

CAMRI Global Perspectives

Monthly digest of market research & views

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A Stay of Execution

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Amid all of the potential factors that collectively are likely to detonate the next global recession, one has been suspended at least for a while. The Fed has recanted their former guidance stating their intention to raise US policy rates several times over the next year or two and systematically reduce their horde of US securities from their portfolio over the interim. Nevertheless, several other major problems persist and will, if not tip the global economy into recession by themselves, will cause global growth to stagnate.

The Fed's forward guidance threatens

Throughout the past year the Federal Reserve was intent upon raising their policy rate back to some hypothetical neutral rate of interest predicated on the actual economy achieving its estimated natural rate of economic growth. They were also concerned about raising the policy rate sufficiently so as to give the Fed the future option of lowering it significantly enough to

re-stimulate the economy, if economic growth suddenly faltered.

The Fed did follow their forward guidance to the financial markets over the course of 2018 by raising their policy rate 4 times and increasing it to 2.25%. In their final meeting of 2018 in December they communicated that they would increase their policy rate 3 times in 2019 in an effort to lift the rate towards 3.25%.

At their December FOMC meeting the committee concluded that:

"The Committee judges that some further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term."

The financial markets responded to the Fed's threat

Understandably there were many negative factors swirling about the financial markets in the second half of 2018 to make investors

nervous enough to sell their risk assets. And, they did. By the end of 2018 the US stock market declined 19.6% from its mid-summer peak.

Fed's forward guidance scares stock market and later comforts it



The Fed wasn't the only bear in the china shop this past autumn. Tariff threats and their imposition multiplied during the second half of 2018 by Brexit-dominated news headlines, the EU had to contend with several outbreaks of political turmoil and eroding GDP growth, while the Japanese economy faced the prospect of future hikes in taxes.

The Fed recants

After the financial markets stumbled and the President voiced his displeasure at the Fed's December future policy guidance, and the fractured US government broke down, freezing Federal spending for nearly a month and ceased producing high frequency economic data, the Fed reversed its forward guidance. At its latest FOMC meeting at the end of January the committee decided:

"In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor

market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes."

Patient was the key word market participants focused on, and investor sentiment immediately improved. The S&P 500 appreciated by 18% and VIX, a measure of financial volatility, dove down to near its mid-summer lows.

The original composition of the Taylor Rule is no longer relevant.

One well-known and widely followed policy metric that has been estimated by policy makers and private sector economists for about three decades is the Taylor rule:

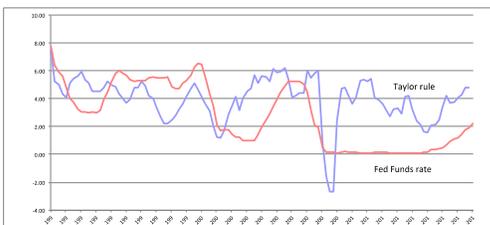
$$i_t = r^* + \pi_t + \alpha(y_t - y^*) + \beta(\pi_t - \pi^*)$$

In the equation above: i_t is the nominal federal funds interest rate; r^* is the equilibrium real interest rate; π_t is the current inflation rate, measured from a year earlier; y_t is real gross domestic product (GDP) and y^* is real potential GDP, the difference between the two being the output gap; and π^* is the Fed's inflation target, which is currently 2 percent for the personal consumption expenditures price index.

The rule implies that the Fed should raise its federal funds target rate when inflation increases above target and decrease it if real

GDP decelerates relative to real potential GDP. In Taylor's original specification, the coefficients on the output and inflation gaps, α and β , respectively, were each 0.5. Taylor also indicated that the equilibrium real interest rate should be fixed over time at 2%.

The Taylor rule seems out of synche with FOMC



The original Taylor rule has been abandoned of late

The figure above shows that during the current expansion, the actual federal funds target rate has been consistently below the rate suggested by the Taylor rule. Using actual data through the fourth quarter of 2018, the actual federal funds target rate is 1.87% percent, while the Taylor rule indicates that the rate should be about 4.75%. The large discrepancy between the actual federal funds target rate and the rate indicated by the Taylor rule using current data suggests that the Federal Open Market Committee may be following a different version of the Taylor rule, or not at all.

Recent research indicates a much lower natural rate of interest

There have been many academic studies trying to estimate a natural rate of interest. A natural rate has long been defined as the real rate of interest consistent with stable inflation and output growing at its natural rate. Perhaps a most useful estimate of the natural rate is found in a recent paper by John Williams, currently President of the New York Federal Reserve Bank.[#] He and colleagues estimated that the US economy's potential rate of growth has been slowing significantly over the past several decades and therefore the natural real rate of interest that he estimates has fallen quite dramatically as well.

Estimated Real Rate falls as estimated potential growth slows

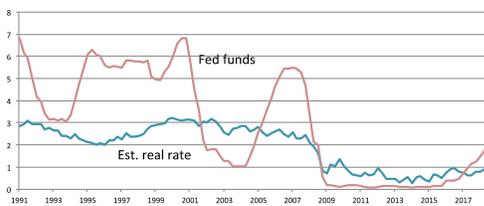


A new low? Is the natural rate of interest high enough to stimulate the economy?

A declining natural rate of interest poses real challenges for a central bank because it limits the bank's ability to respond to recessions. When an economy enters recession, policymakers decrease policy interest rates and increase them back to "normal" when the economy starts growing. If natural rates are as low as the estimates presented by President Williams from the NY Fed, central banks, including the Federal Reserve, won't be able to raise the nominal

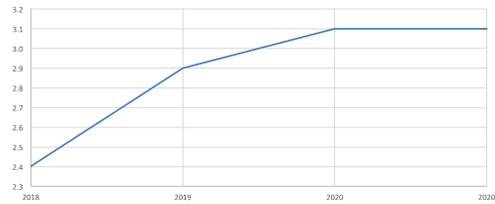
rate far above the zero lower bound in normal times without policy becoming restrictive. That is, with a low natural rate of interest even in normal times, central banks won't be able to respond effectively to recessions, because there won't be much scope to lower interest rates when needed.

Fed Funds rate rises above estimated real rate



Therefore, instead of using conventional monetary policy to influence short-term interest rates, central banks might have to rely on unconventional monetary policy for unconventional times. For example, during the Financial Crisis of 2008-09, with the federal funds rate already cut close to zero, the Federal Reserve stimulated the economy with quantitative easing (QE), which entailed purchases of pre-specified amounts of bonds and financial assets, and with forward guidance, which reduced the expected future path of policy rates. All other advanced economy central banks followed the Fed's policy tactics. The Japanese have been using QE since the 90's, then to fight off the bad debt problem of their big banks and the subsequent domestic deflationary spiral.

Latest Forward Guidance for future Fed funds rate



The latest forward guidance

While the latest FOMC meeting's forward guidance stressed a pause, the FOMC members forecast that they intend to raise the Fed funds rate well above its present level over the next year or two to 3.1%, their median estimate. Some FOMC members even suggested they would favor a rate rise or two later this year. Thus, the members think the long-term rate is well below the Taylor rule estimates, and above the William's estimate ($2.82\% = 0.82\% + 2\%$ for the desired inflation rate).

Conclusion: The global economy is distressed

Although the Fed temporarily removed one of the obstacles to economic growth in the US, there are a multitude of structural and geopolitical problems throughout the world that continue to erode global economic growth. The global economy is at an inflection point. Another bout of Fed tightening, perhaps in the second half of this year, would probably be the provocation that tips the global economy into recession.

Brexit is one of the worst - and the most probable - causes to upset growth in the EU and at home in the UK. Many global companies have announced their plans to shift their Euro-oriented operations out of Great Britain and into diverse areas throughout Europe. Great Britain is certain to suffer a significant recession, loss of employment and asset price depreciation.

The EU economy will not benefit by as much as Great Britain losses. New tariff issues and border regulations will slow traffic, add to shipping costs and raise inefficiencies throughout the EU. Moreover, there are many internal EU issues that are already disintegrating economic growth: especially political fragmentation. Italy is a primary example of how disruptive politics has undermined economic activity. Italy has already fallen into recession, and other major countries in the EU are predicted to join it soon.

Closer to home, China's economic growth has been slowing for a while. The trade tariff dispute with the US has accelerated this deceleration. The government has responded by financing state-owned companies' projects to keep economic momentum positive. However, the available evidence suggests that the private sector is more cautious and not increasing its investment and spending. State-owned

company debt has been piling up, at some point it will choke private spending.

The Fed will return to its temporarily-paused policy course once the US government overcomes its economically paralyzing budget games. Higher policy rates will again become a litmus test for the financial markets and for the momentum of the economy. Moreover, Fed policy guidance and action will increasingly be a major catalyst to financial market volatility this year.

#Laubach and Williams. 2003. "Measuring the Natural Rate of Interest," The Review of Economics and Statistics, 85, no.4 (November): 1063-70.

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KEY INDICATORS TABLE (AS OF 31 JANUARY 2019)								
INDEX	LEVEL (LC)	%1MO (LC)	%1MO (USD)	%1YR (LC)	%1YR (USD)	INDEX	LEVEL	%1YR
S&P500	2704.10	8.95%	8.95%	-2.32%	-2.32%	3MO LIBOR	2.74	53.99
FTSE	6968.85	3.54%	6.99%	-3.57%	-10.79%	10YR UST	2.63	-2.80
NIKKEI	20773.49	3.80%	5.32%	-8.31%	-7.86%	10YR BUND	0.15	-78.61
HANG SENG	27942.47	9.59%	9.36%	-12.00%	-12.28%	10YR SPG	1.19	-16.22
STI	3190.17	4.55%	6.16%	-6.37%	-8.76%	10YR SGS	2.15	-2.24
EUR	1.14	0.04%		-7.78%		US ISM	56.60	-5.03
YEN	108.89	-1.25%		-0.27%		EU PMI	50.50	-15.27
CMCI	1212.30	6.39%		-6.32%		JP TANKAN	16.00	0.00
Oil	53.79	18.66%		-16.90%		CHINA IP	5.70	-8.06

Source: Bloomberg

APPENDIX

GLOSSARY OF KEY TERMS (Source: Bloomberg, with tickers in parenthesis. In US\$ where applicable)

S&P500: capitalization-weighted index of the prices of 500 US large-cap stocks (SPX)

FTSE: capitalization-weighted index of the prices of the 100 largest LSE-listed stocks (UKX)

NIKKEI: capitalization-weighted index of the largest 225 stocks of the Tokyo Stock Exchange (NKY)

HANG SENG: capitalization-weighted index of companies from the Hong Kong Stock Exchange (HSI)

STI: cap-weighted index of the top 30 companies listed on the Singapore Exchange (FSSTI)

EUR: USD/EUR exchange rate: 1 EUR = xx USD (EUR)

YEN: YEN/USD exchange rate: 1 USD = xx YEN (JPY)

CMCI: Constant Maturity Commodity Index (CMCIPI)

Oil: West Texas Intermediate prices, \$ per barrel (CLK1)

3MO LIBOR: interbank lending rate for 3-month US dollar loans (US0003M)

10YR UST: 10-year US Treasury yield (IYC8 – Sovereigns)

10YR BUND: 10-year German government bond yield (IYC8 – Sovereigns)

10YR SPG: 10-year Spanish government bond yield, proxy for EU funding problems (IYC8 – Sovereigns)

10YR SGS: 10-year Singapore government bond yield (IYC8 – Sovereigns)

US ISM: US business survey of more than 300 manufacturing firms by the Institute of Supply Management that monitors employment, production inventories, new orders, etc. (NAPMPMI)

EU PMI: Purchasing Managers' index for the 17 country EU region (PMITMEZ)

JP TANKAN: Bank of Japan business survey on the outlook of Japanese capital expenditures, employment and the overall economy, quarterly index (JNTGALLI)

CHINA IP: China's Industrial Production index, with 1-month lag (CHVAIOY)

LC: Local Currency

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