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WITH THE ST. LOUIS FED



FEDERAL RESERVE BANK of ST. LOUIS
CENTRAL TO AMERICA'S ECONOMY®

May 22, 2018

1:00PM to 2:00PM CST

What's Driving the Neutral Real Interest Rate?

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Today's Presenters

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Disclaimer

The opinions expressed in the presentations are intended for informational purposes, and are not formal opinions of, nor binding on the Federal Reserve Bank of St. Louis or the Board of Governors of the Federal Reserve System.

What's the Neutral Real Interest Rate? Why Is It So Low? Why Does It Matter?

- The neutral real rate of interest
 - **Definitions**
 - **Evidence**
- Why is it so low now?
 - **Bank of England view**
 - **Bullard view**
 - **Bank for International Settlements (BIS) view**
- Why does it matter?
 - **Gauge for monetary policy**
 - **Barometer for economy**

What's the Neutral Real Interest Rate?

- Definitions and notation
 - The neutral real interest rate is:
 - The inflation-adjusted short-term interest rate expected to prevail when the economy is operating at its full potential
 - The interest rate consistent with stable prices
 - An interest rate not constant over time
 - Also sometimes called the “natural rate of interest” or the “Wicksellian interest rate” (after Knut Wicksell, a Swedish economist who lived 1851-1926)
 - Usually denoted r^* (pronounced “r-star”)
 - Re-popularized about 15 years ago by Michael Woodford, an American economist

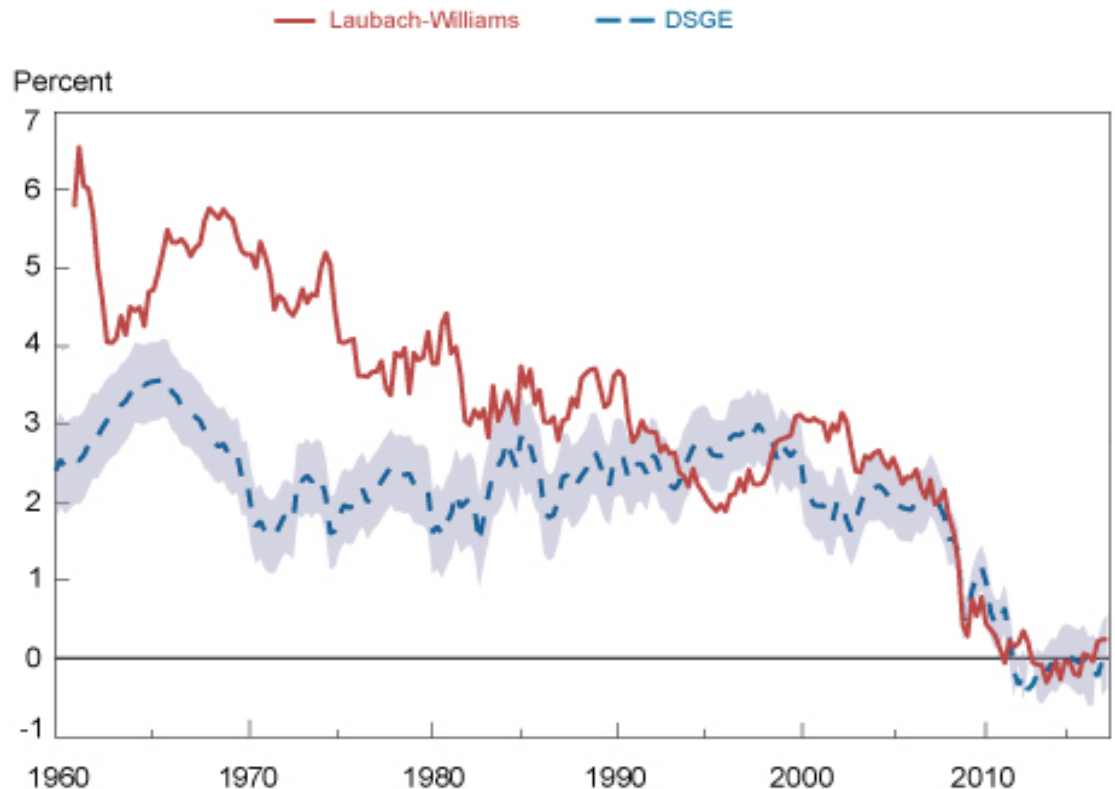
What's the Neutral Real Interest Rate?

■ Evidence

- r^* cannot be observed directly—it's a theoretical construct.
- We estimate r^* by:
 - Checking what interest rates and inflation were when the economy performed well in the past; r^* is the difference between nominal interest rates and inflation at those times.
 - Assuming that the economy performs well on average over time, then estimating the “trend” in real interest rates over long periods.
 - Applying more complicated methods that estimate various determinants or components of r^* .

Methods Differ But All Agree r^* Is Low Now

Real Natural Interest Rate (Five-Year-Ahead Forecast)
and Laubach and Williams' 2016 Estimate of the Natural
Rate of Interest, 1960-2016



Sources: Laubach and Williams' 2016 article (linked in the text above); authors' calculations.

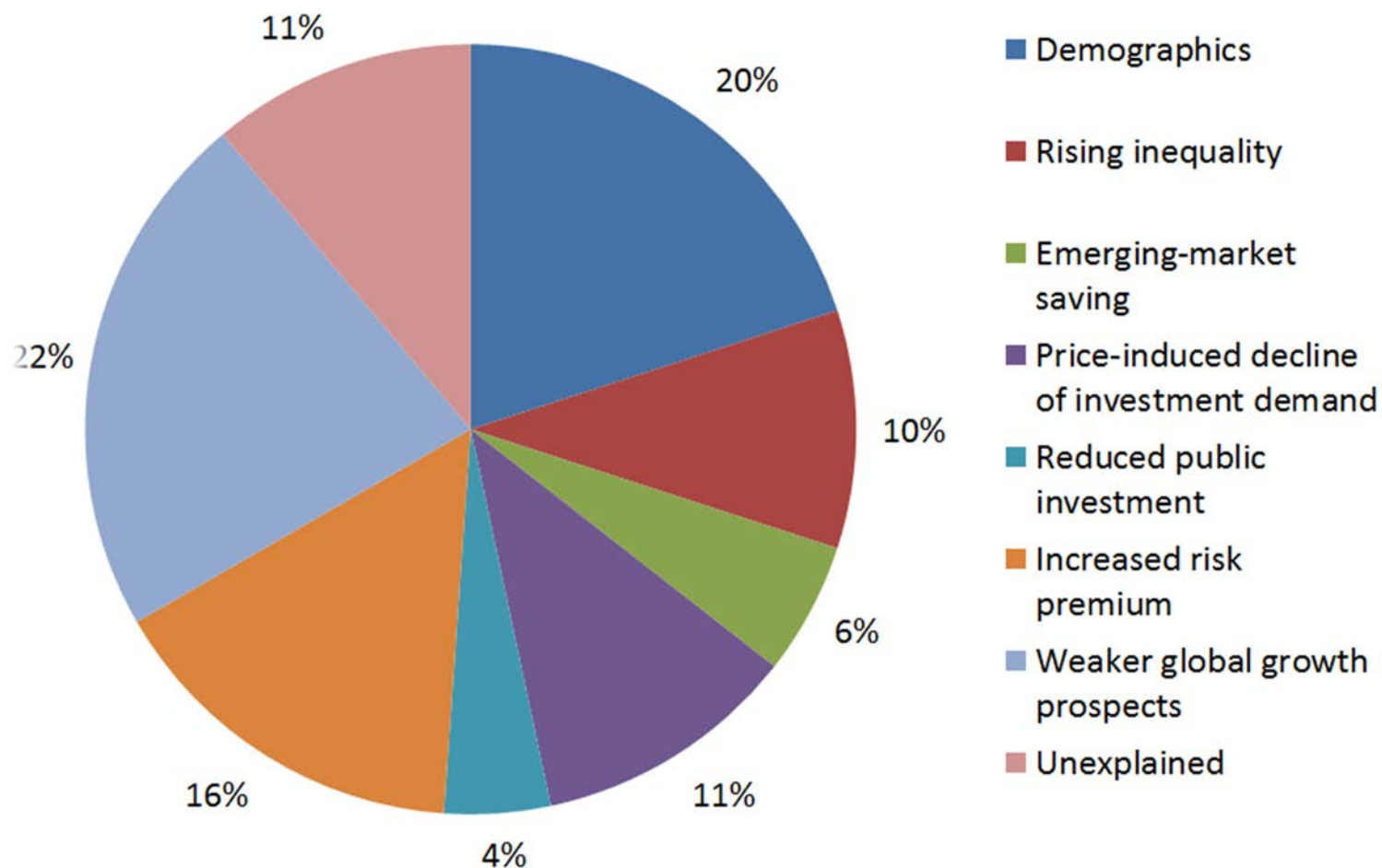
Notes: The dashed line is the DSGE model's median estimate of the five-year-ahead real natural rate of interest, and the shading marks uncertainty (84th and 16th percentiles). The solid line is the one-sided estimate of the natural rate as shown in Figure 5 of Laubach and Williams' 2016 study.

Why is r^* So Low Today?

- Bank of England view (the view of most economists)
 - Many underlying economic and financial factors have changed, driving r^* lower.
 - Much of the decline is likely to be permanent.
- President James Bullard's view
 - Bullard's view was resented in a “new narrative” in June 2016. (<https://www.stlouisfed.org/~media/files/pdfs/bullard/papers/regime-switching-forecasts-17june2016.pdf>)
 - The neutral real rate is *temporarily* low.
 - Called “r-dagger” (r^\dagger) to differentiate it from r^*
- Bank for International Settlements' view
 - Monetary-policy “regimes” are key, hard to predict.
 - Central Banks should not assume r^* will remain low forever.

Bank of England Decomposition of r^* Changes

Sources of Decline in Global Real Interest Rates, 1990-2015

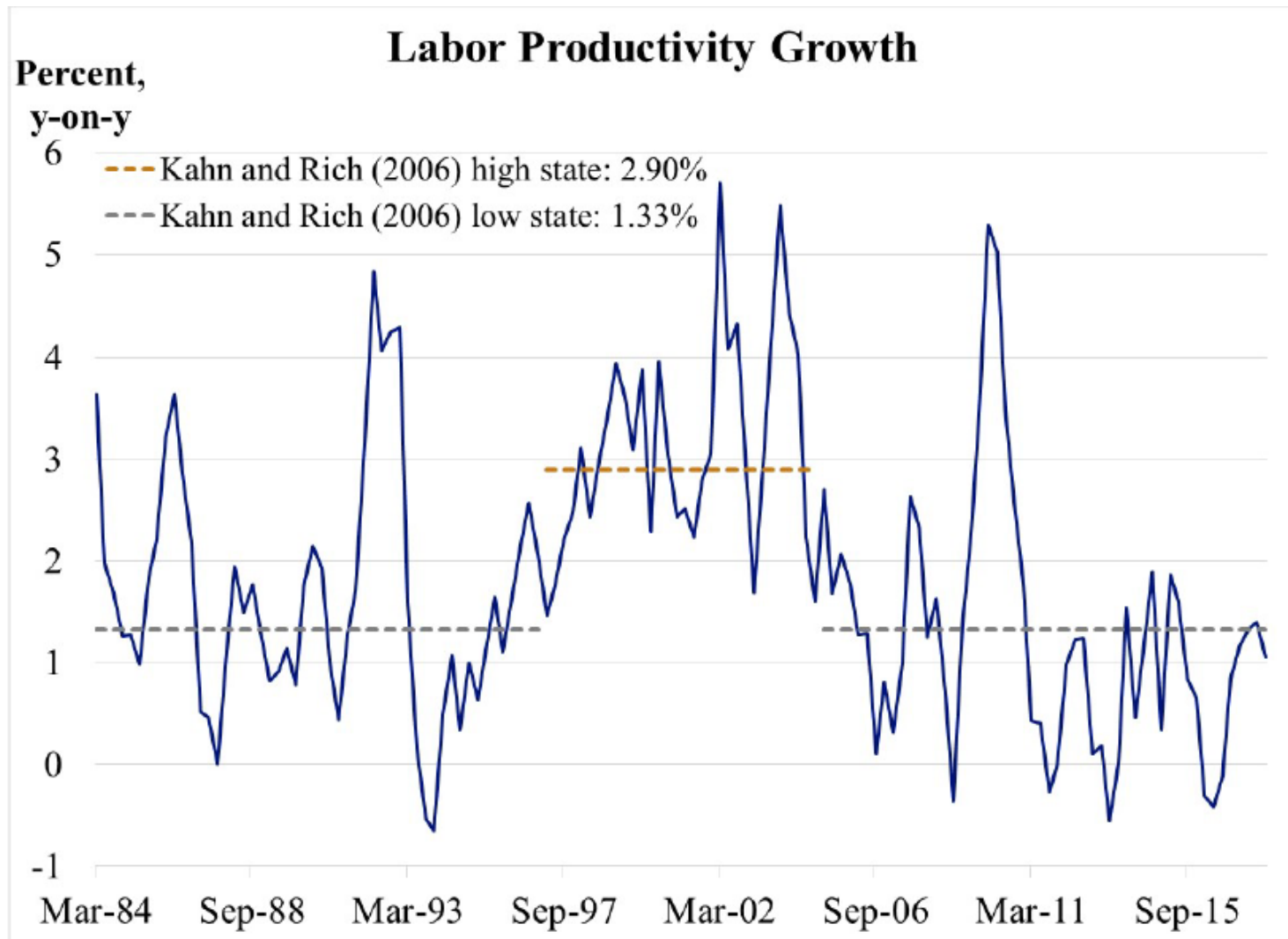


More on the Bank of England Research

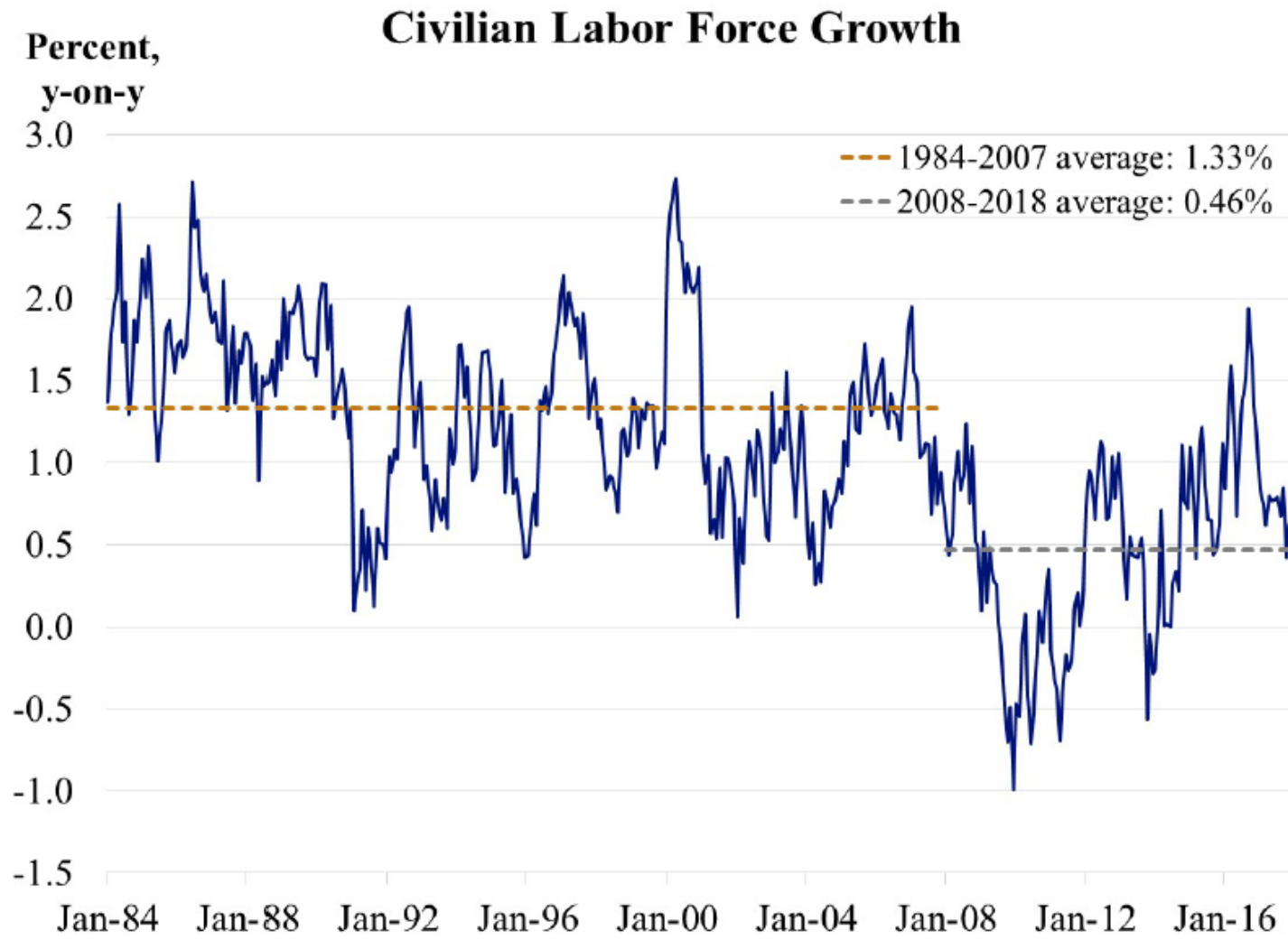
- Lukasz Rachel and Thomas D. Smith, “Secular Drivers of the Global Real Interest Rate,” Bank of England Working Paper, December 2015 (*Int. J. Cent. Bking* 2017)
- Secular drivers of the 450-basis-point long-term (post-1990) decline in r^* include:

<div>Real factors</div> <div>Financial factor</div>	■ Demographics (dependents ↓):	-90 bp	Increased saving
	■ Rising inequality:	-45 bp	
	■ Emerging-market saving:	-25 bp	
	■ Lower investment demand:	-50 bp	Decreased investment
	■ Reduced public investment:	-20 bp	
	■ Increased risk premium (conv. yld):	-70 bp	
	■ Weaker growth prospects:	-100bp	

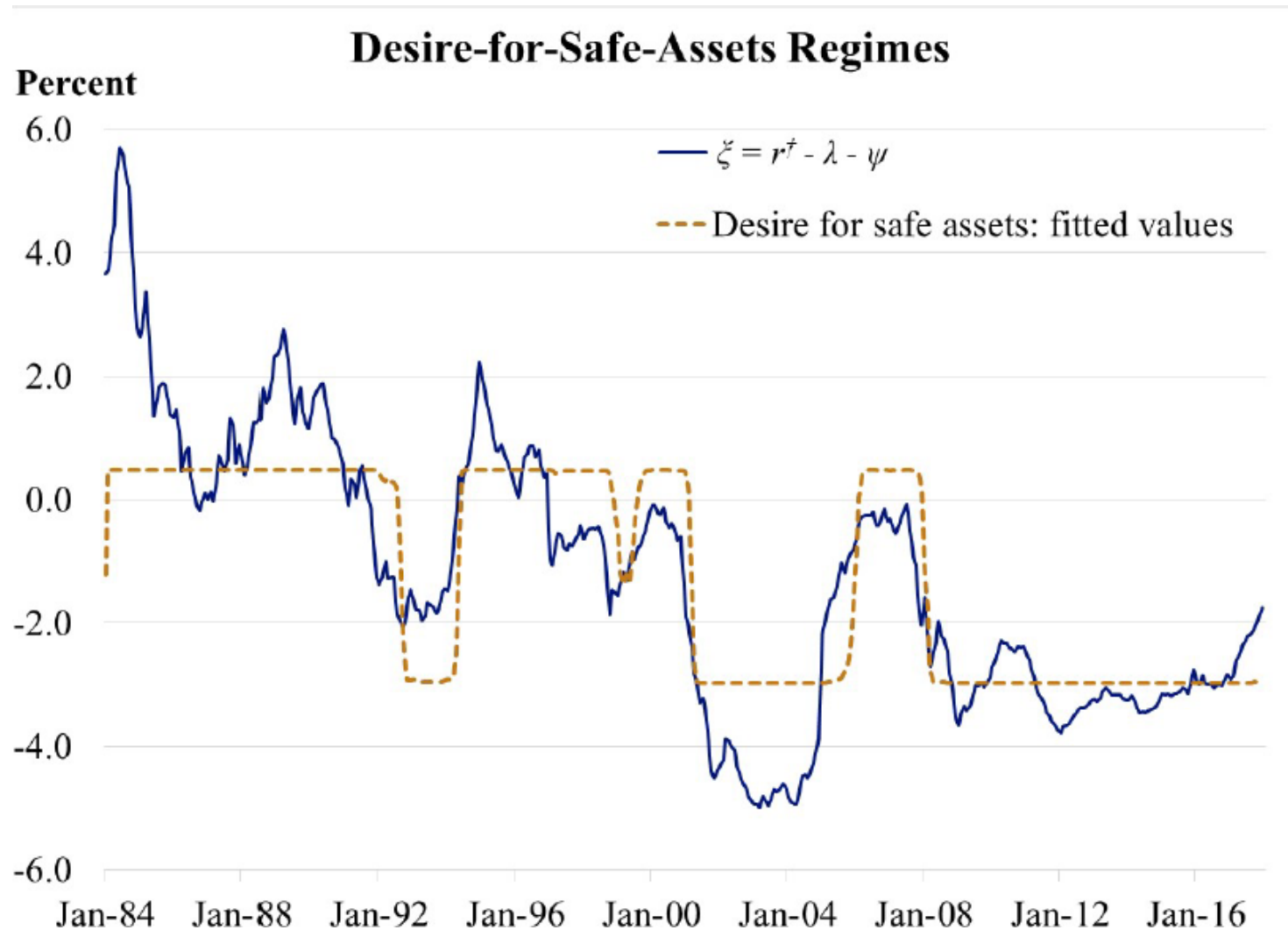
Bullard Ingredient #1: Low Productivity Growth



Bullard Ingredient #2: Low Labor-Force Growth



Bullard Ingredient #3: High Safe-Asset Demand



The Bullard Difference

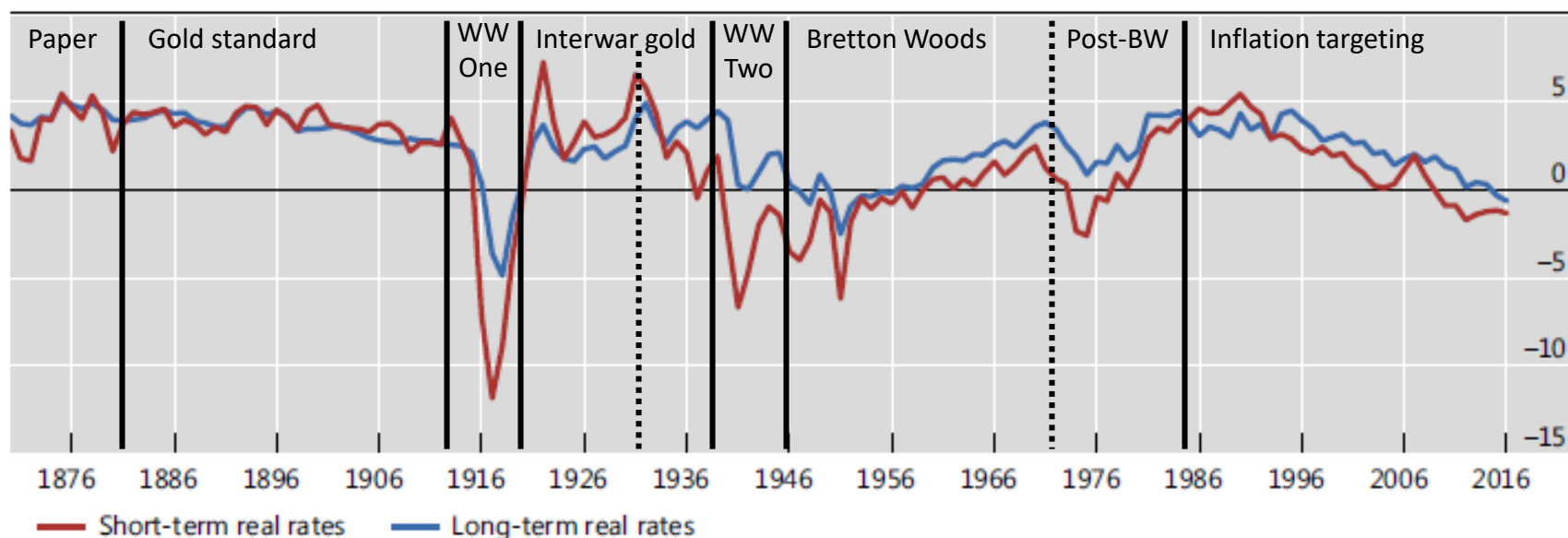
- Productivity growth may switch to the “high regime” in the future.
- Labor force growth is unlikely to increase, but we don’t really know.
- Demand for safe assets may diminish.
- Bottom line: r-dagger could switch back to a higher level at some time in the future.

BIS View: History Suggests r^* Moves Around Significantly for Economic and Political Reasons

Real interest rates

In per cent

Graph 1



Sources: Authors' calculations.

Source: Borio et al (2017a), p. 10

Why Does r^* Matter?

- r^* has become an important gauge for monetary policy--the FOMC explains its monetary-policy actions and longer-term strategy in terms of r^* (without using that term).
- “In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1-1/2 to 1-3/4 percent. The stance of monetary policy remains accommodative, thereby supporting strong labor market conditions and a sustained return to 2 percent inflation....
- “The Committee expects that economic conditions will evolve in a manner that will warrant further gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.”

www.federalreserve.gov/newsevents/pressreleases/monetary20180502a.htm

How do they know this? Because current r is less than the r^ they have estimated.*

What is that longer-run level? r^ plus 2%, the inflation target—currently 2.9%.*

Why Does r^* Matter?

- It is an important barometer of economic and financial conditions.
 - r^* is related to the underlying growth potential of the economy.
 - r^* is the basic building block for estimating all other rates of return on financial and real assets.
- Implications
 - Slower economic growth means living standards won't rise as fast, inequality will be harder to overcome, and budgets will be harder to balance.
 - Lower returns on assets mean pension contributions will need to increase, “reaching for yield” will be more common, and saving will become more important in building wealth.

Summary

- The neutral real rate of interest is r^* , the “exchange rate” between a dollar today and a dollar tomorrow.
- Most economists agree that r^* is historically low today.
- The Fed and other central banks base their monetary policy on estimates of r^* and investors base their return expectations on it.
- A low r^* is a defining characteristic of the “new normal.”

Questions



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