Model, Model On The Wall
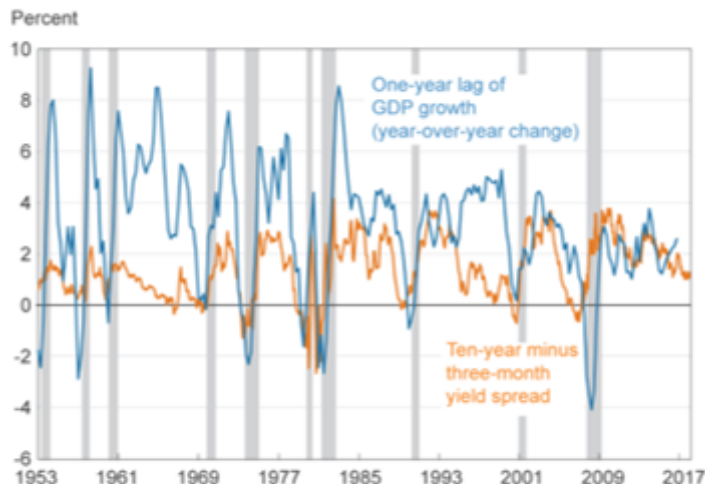# Which Is The Fairest Of Them All?

*?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.?*

The Federal Reserve (Fed) regularly proclaims its decisions on monetary policy are ?data dependent.?• More precisely, the Fed uses data as inputs for its economic models, which are thought to describe how the economy functions in the real world.• The complexity of Fed models probably couldn?t be explained in fewer than 50 pages of academic jargon. •But Keynesian economic philosophy, a belief that an economy?s health can be described by the aggregate annual amount of spending (otherwise known as GDP), is foundational to the Fed models.• For 2018, the Federal Open Market Committee (FOMC), which votes on monetary policy, predicts real GDP growth of 2.7%. The Fed?s regional banks also produce economic research, which can differ from the FOMC?s forecasts.• For example, the Cleveland Fed (CF) also produces an estimate of the upcoming year?s GDP growth, but its model is based on observations of the U.S. Treasury yield

curve.• No model can perfectly describe reality, and a potential weakness of CF model is that it is based on a single input; the spread between the yield on the 3-month Treasury bill and the 10-year Treasury bond. Because the CF model is based on market-based data (not economic data), it is fundamentally different than the FOMC model.• As a result, the difference between the FOMC model and the CF model could be interpreted as a difference between what the FOMC believes and what the market believes. The CF model is based on 60+ years of historical data between

~~GDP growth and the shape of the yield curve, as shown below.~~• To achieve the best fit between the
~~__~~ ~~__~~ ~~__~~ he spread of the yield curve affect GDP
~~__~~ ~~__~~ w shows the real-time yield spread (orange

Yield Curve Spread and Lagged Real GDP Growth

Percent

One-year lag of GDP growth (year-over-year change)

Ten-year minus three-month yield spread

Note: Shaded bars indicate recessions.
Source: Bureau of Economic Analysis; Federal Reserve Board.

The chart below shows the CF model over

e yield curve and GDP growth.•
P growth for the upcoming year
nonths.

Yield-Curve-Predicted GDP Growth

Percent

Predicted GDP growth

Ten-year minus three-month yield spread

Incomplete quarterly average, 1/1/2018 to 3/23/2018

GDP growth (year-over-year change)
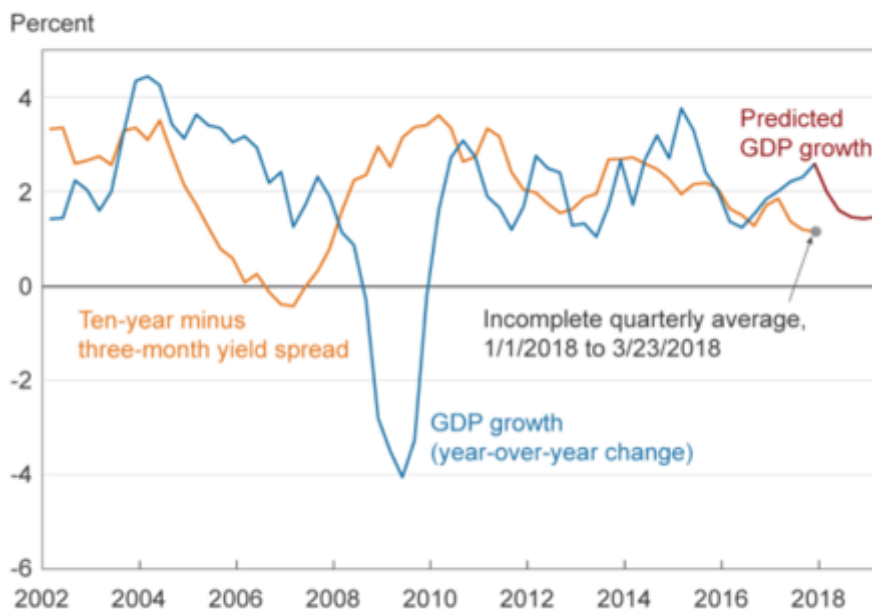
Sources: Bureau of Economic Analysis; Federal Reserve Board; authors' calculations.

The FOMC model estimates 2018

GDP growth of 2.7% while the market-based estimate is 1.4%.• So, what is the market seeing that the Fed is missing, or vice versa?• The most likely explanation is the effect of the recent tax cut/reform (TCJA).• The main components of the TCJA were a $200 billion annual tax cut for individuals, plus another $100 billion in additional government spending in 2018.• Keynesian economic theory assumes the total of $300 billion will be spent on items that will increase GDP by 1.5% during 2018 (1.5% equals $300 billion divided by $20 trillion, which is the approximate size of US GDP). Also, Keynesian theory assumes a multiplier effect for government deficit spending, meaning that the theoretical boost to GDP in 2018 should exceed 1.5%.•• But the theoretical multiplier isn?t the same for different types of spending and it isn?t stable over time, so it isn?t a useful concept for this analysis. Looking at the difference between the FOMC model of 2.7% GDP growth and the CF model of 1.4% growth, the market appears to be saying that the TCJA will have a very little effect on 2018 GDP growth.• How could that be possible?• The market appears to believe that the $200 billion in individual tax cuts will not be spent during 2018; instead, that money will be saved or used to pay down debt, neither of which directly boosts GDP growth in the short-term. What about the $100 billion in federal deficit spending?• Surely that should create an increase in 2018 GDP growth, under Keynesian assumptions.• It appears the market is no longer driven by Keynesian analysis, because the CF model shows that deficit spending may have very little effect, if any, on GDP growth. If so, the market?s belief would coincide with the analysis in ?Is the U.S. Economy Really Growing??, which demonstrated a regime change has occurred since 2008.• Before 2008, deficit spending resulted in what Keynesians expected; an increase in GDP that exceeded the amount of deficit spending.• But after 2008, annual increases in federal debt far exceeded annual GDP growth.• The regime change may be the single-most important reason that the Fed has consistently overestimated GDP growth in its forecasts over the past decade. Does the fact that the Fed has systematically overestimated growth in GDP and inflation over the past decade mean that it will do so in the future?• Not necessarily.• Will the market estimate of 2018 GDP growth be too low?• Again, not necessarily, and for the same reason; the past does not always predict the future. But there are some clues to which may be more accurate.• The market-based estimate of the CF model incorporates bets by the world?s largest investors to forecast GDP growth (and inflation), and it hasn?t systematically overestimate or underestimated GDP growth over the past decade, as shown in the second chart.• In contrast, the FOMC model incorporates Keynesian assumptions on economic data to forecast GDP growth (and inflation), and it has systematically overestimated GDP growth over the past decade.• When there is a divergence between the two groups, it?s probably a better bet to follow the money, not the academics.

Conclusion• Today, two models that forecast 2018 GDP growth produce substantially different results. The 1.3% difference in GDP growth forecasts (2.7% - 1.4%) is roughly equal to the theoretical fiscal stimulus of the TCJA (1.5%). The FOMC model is based on Keynesian assumptions that equate a boost in federal deficit spending with an increase in real GDP. •The FOMC model has consistently overestimated GDP growth over the past decade, probably because it has failed to grasp the regime change that has occurred in the relationship between deficit spending and GDP growth. The CF model is based on the spread of the yield curve and appears to reflect a high degree of skepticism that federal deficit spending will produce a boost to GDP growth. •Over the past decade, it hasn?t systematically overestimated or underestimated GDP growth. It is possible that GDP growth is 2.0%, and that both models will be incorrect by the same amount.• But probably not.• As we progress through 2018, the results of the models will converge.• The direction in which the convergence occurs will be crucially important to investors.