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January 25, 2018, Norges Bank, Oslo, Norway. [Presentation (pdf)](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_dicecio_mp_for_the_masses_25january2018.pdf).

This video is from the June 14th event in Barcelona.

Having trouble with the video? [Watch it on YouTube.](https://www.youtube.com/watch?v=4Q2JaWCetqM)

- **July 20, 2018**. Presentation. "Assessing the Risk of Yield Curve Inversion: An Update," Glasgow-Barren County Chamber of Commerce Quarterly Breakfast, Glasgow, Ky.
  Presentation (pdf) (bullard_glasgow_chamber_20_july_2018pdf) | Press Release | Video | Audience Q&A (audio) | Photos | Transcript of Media Q&A (pdf) (bullard_mediaavailabilityglasgowky_20_july_2018pdf).

Assessing the Risk of Yield Curve Inversion: An Update

July 20, 2018

[Presentation (pdf)](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_glasgow_chamber_20_july_2018.pdf)| [Press Release](https://www.stlouisfed.org/news-releases/2018/07/20/bullard-update-yield-curve-inversion)| [Photos](https://www.stlouisfed.org#photos)[Video of Presentation](https://www.stlouisfed.org#video)| [Audience Q&A (audio)](https://www.stlouisfed.org#audio)[Transcript of Media Q&A (pdf)](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_mediaavailabilityglasgowky_20_july_2018.pdf)

In Glasgow, Ky., St. Louis Fed President James Bullard talked about the possibility that the yield curve would invert, which he first discussed in a speech on Dec. 1, 2017. "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," he said.

In particular, Bullard commented that 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 for raising the fed funds rate, as suggested in the June 2018 Summary of Economic Projections. Such an inversion—whereby short-term interest rates exceed long-term interest rates—is a "naturally bearish signal for the economy," he said. He noted that yield curve inversion is best avoided in the near term by caution in raising the fed funds rate. "Given tame U.S. inflation expectations, it is unnecessary to push monetary policy normalization to such an extent that the yield curve inverts," he said.

Presentation:

Audience Q&A:

Photos:

On a two-day trip to Glasgow, Ky., Federal Reserve Bank of St. Louis President James Bullard visited with business and other civic leaders. Among his stops Thursday and Friday were at two manufacturers, a health “pavilion” in what was once a Walmart and a technology center due to open next month on the local high school’s campus. Bullard frequently visits communities in the four zones that make up the St. Louis Fed’s District. Glasgow is in the Louisville Zone.

One of the stops made by Federal Reserve Bank of St. Louis President James Bullard (arms folded) on Thursday was at SpanTech LLC, which develops and manufactures conveyor systems and chain components. The company’s chief operating officer, Tiffany Somerville, and co-worker Roger Judd explain the manufacturing process. Also participating on this tour (from the left) were Courtney Ingram, an intern at the Fed’s Louisville Branch; Randy Schumaker, a member of the Branch’s board of directors; and Nikki Jackson, a senior vice president of the St. Louis Fed and the regional executive of its Louisville Branch. [Download High Resolution Photo](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-louisville-tour/bullardglasgow2018spantechllc.jpg)

Federal Reserve Bank of St. Louis President James Bullard addressed more than 200 people on Friday at a breakfast sponsored by the Glasgow-Barren County Chamber of Commerce. His topic was the risk of a yield curve inversion, when short-term interest rates surpass long-term rates. An inversion “is a naturally bearish signal for the economy,” he said. [Download High Resolution Photo](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-louisville-tour/bullardglasgow2018presentation.jpg)

St. Louis Fed's Bullard Gives an Update on the Risk of Yield Curve Inversion

GLASGOW, Ky. – Federal Reserve Bank of St. Louis President James Bullard gave remarks titled [“Assessing the Risk of Yield Curve Inversion: An

Update"](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_glasgow_chamber_20_july_2018.pdf)to the Glasgow-Barren County Chamber of Commerce on Friday.

Bullard first addressed on Dec. 1, 2017, the possibility of a U.S. Treasury yield curve inversion if the Federal Open Market Committee (FOMC) continued on its higher projected path for the Federal Reserve's policy rate (i.e., the federal funds target rate). "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," he said Friday.

Bullard explained that an inverted yield curve, which occurs when yields on shorter-term government debt exceed yields on longer-term government debt, helps predict recessions.

"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," he said. "Yield curve inversion is a naturally bearish signal for the economy. This deserves market and policymaker attention."

He also discussed possible ways to avoid an inverted yield curve, noting that policy caution is best. "Given tame U.S. inflation expectations, it is unnecessary to push monetary policy normalization to such an extent that the yield curve inverts," he said.

A Flattening U.S. Yield Curve that Could Invert
Bullard noted that the U.S. nominal yield curve has been flattening since 2014. While the spread between 10-year and one-year Treasury yields was close to 300 basis points at the beginning of 2014, the spread narrowed to only 46 basis points as of July 12.

He explained that the FOMC has been increasing the policy 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," he said.

Bullard speculated on what might happen if longer-term yields remain near current levels and if the FOMC remains on track to raise the policy rate at the pace suggested in the FOMC's June 2018 Summary of Economic Projections (SEP). Under this scenario, he noted, the nominal yield curve would invert in late 2018 based on the projected one-year Treasury rate. 1

However, he said, "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."

Consequences of an Inverted U.S. Yield Curve

Both in empirical academic research and in more casual assessments, the slope of the yield curve is considered a good predictor of future real economic activity in the U.S., Bullard pointed out.

He discussed the empirical proposition that an inverted yield curve helps predict recessions, which he said 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.

While Bullard examined the spread between 10-year and one-year Treasury yields, he noted that 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," he said.

He explained that the 10-year Treasury yield is a bellwether rate determined mostly by market forces and that the one-year Treasury yield is closely related to Fed policy. "An inversion suggests a very different outlook at the Fed versus in the market," he said.

How Could Yield Curve Inversion Be Avoided?

"The simplest way to avoid yield curve inversion in the near term is for policymakers to be cautious in raising the policy rate," Bullard stated. He noted that 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.

He pointed out that the FOMC's 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. He added that 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," he said.

Bullard noted that another way to avoid yield curve inversion would be for longer-term nominal interest rates to move higher. "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," he said.

He explained that longer-term nominal yields could rise if longer-term real interest rates or longer-term inflation expectations increase. "However, it does not currently appear that there is any trend toward increased inflation expectations over the longer run," he said.

Regarding the possibility that longer-term real rates will begin to rise, he pointed out that 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," he said, adding that global real interest rates are low. In addition, he said, "Current real GDP growth is strong, but it is forecast to moderate over the forecast horizon."

He also noted the effects of rapid economic growth and low employment on inflation are negligible. The empirical relationship represented in the Phillips curve has broken down over the last 30 years due in part to better policymaking, he said. "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," he said.

1The projected one-year Treasury rate is calculated as the SEP median federal funds rate plus the current spread between the one-year Treasury bill and the federal funds rate.