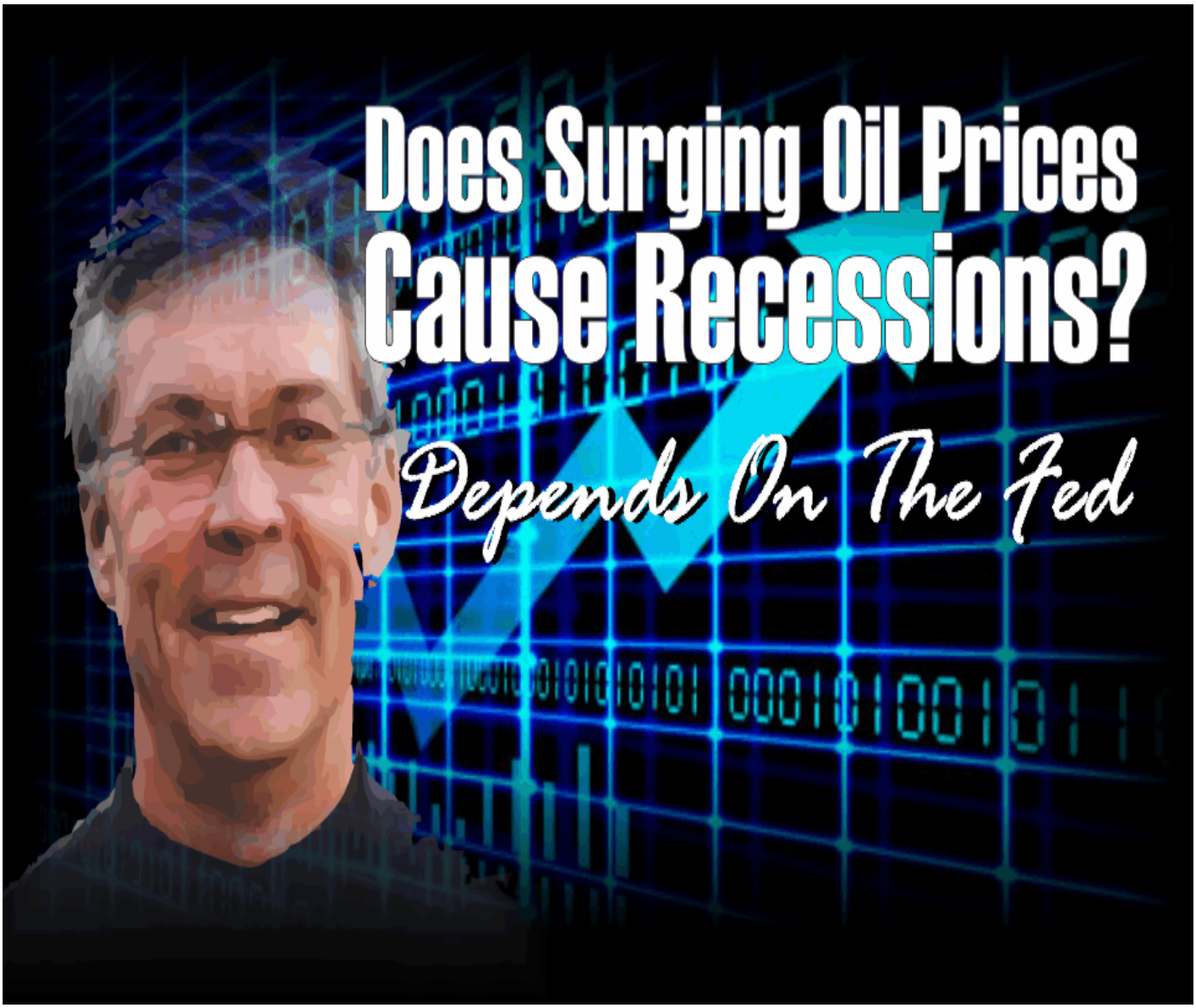
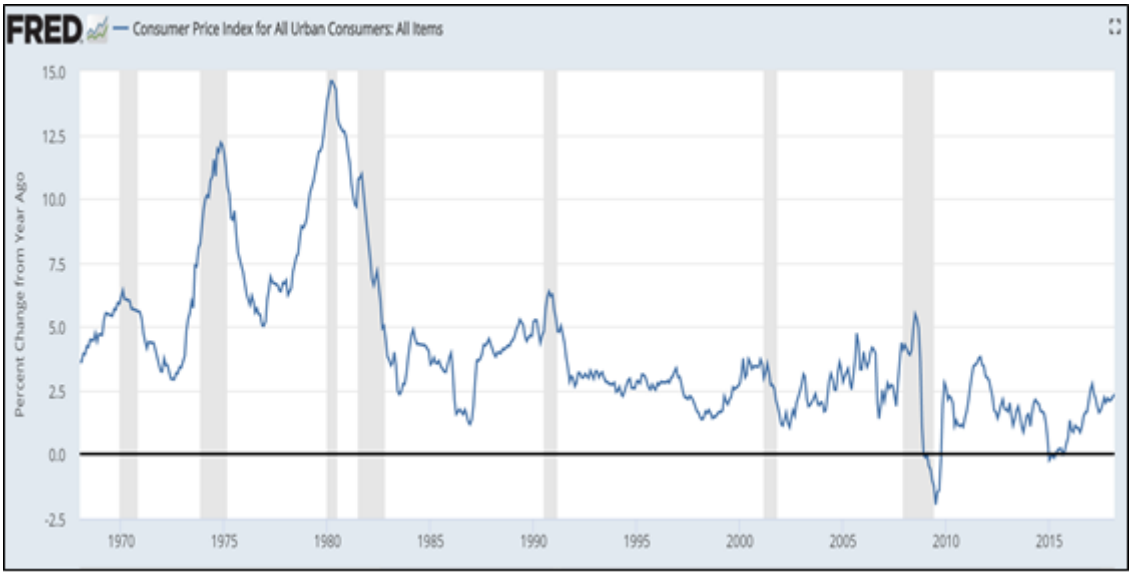


*?Peter Cook is the author of the **?Is That True??**•series of articles, which help explain the many statements and theories circulating in the mainstream financial media often presented as ?truths.? The motives and psychology of market participants, which drives the difference between truth and partial-truth, are explored.?*

It is widely known that a rise in interest rates, engineered by the Federal Reserve Bank (Fed), has preceded recessions over the past several decades.• However, knowing that a sharp rise in rates preceded recessions is one thing.• Knowing that a sharp rise in rates caused recessions is another thing. •To establish causation, each period of rising Fed Funds rates would have to precede each recession.• But that?s not what happened over the past five decades.• Conventional wisdom may capture popular thought at a moment in time but isn?t always true, and it shouldn?t drive investment decisions. The Fed Funds rate, which the Fed controls, rose between 2% and 15% just prior to recessions, which are marked by the gray vertical bars in the chart below.• During the first four recessions on the chart (1969-1982), rates peaked just before or within the recessions.• One interpretation of the chart would be that the Fed was unafraid of its role of ?*taking the punch bowl*

away from the party,? to quote a former Fed governor.• That is, the Fed kept raising rates until it saw actual declines in economic data, and only then began to reduce rates.**•In these four cases, it is quite possible that the Fed?s actions played a sizeable role in causing the recessions.**

However, in the case of the three most recent recessions, the peak in interest rates preceded recession by 6 to 18 months, so it is not obvious that Fed actions directly led to recessions. •Monetary textbooks might argue that a lag has developed between the rise in rates and a subsequent decline in economic activity.• But does anyone believe that information travels more slowly today than it did 40 years ago? Further undermining the logic that Fed rate policy causes recessions, the Fed hiked rates a total of 4% during 1983-84, and by a total of 3% during 1994-95, but a recession never occurred in the aftermath.• So, the Fed?s interest rate manipulations alone do not explain the occurrence of recessions. What prompts the Fed to raise the Fed Funds rate?• Congress gave the Fed the statutory mandate to manage the growth of employment and inflation. Of these two mandates, only an outbreak of inflation would cause the Fed to raise interest rates. Of course, an outbreak of inflation can be either real or perceived, even for the Fed.



Looking at inflation

data in the chart above, during the first four recessions, inflation peaked and then declined dramatically, which was the Fed?s stated intent.• During the three most recent recessions, inflation also peaked and then declined.• But during the Fed?s tightening cycles of 1983-84 and 1994-95, the Fed hiked rates because they perceived an outbreak of inflation.• But instead, inflation remained stable during those periods. A defender of the Fed?s policies would assert that the Fed?s actions prevented a subsequent outbreak of inflation.• While that assertion is plausible, it is also a use of counterfactual logic that cannot be proven in a separate, identical experiment. •Counterfactual arguments are rife ?would have? or ?could have? statements, as in ?inflation would have been worse if not for the Fed?s actions.?• Nobody can know whether that statement is true or untrue. Summarizing the relationship between inflation, rising interest rates, and recessions since the 1960s, **inflation always declines during recessions and sometimes declines when the Fed is raising the Fed Funds rate.**

Crude Oil

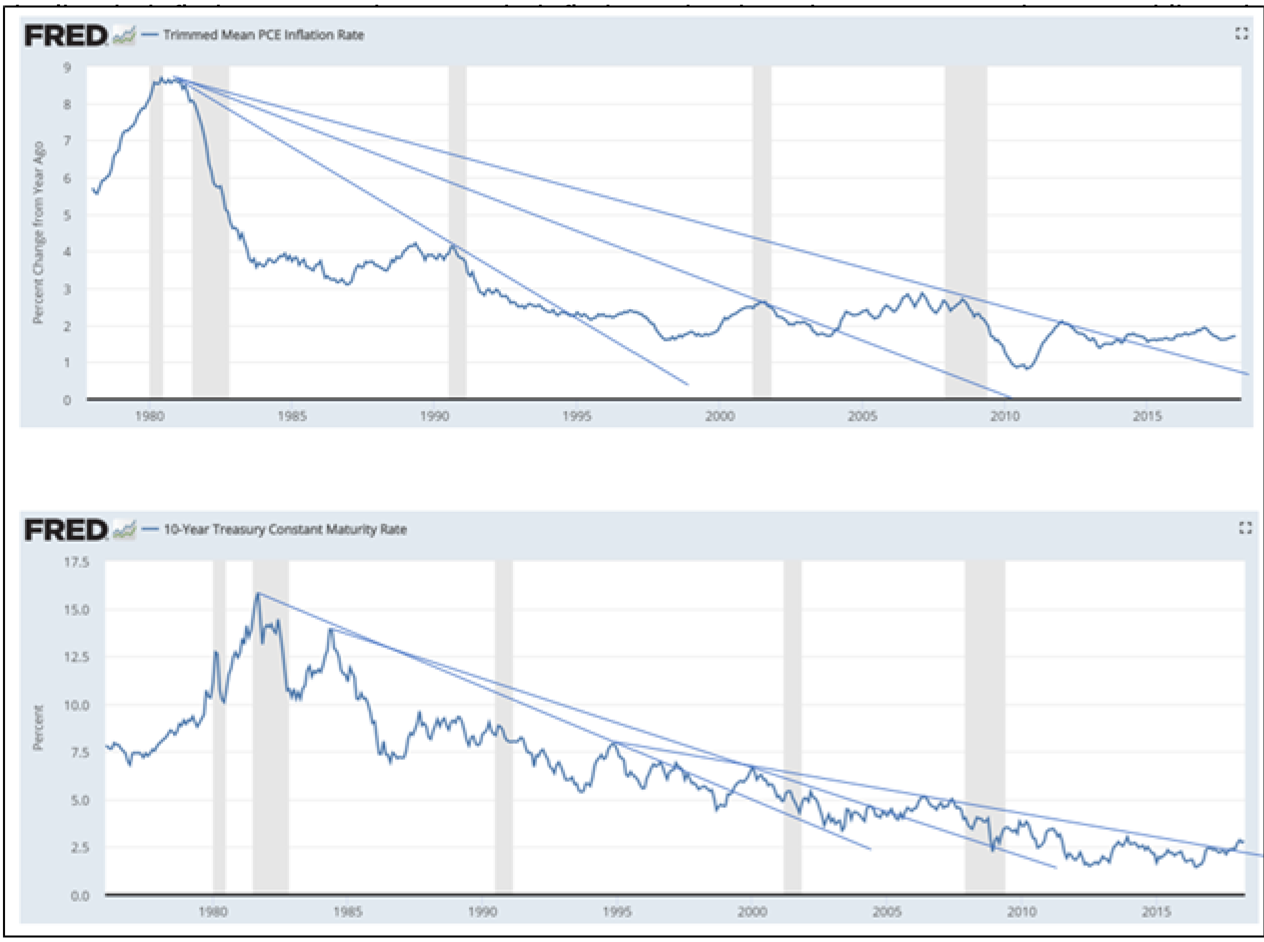
Enter the price of crude oil.• During the 1960s, the price of crude oil was essentially fixed, so the recession of the late 1960s cannot be attributed to a change in the price of oil, as shown below.• However, a spike in oil prices (defined as a doubling or more) preceded all the other recessions since the late 1960s.•• Interestingly, during the Fed rate hikes of 1983-84 and 1994-95, oil prices were either falling or relative
Similar to Fed rate hikes, a
period 2010-14, and again 2
occur. **Crude Oil ($ barrel)**

Fed Funds Rate By

putting the two charts in proximity, it becomes clear that a **recession only occurs when the Fed Funds rate rose by at least 2.00-2.50% AND the price of crude oil doubled (or more)*.**• When only one of the variables is rising sharply, a false alarm is triggered. For example, there was no recession during the Fed Funds hikes of 1983-84 and 1994-95, because the price of oil was falling or stable.• From 2010-14, the price of oil more than doubled, but the Fed wasn?t raising rates, so there was no recession.• The charts above are annotated with a red X to show instances when only one variable rose significantly. **The important takeaway and economic rationale for this logic are that when the price of money *AND* the price of energy are rising sharply, it causes a retrenchment in consumer and commercial behavior that leads to a recession.**

Current Situation

The knowledge that a rise in both the price of money AND energy is required to cause a recession leaves markets in a precarious position in 2018.• The price of oil has more than doubled, but thus far the Fed has only hiked the Fed Funds rate by a total of 1.50%.• However, public statements by Fed governors, even by historically dovish Fed governors and their own published forecasts signal a further increase 0.75% during 2018.•**Based on the historical data, if the Fed follows through on its plans, then the increase in the price of energy and money will make a recession more likely sometime in H2 2018.** The investment implications are obvious, but especially important given the current investment consensus.• The institutional investment management crowd is proclaiming the arrival of an inflation outbreak, as evidenced by an increase in some commodity prices and the break of a 30-year downtrend in interest rates.• The thought process on commodities is circular, because the increase in a major commodity such as oil, which precedes most recessions when combined with a sharp rise in interest rates, is ultimately more likely to lead to a



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probably

Another

notable feature of the current market is the record short position in bond futures (betting on an increase in interest rates), which reflects the consensus line of logic.• The Fed is also part of the consensus, as it is forecasting GDP growth of 2.7% in 2018 and another 2.4% in 2019.• Currently, everyone is standing on one side of the boat, which could be called the *Growth and Inflation Scare of 2018 Part II*, even though *Model, Model on the Wall* is forecasting GDP growth of only 1.4% for next year.• As the yield curve flattens further, the forecast for that indicator should fall further.

Conclusions

Textbook monetary theory teaches that a series of Fed Funds interest rate hikes cause a reduction in inflation.• But inflation hasn?t always declined when interest rates rise.• The data shows that inflation always peaks and falls during recessions.•**Therefore, it is recessions, not interest rate hikes that are the primary cause of a decline in inflation.** If recessions kill inflation, what causes recessions?• Textbook monetary theory teaches that a series of Fed Funds rate hikes cause recessions.• For the recessions of the 1960s-1980s period, that appears to be true.• However, a lag has developed in recent years between the peak of the Fed Funds rate and the onset of a recession.• Textbooks would also have to explain how the Fed hiked rates significantly during 1983-84 and again during 1994-95 without causing an imminent recession.•**Based on the data of the past five decades, Fed rate hikes alone do not cause recessions.**• A better record of predicting recessions is achieved when Fed has hiked rates by 2.00%-2.50%, AND oil prices have at least doubled*.• The price of money and energy are major financial inputs to financial planning, so when they simultaneously rise sharply, consumers and businesses are forced to retrench.• Based on the Fed?s well-communicated strategy, it plans to raise rates another 0.75% during 2018 on top of the previous 1.50% over the past few years.•**If crude oil stays above $50-60, both conditions for a recession would be met in H2 2018.** Yet neither the Fed nor any high-profile economist is predicting the beginning of a recession during 2019, let alone 2018.• Answering the inflation/deflation question correctly is the most important issue of the day for investment portfolios.• **If recession/deflation arrives before growth/inflation, a major adjustment in expectations, and capital market prices, is coming within the next year.**•

> **While establishing a range of 2.00%-2.50% may not be specific enough for those who demand a point estimate, we believe that a range is a better approximation of the environment that will begin to increase the probability of a recession. Water turns to gas at exactly 212F, which is a scientific fact because it is repeatable. The economy doesn?t operate like a science experiment. For example, we don?t believe that a rise in the Fed Funds rate of, say, precisely 2.26% will trigger a recession while 2.25% will not.*