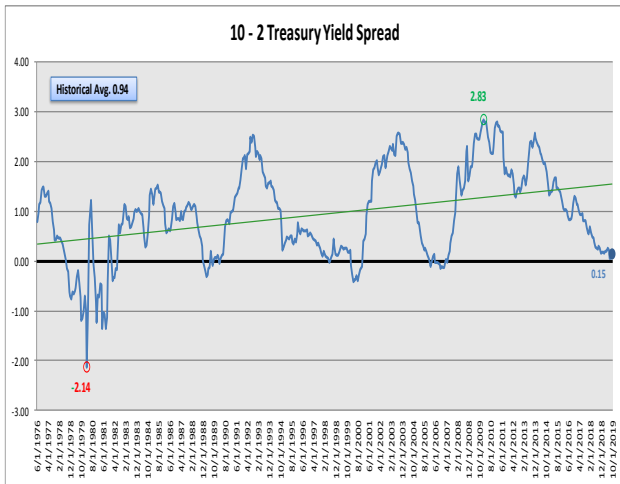
This graph shows the GDP, which is the measure of the value of economic activity within the United States. It is updated at the end of every quarter.

Initial Jobless Claims



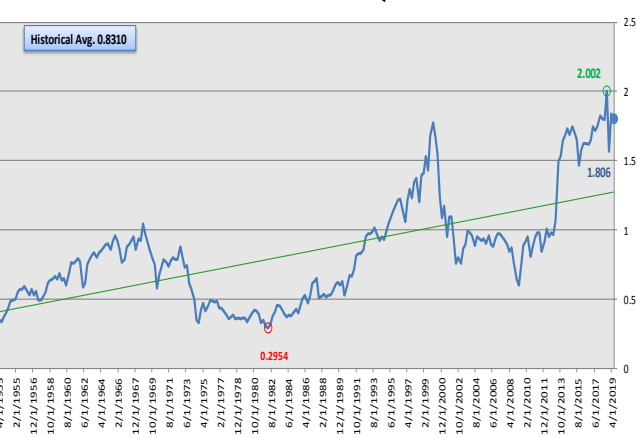
This shows the number of people who are filing for the first time to receive unemployment insurance benefits. The 4 week moving average is an important leading economic indicator observed for upward or downward trends. This is reported weekly by the U.S. Department of Labor.

## Market Value Indicators



The spread between the 10-2 serves as an indicator of the yield curve which in turn helps to shape economic expectations. A higher spread indicates a steepening of the curve which implies stronger growth, higher inflation, and interest rate increases. Conversely a lower spread means the curve is flattening which points to weaker growth, lower inflation, and lowered rates. An inversion of the curve has historically preempted severe stock market collapse as it did prior to the early 1990s recession, the tech bubble, and the financial crisis of 07-08.

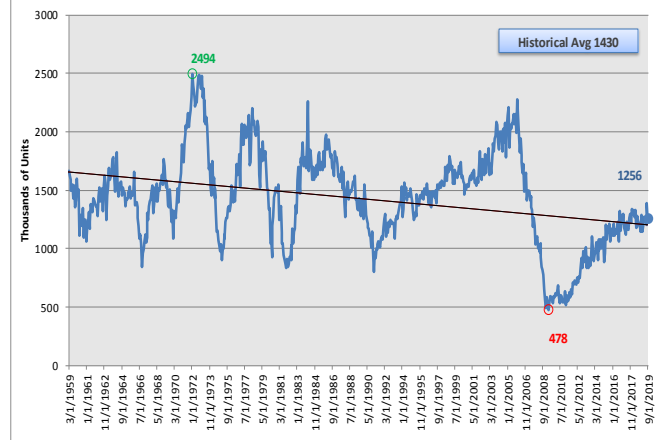
### Historical Tobin's Q



The Q ratio is the total market value of companies in relation to the total asset value of each company. It answers the question: does the market over or under value the replacement cost of assets? The Q ratio is released every quarter.

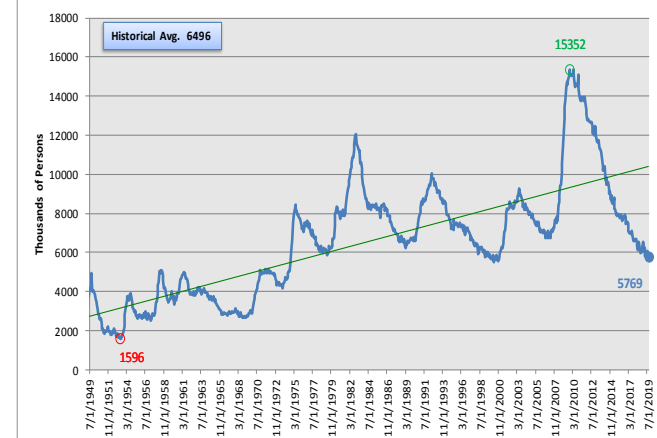
## Economic Indicators

### Housing Starts



This shows housing starts, which are the number of new residential construction projects that have begun during the month, over time.

### Unemployment Level



This shows the number of people in the United States that are unemployed, but have actively looked for employment in the last 4 weeks (u3). It is not a reflection of total unemployment as it doesn't include those who have stopped looking for work (u6). These numbers are released monthly by the U.S. Bureau of Labor Statistics.

## Recent trends of the Market Value Indicators:

Economic Indicator	Previous Period	Current Period	% Change	Previous Year 12/31/18	YTD
GDP	21340.3	21525.8	→ 0.87%	21098.827	→ 2.02%
Jobless Claims	213000	218000	→ 2.35%	231000	↓ -5.63%
Housing Starts	1386000	1256000	↓ -9.38%	1142000	↑ 9.98%
Unemployment Level	6044	5769	→ -4.55%	6294	↓ -8.34%

## Recent trends of the Economic Indicators:

Economic Metric	Previous Period	Current Period	% Change	Previous Year 12/31/18	YTD
TMC/GDP Ratio	139%	141%	→ 1.44%	133%	↑ 6.02%
Shiller's CAPE Ratio	28.91	30.03	→ 3.87%	28.29	↑ 6.15%
10 - 2 Treasury Yield Spread	0.05	0.15	↑ 200.00%	0.16	↓ -6.25%
Tobin's Q	1.836	1.806	→ -1.63%	1.564	↑ 15.47%

Things to note about the graphs:

The dashed line indicates the historic mean of that metric or report

The black line seen on the Jobless Claims graph is the 4 week moving average, which is used to decrease the week to week volatility often seen with this report

The green or red line is the historic trend of that metric or report

The green or red circles indicate the historic high or low for that metric or report