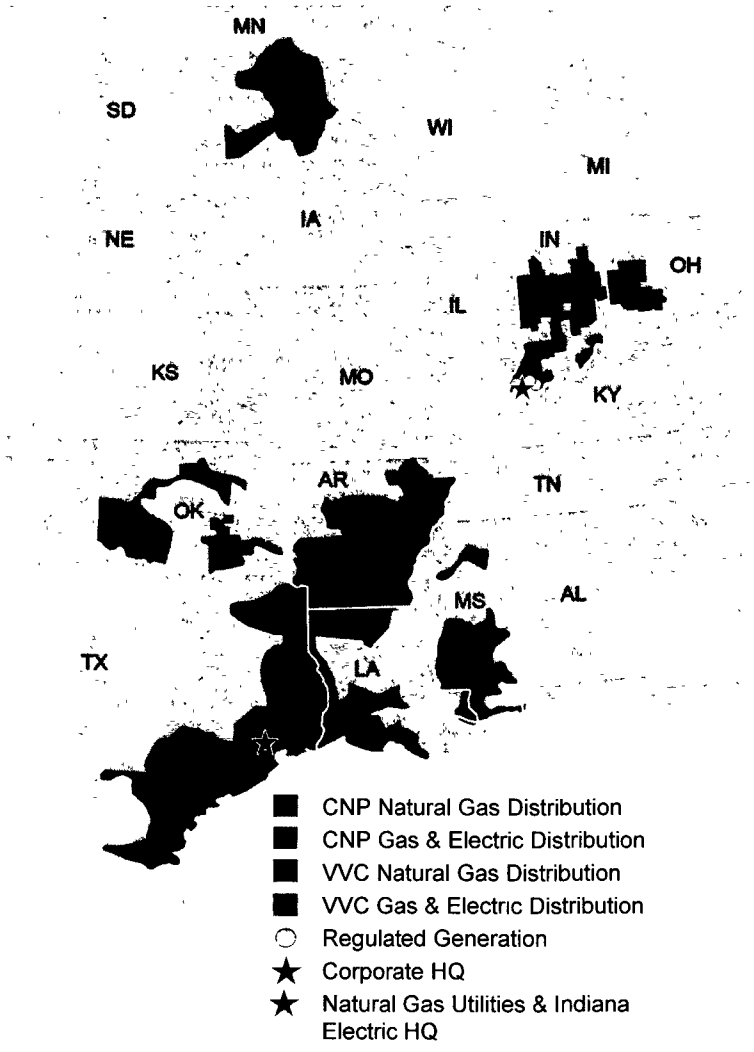
Summary

- CenterPoint Energy's pending merger with Vectren advances its vision to lead the nation in delivering energy, service and value
- Expect higher percentage of regulated utility earnings with 7.6% compound annual rate base growth assuming current capital plans
- Increased geographic and business-line diversity reduces business risk as determined by the rating agencies
- CNP Midstream internal spin expected to provide greater clarity of earnings and reduce CERC risk

Appendix

Post-Merger CenterPoint Energy at a Glance[1]

7+ Million Customers



Electric Utility Services

- Electric transmission and distribution operations with ~2.4 million metered customers across ~5,000 sq. miles in and around Houston, Texas
- Electric generation, transmission, and distribution to ~145,000 metered customers in southwestern Indiana

Gas Utility Services

- Regulated gas distribution jurisdictions in eight states with ~4.5 million customers

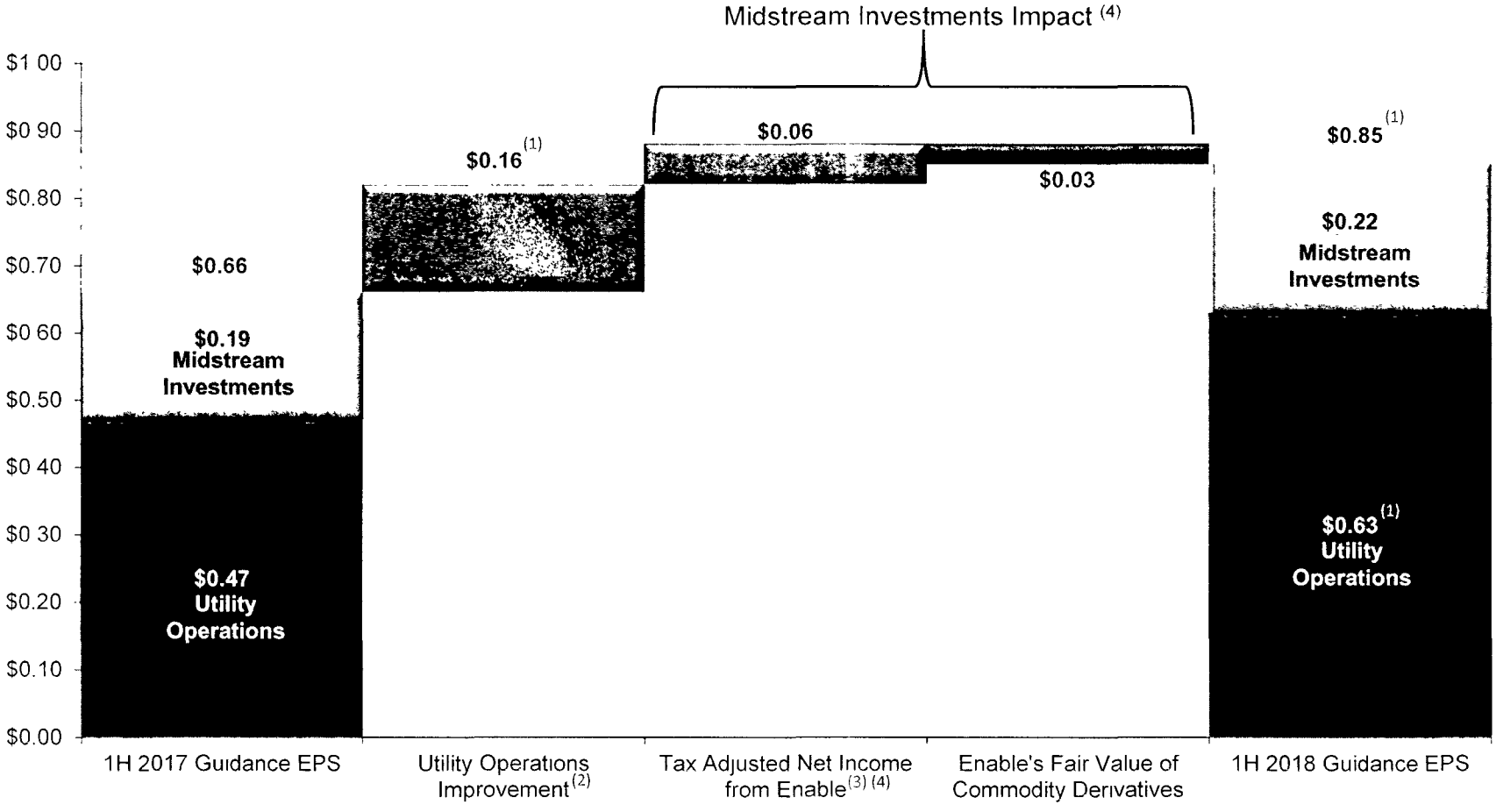
Non Rate-Regulated Businesses

- CenterPoint Energy Services (CES) serves ~31,000[2] commercial and industrial customers across 33 states
- Vectren's Infrastructure Services division is a major U.S. provider of underground construction and repair services to Local Distribution Companies (LDC)
- Vectren's Energy Services division provides energy performance contracting and sustainable infrastructure, such as renewables, distributed generation, and combined heat and power projects

[1] Operational data based on information as of December 31, 2017

[2] Does not include approximately 72,000 natural gas customers as of December 31, 2017 that are under residential and small commercial choice programs invoiced by their host utility

Consolidated Adjusted Diluted EPS Drivers
Six Months Ended June 30, 2017 vs June 30, 2018
(Guidance Basis)[1]



[1] Excluding $34 million of pre-tax costs ($27 million of operating income and $7 million of interest) associated with the pending merger with Vectren, Utility Operations EPS includes all earnings except those related to Midstream Investments (Utility Operations EPS includes the Enable Series A Preferred Units)
[2] Includes Utility Operations improvement of $0 16 in Q1 2018 vs Q1 2017 and $0 00 in Q2 2018 vs Q2 2017
[3] Uses a limited partner interest (excluding Series A Preferred Units) ownership percentage of 54 1% for Q2 2017 and 54 0% for Q2 2018
[4] Midstream Investments components including the decreased tax rate associated with TCJA
Note Refer to slide 18 for reconciliation to GAAP measures and slide 3 for information on non-GAAP measures

Reconciliation: Net Income and Diluted EPS to Adjusted Net Income and Adjusted Diluted EPS Used in Providing Annual Earnings Guidance

	Six Months Ended			
	June 30, 2018		June 30, 2017	
	Net Income (in millions)	Diluted EPS	Net Income (in millions)	Diluted EPS
Consolidated net income and diluted EPS as reported	$ 90	$ 0.21	$ 327	$ 0.75
Midstream Investments	(96)	(0.22)	(82)	(0.19)
Utility Operations [1]	(6)	(0.01)	245	0.56
Timing effects impacting CES[2]:				
Mark-to-market (gains) losses (net of taxes of $17 and $8)[3]	55	0.13	(13)	(0.03)
ZENS-related mark-to-market (gains) losses:				
Marketable securities (net of taxes of $5 and $23) [3][4]	(18)	(0.04)	(44)	(0.10)
Indexed debt securities (net of taxes of $57 and $8) [3][5]	215	0.49	15	0.04
Utility operations earnings on an adjusted guidance basis	$ 246	$ 0.57	$ 203	$ 0.47
Adjusted net income and adjusted diluted EPS used in providing earnings guidance:				
Utility Operations on a guidance basis	$ 246	$ 0.57	$ 203	$ 0.47
Midstream Investments	96	0.22	82	0.19
Consolidated on a guidance basis	$ 342	$ 0.79	$ 285	$ 0.66
Costs associated with the Vectren merger (net of taxes of $8) [3]	26	0.06	-	-
Utility Operations on a guidance basis, excluding costs associated with the Vectren merger	$ 272	$ 0.63	$ 203	$ 0.47
Midstream Investments	96	0.22	82	0.19
Consolidated on a guidance basis, excluding costs associated with the Vectren merger	$ 368	$ 0.85	$ 285	$ 0.66

[1] CenterPoint earnings excluding Midstream Investments

[2] Energy Services segment

[3] Taxes are computed based on the impact removing such item would have on tax expense

[4] As of June 14, 2018, comprised of AT&T Inc. and Charter Communications, Inc. Prior to June 14, 2018, comprised of Time Warner Inc. and Charter Communications, Inc. Results prior to January 31, 2018 also included Time Inc.

[5] 2018 includes amounts associated with the acquisition of Time Warner Inc by AT&T Inc. as well as the Meredith tender offer for Time Inc. common stock

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Assessing the Risk of Yield Curve Inversion: An Update

James Bullard
President and CEO

Glasgow-Barren County Chamber of Commerce
Quarterly Breakfast

July 20, 2018
Glasgow, Ky.

Any opinions expressed here are my own and do not necessarily reflect those of the Federal Open Market Committee

Introduction

An update

- I first started discussing the possibility of yield curve inversion in a speech on Dec. 1, 2017, in Little Rock, Ark.*
- Since then, events have transpired that have flattened the yield curve further, and imminent yield curve inversion in the U.S. has become a real possibility.
- Accordingly, I thought it might be useful today to review and update some of the arguments from that speech 7 ½ months ago.

** See J. Bullard, "Assessing the Risk of Yield Curve Inversion." Remarks delivered at a regional economic briefing, Little Rock, Ark, Dec. 1, 2017*

A flattening yield curve

- The Federal Open Market Committee (FOMC) has been increasing the policy rate—the federal funds target rate—since December 2015, and thus shorter-term interest rates have been rising.
- At the same time, longer-term interest rates in the U.S. have not risen as rapidly.
- Financial market commentary has been addressing this phenomenon, often referred to as a "flattening yield curve."
- I will discuss current yield curve circumstances and comment on some possible interpretations.

Key themes in this talk

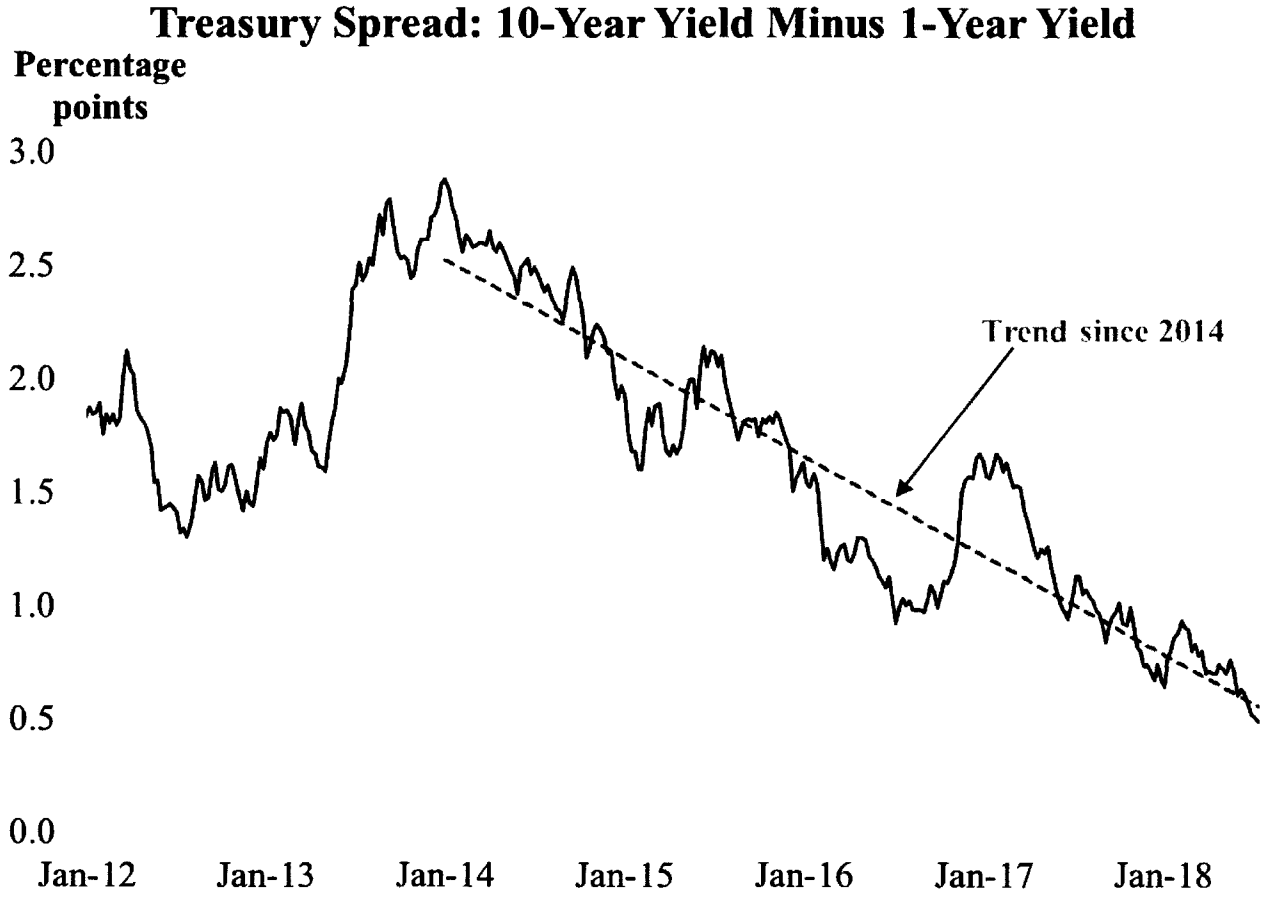
- There is a material risk of yield curve inversion over the forecast horizon (about 2 ½ years) if the FOMC continues on its present course.
- Yield curve inversion is a naturally bearish signal for the economy. This deserves market and policymaker attention.
- It is possible that yield curve inversion will be avoided if longer-term nominal yields begin to rise in tandem with the policy rate, but this seems unlikely as of today.
- Bottom line: Given tame U.S. inflation expectations, it is unnecessary to push monetary policy normalization to such an extent that the yield curve inverts.

A Flattening U.S. Yield Curve

The slope of the yield curve

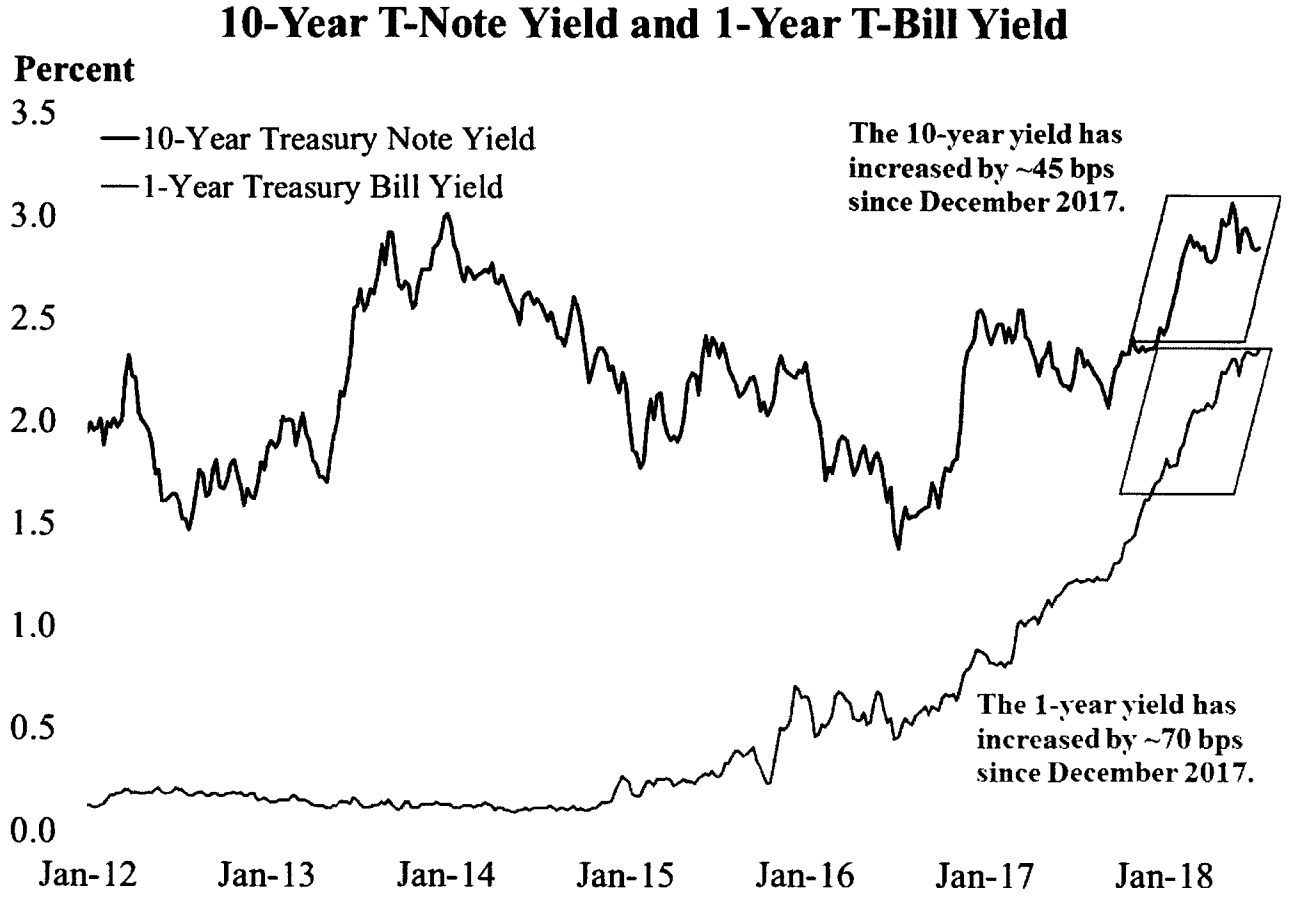
- The U.S. nominal yield curve has been flattening since 2014.
  - The spread between 10-year and one-year Treasury yields was close to 300 basis points at the beginning of 2014.
  - That same spread is currently (July 12) only 46 basis points.
- The flattening is due to rising short-term rates vis-à-vis relatively stable long-term rates.
- There is a material risk that the nominal yield curve will invert over the forecast horizon if the FOMC continues on its current policy path, as suggested in the FOMC's latest Summary of Economic Projections (SEP).

Nominal yield curve flattening



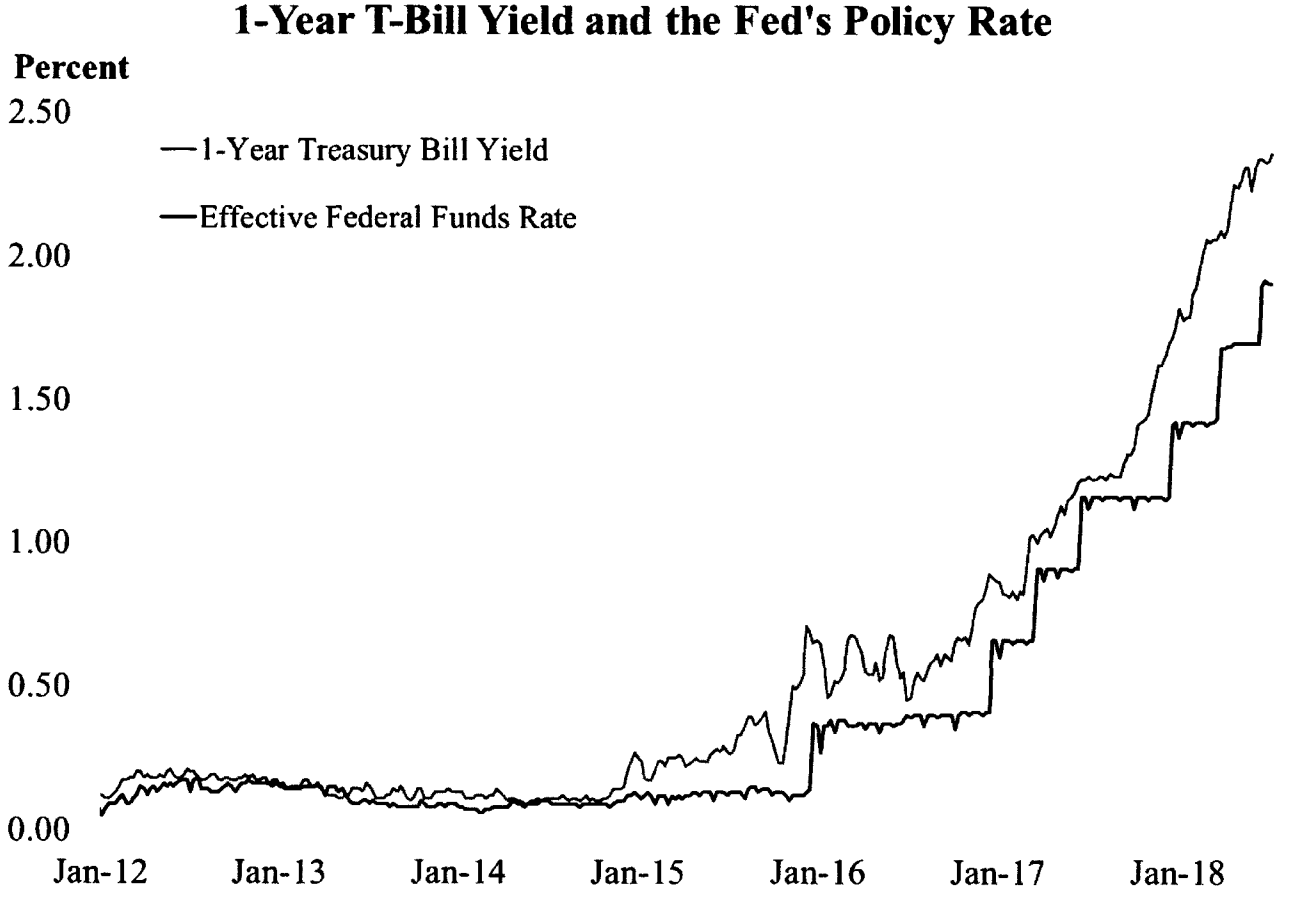
Sources: Federal Reserve Board and author's calculations. Last observation: Week of July 11, 2018.

Flattening due to rising short-term rates



Sources: Federal Reserve Board and author's calculations. Last observation: Week of July 11, 2018.

Rising short-term rates are closely related to the FOMC policy rate

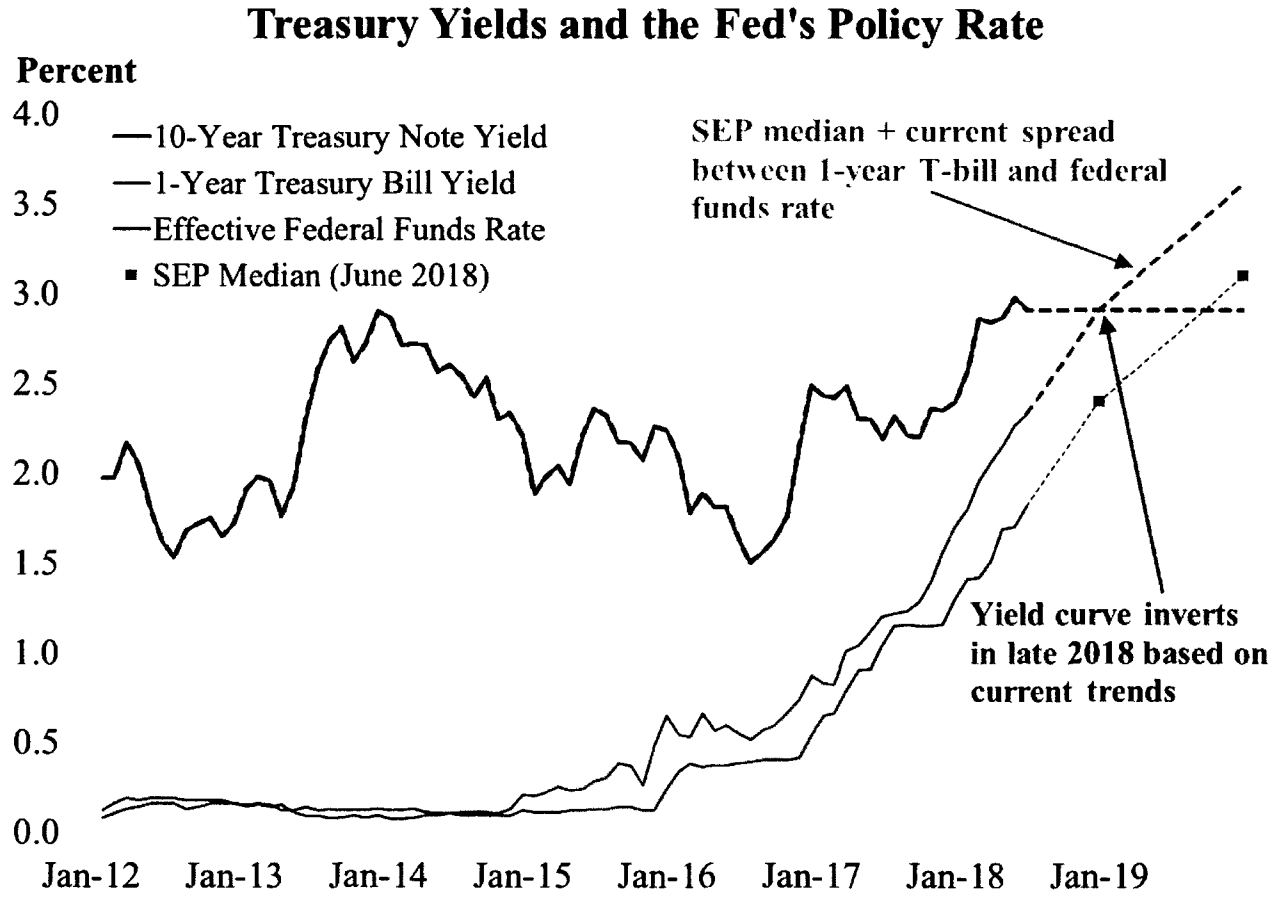


Sources: Federal Reserve Board and author's calculations. Last observation: Week of July 11, 2018.

The risk of yield curve inversion

- Let's suppose that longer-term yields remain near current levels.
- Let's also suppose that the FOMC remains on track to raise the policy rate at the pace suggested in the SEP.
- Under this scenario, the U.S. nominal yield curve would invert in late 2018.
- This scenario would not play out if either (1) the FOMC does not raise the policy rate as aggressively as suggested by the SEP, or (2) longer-term rates begin to rise in tandem with the policy rate.

The possibility of yield curve inversion



Sources: Federal Reserve Board and author's calculations. Last observation: June 2018.

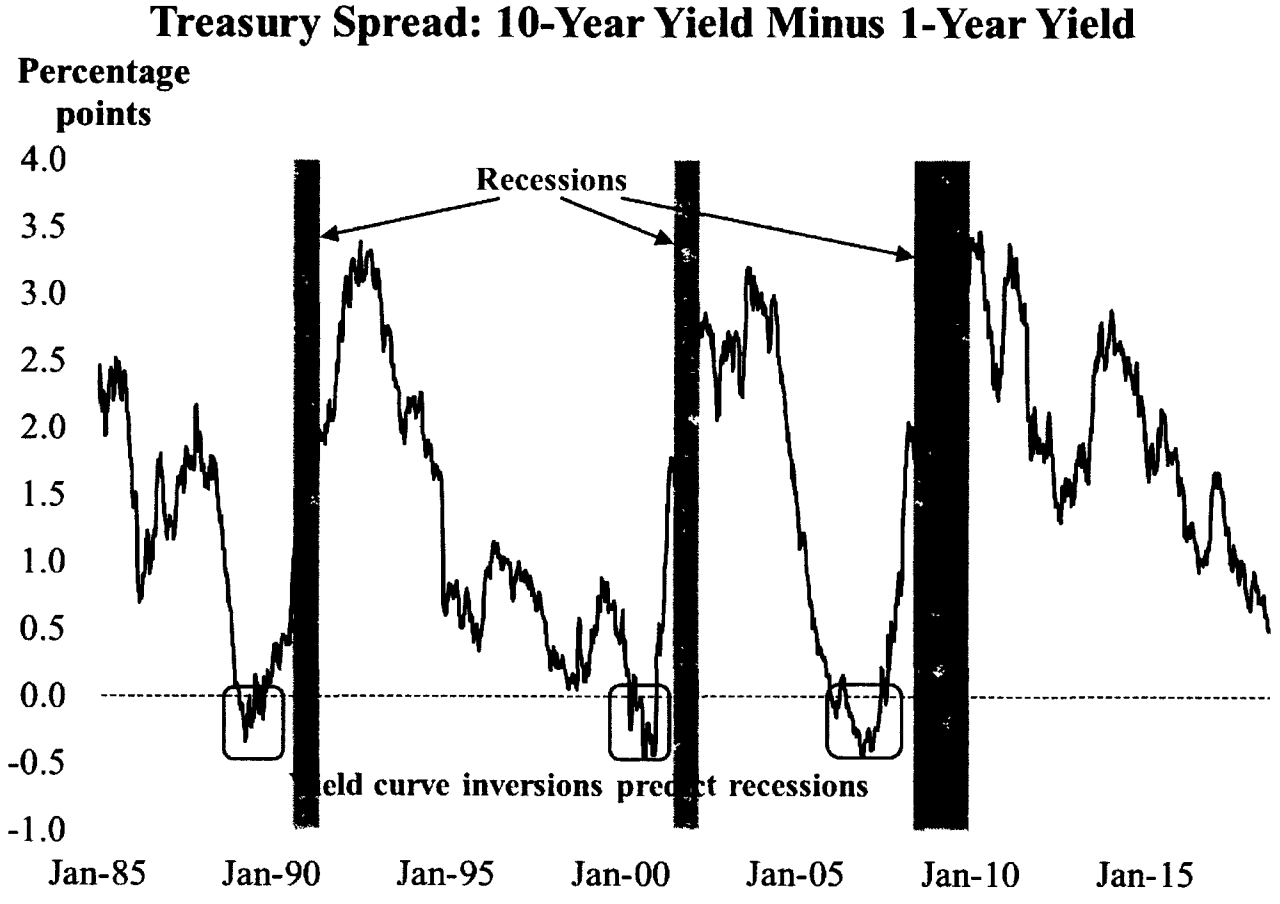
Consequences of an Inverted U.S. Yield Curve

Slope of the yield curve as a predictor of economic activity

- The slope of the yield curve is considered a good predictor of future real economic activity in the U.S.*
- This is true both in empirical academic research and in more casual assessments, such as the next chart.

** For example, see A. Estrella and G.A. Hardouvelis, "The Term Structure as a Predictor of Real Economic Activity," Journal of Finance, June 1991, 46(2), 555–76, and J.H. Wright, "The Yield Curve and Predicting Recessions," Federal Reserve Board FEDS Working Paper No. 2006-07, February 2006. A. Estrella's bibliography provides a comprehensive list of references on the topic.*

An inverted yield curve helps predict recessions



Sources: Federal Reserve Board and author's calculations. Last observation, Week of July 11, 2018. The shaded areas indicate NBER recessions

Caveats on the empirical evidence

- The empirical proposition that an inverted yield curve helps predict recessions makes sense to the extent that lower longer-term nominal interest rates may be a harbinger of both lower growth prospects and lower inflation in the future.
- To be sure, yield curve information is not infallible, and inversion could be driven by other factors unrelated to future macroeconomic performance.
- Nevertheless, the empirical evidence is relatively strong. Therefore, both policymakers and market professionals need to take the possibility of a yield curve inversion seriously.

Alternative term spreads

- The previous chart is based on the spread between the 10-year Treasury yield and the one-year Treasury yield. One could consider alternative term spreads and other information.*
- However, various term spreads tend to be highly correlated, so switching to somewhat different measures tends not to change the broad macroeconomic interpretation.
- The 10-year Treasury yield is a bellwether rate determined mostly by market forces, and the one-year is closely related to Fed policy. An inversion suggests a very different outlook at the Fed versus in the market.

** See P. Johansson and A. Meldrum, "Predicting Recession Probabilities Using the Slope of the Yield Curve," FEDS Notes, March 1, 2018*

How Could Yield Curve Inversion Be Avoided?

Policymaker caution

- The simplest way to avoid yield curve inversion in the near term is for policymakers to be cautious in raising the policy rate.
- The St. Louis Fed's policy rate recommendation is flat over the forecast horizon, meaning no planned policy rate increases—provided the economy continues to perform about as expected.
- The SEP has led to a focus on the number of projected policy rate hikes over the forecast horizon, which is a form of calendar-based policy. Calendar-based policy is known to be suboptimal in the academic literature.
- Instead, reacting to macroeconomic events should be the basis for the FOMC's decisions on the policy rate.

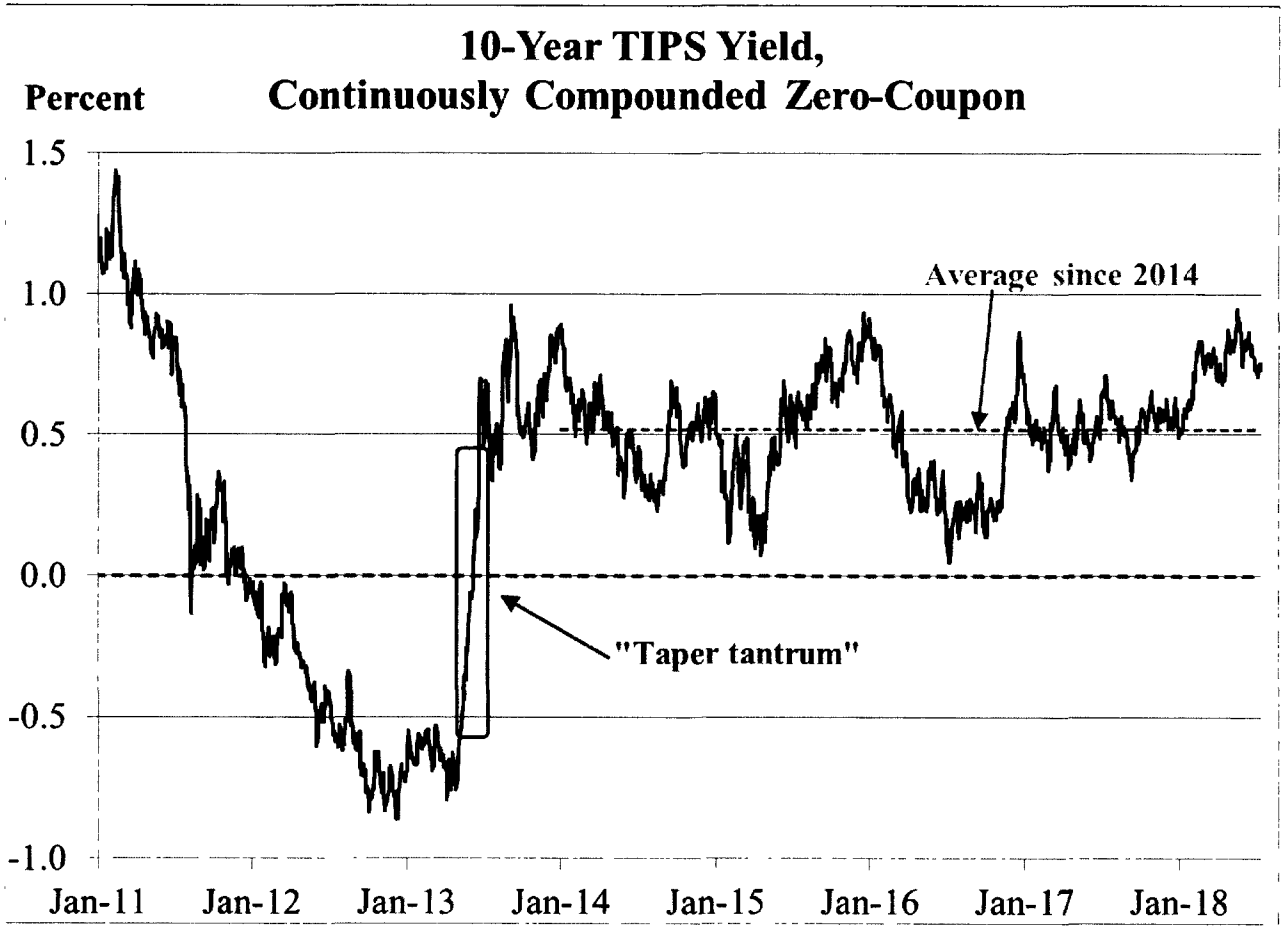
Will longer-term rates begin to rise?

- Another way to avoid yield curve inversion would be for longer-term nominal interest rates to begin to rise in tandem with policy rate increases.
- What are the prospects for increases in longer-term nominal yields?
  - First, longer-term nominal yields could begin increasing because the real rate component begins to increase. However, I see little prospect of this at the moment.
  - Second, the inflation expectations component could increase. But longer-term inflation expectations remain relatively low.

Will longer-term real rates rise?

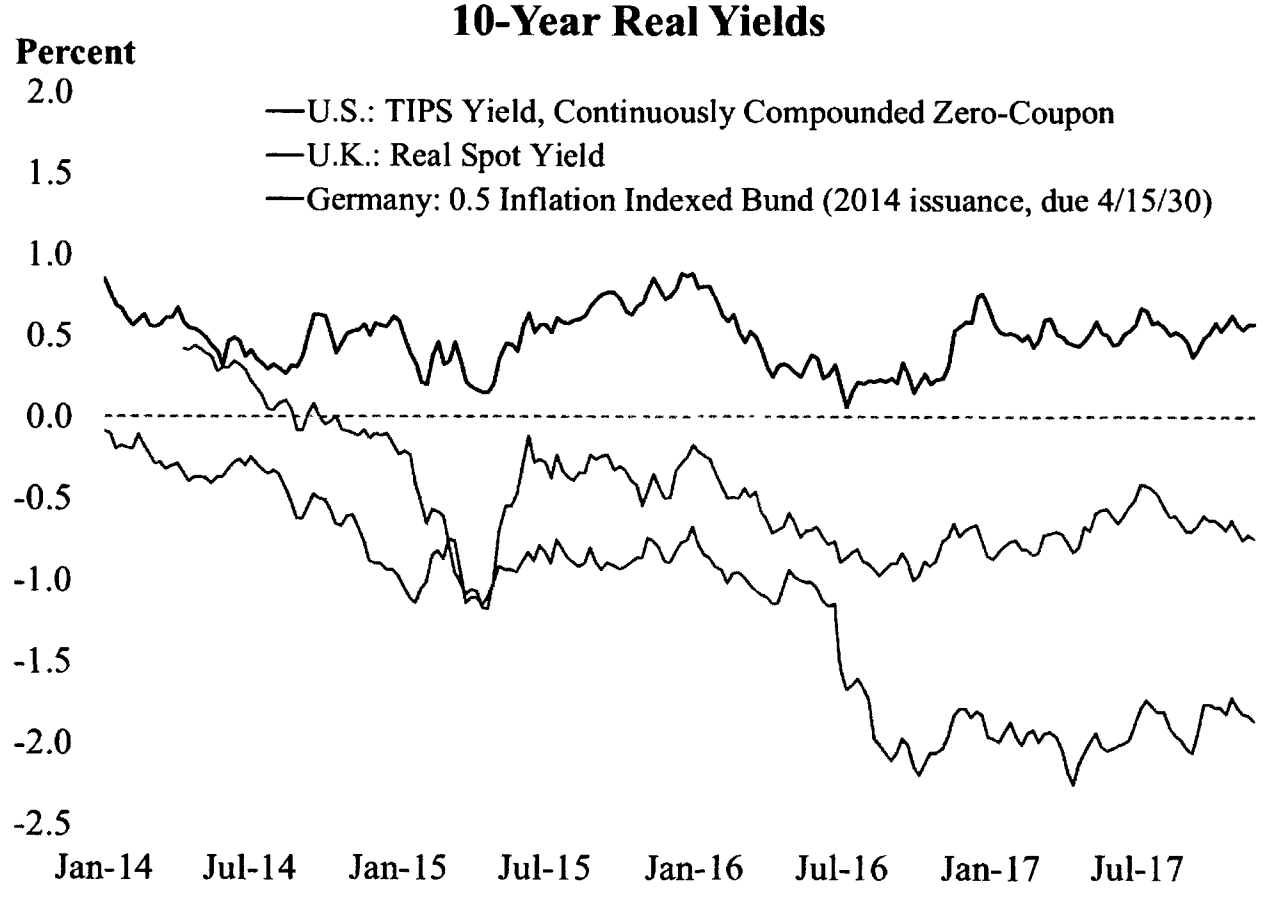
- Let's begin with the possibility that longer-term real interest rates will begin to rise.
- This may be the case if investors perceive greater growth prospects for the U.S. economy going forward.
- However, it does not currently appear that there is any trend toward higher real interest rates over a 10-year horizon.
- In addition, global real interest rates are low, so U.S. rates are low in part due to the nature of the global equilibrium.
- Current real GDP growth is strong, but it is forecast to moderate over the forecast horizon.

The 10-year real rate has been roughly constant since 2014



Sources: Federal Reserve Board and author's calculations. Last observation: July 13, 2018.
Note. TIPS stands for Treasury Inflation-Protected Securities.

Global real interest rates are low



Sources: Federal Reserve Board, Bank of England and Deutsche Bundesbank. Last observation: Week of July 13, 2018.

Expected inflation

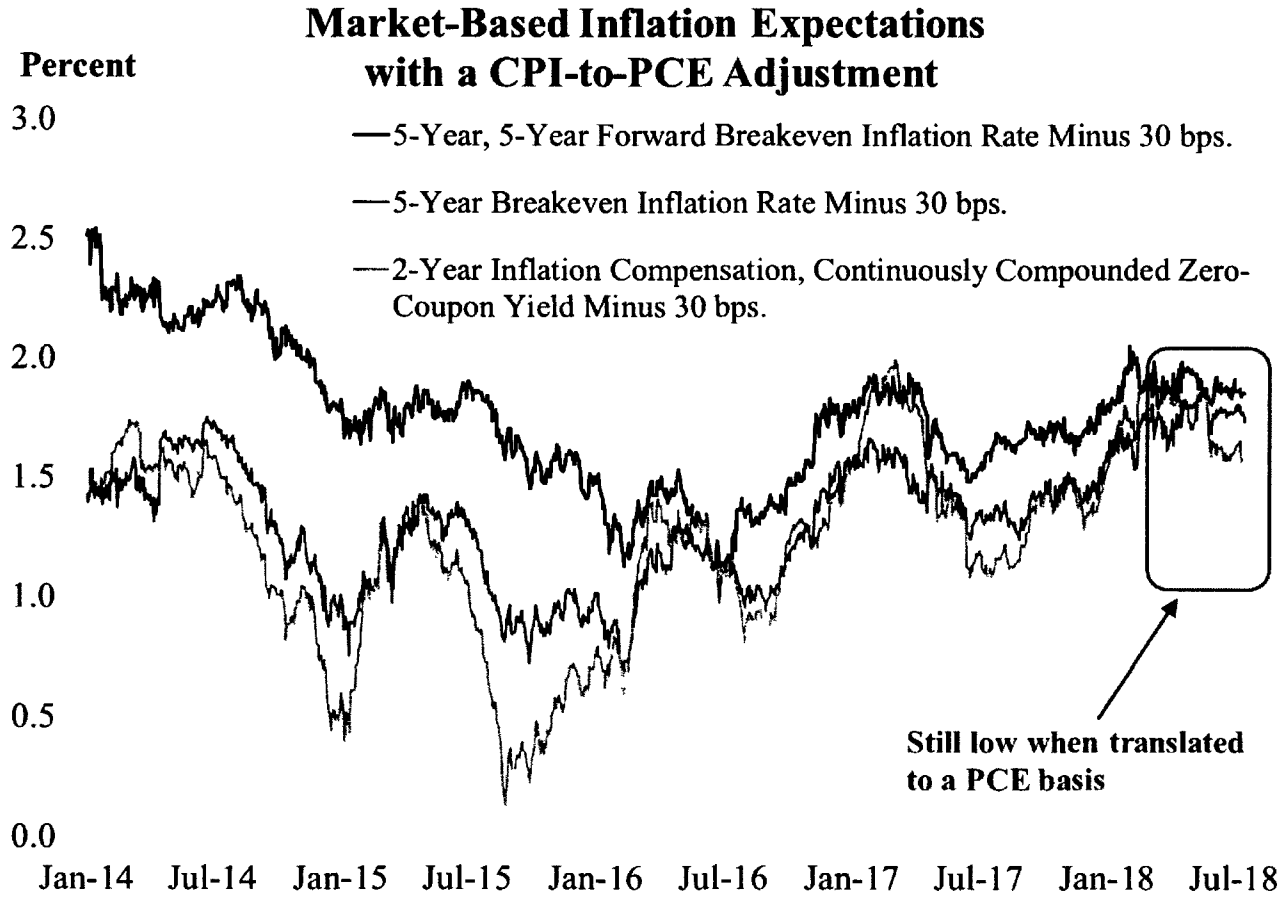
- Let's turn to the possibility that longer-term nominal interest rates will begin to rise because longer-term expected inflation will begin to rise.
- This may be the case if investors perceive greater risk of higher inflation in the U.S. economy going forward.
- However, it does not currently appear that there is any trend toward increased inflation expectations over the longer run.

Market-based inflation expectations

- The inflation compensation derived from Treasury Inflation-Protected Securities (TIPS) is based on headline consumer price index (CPI) inflation.
- The FOMC's 2 percent inflation target is in terms of the annual change in the price index for personal consumption expenditures (PCE).
- Historically, CPI inflation has run somewhat higher than PCE inflation, with an adjustment of about 30 basis points at an annual rate.*
- Other factors can influence TIPS-based expected inflation.

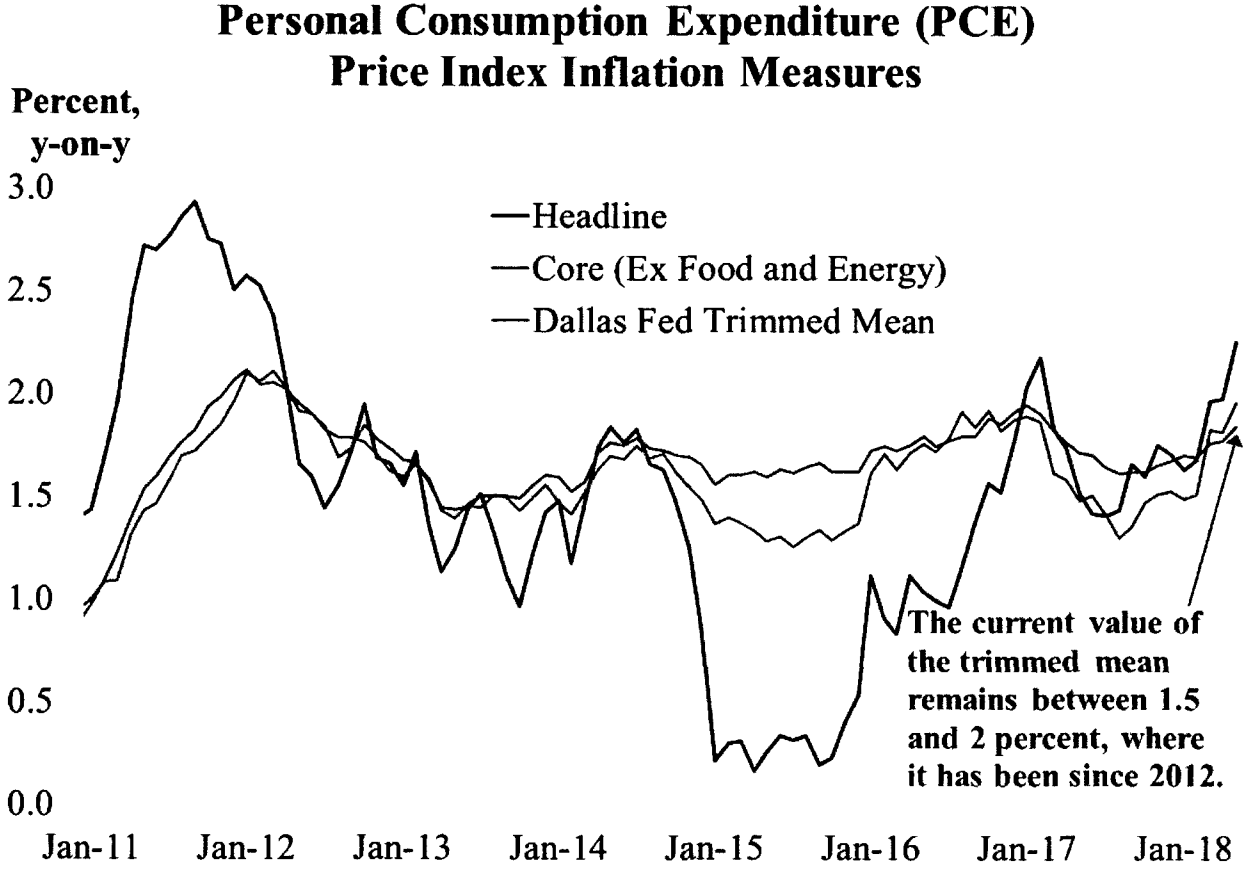
** This adjustment is conservative. The difference between CPI and PCE inflation since January 1960 was, on average, 46 basis points.*

Market-based inflation expectations remain low



Source: Federal Reserve Board. Last observations: July 17 (breakeven inflation rates) and July 13, 2018.

Trimmed mean inflation somewhat below target



Sources: Bureau of Economic Analysis and FRB of Dallas. Last observation: May 2018

Phillips curve effects are negligible

- Many policymakers and financial professionals strongly believe in empirical Phillips curve effects.
  - This means that when the economy grows rapidly and unemployment is low, inflation must increase according to an empirical relationship estimated using past data.
- However, as I have discussed elsewhere recently, this empirical relationship has broken down over the last 30 years due in part to better policymaking.*
- The FOMC has already anticipated these types of effects, pre-emptively raising the policy rate and reducing the size of the Fed's balance sheet.

* See J. Bullard, "The Case of the Disappearing Phillips Curve," Remarks delivered at the 2018 ECB Forum on Central Banking, Sintra, Portugal, June 19, 2018.

Policy caution is best

- In summary, longer-term nominal yields in the U.S. have been relatively low.
- So far, these yields have not increased in tandem with the FOMC's policy rate hikes.
- U.S. longer-term nominal yields could move higher, but current trends seem to indicate that both the real component and the expected inflation component will be subdued going forward.
- This suggests that the risks of yield curve inversion are best avoided by FOMC caution in raising the policy rate during 2018.

An adjustment for QE?

- It is possible that longer-term yields in the U.S. are being held lower in part because of the size of the Fed's balance sheet.
- One could adjust the longer-term yields for the magnitude of this effect and judge the possibility of yield curve inversion based on this adjusted metric instead.
- There are two issues with such an adjustment:
  - The magnitude of these effects is very uncertain.
  - It is far from clear if "adjusted" yield curve inversion would be a better or worse predictor of future real activity than yield curve inversion conventionally defined.

Conclusion

Conclusion

- There is a material risk of yield curve inversion over the forecast horizon if the FOMC continues on its present course of increases in the policy rate.
- Yield curve inversion is a naturally bearish signal for the economy. This deserves market and policymaker attention.
- It is possible that yield curve inversion will be avoided if longer-term nominal yields begin to rise in tandem with the policy rate, but this seems unlikely as of today.
- Given tame U.S. inflation expectations, it is unnecessary to push normalization to such an extent that the yield curve inverts.

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