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- **May 14, 2018.** Presentation. "[Non-Uniform Currencies and Exchange Rate Chaos.](#)" CoinDesk, Consensus 2018, New York, N.Y. [Presentation \(pdf\) \(bullard\\_consensus\\_new\\_york\\_14\\_may\\_2018pdf\)](#) | [Press Release.](#)

### **Non-Uniform Currencies and Exchange Rate Chaos**

May 14, 2018

[Presentation (pdf)]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard\\_consensus\\_new\\_york\\_14\\_may\\_2018.pdf](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_consensus_new_york_14_may_2018.pdf)) | [Press Release](<https://www.stlouisfed.org/news-releases/2018/05/14/bullard-non-uniform-currencies>)

Speaking in New York, St. Louis Fed President James Bullard discussed how the current cryptocurrency wave may be driving the U.S. uniform currency system toward something more like the global non-uniform currency system, which is characterized by volatile exchange rates. He noted that societies have disliked non-uniform currency systems because the currencies trade at different values. "Cryptocurrencies may unwittingly be pushing in the wrong direction in trying to solve an important social problem, which is how best to facilitate market-based exchange," Bullard said.

Similar remarks were delivered at Alternative Money University, Cato Institute, Washington, D.C., July 15, 2018, [(presentation pdf)]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard\\_mu\\_cato\\_15july2018.pdf](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_mu_cato_15july2018.pdf)) and at The Canon Institute for Global Studies, Conference on Macroeconomic Theory and Policy 2018, Tokyo, Japan, June

4, 2018, [(presentation pdf)]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard\\_cigs\\_tokyo\\_4\\_june\\_2018.pdf](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_cigs_tokyo_4_june_2018.pdf)).

## **St. Louis Fed's Bullard Discusses "Non-Uniform Currencies and Exchange Rate Chaos"**

NEW YORK – Federal Reserve Bank of St. Louis President James Bullard discussed [“Non-Uniform Currencies and Exchange Rate Chaos”]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard\\_consensus\\_new\\_york\\_14\\_may\\_2018.pdf](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_consensus_new_york_14_may_2018.pdf)) on Monday at the CoinDesk Consensus 2018 conference.

While acknowledging the promise of blockchain and related technologies, he focused his remarks on the narrower topic of currency provision. Bullard, who has contributed to the literature on “private money,” drew on this literature as well as other observations.

He noted that the U.S. is drifting toward non-uniform currency trading arrangements. “Cryptocurrencies are creating drift toward a non-uniform currency in the U.S., a state of affairs that has existed historically but was disliked and eventually replaced,” Bullard said.

### *Global currency competition*

Currency competition is nothing new, nor is electronic delivery of value, Bullard noted, adding that many currencies are government-issued and backed by the government’s monetary policy.

As an example of global currency competition, he pointed to the exchange rate between the Venezuelan bolivar and the U.S. dollar during 2018. “U.S. monetary policy is relatively stable, while Venezuelan policy has been unstable, leading the bolivar to devalue against the dollar,” he said.

### *Privately issued currency*

Regarding privately issued currency, Bullard said that it can fit into this

context of many competing currencies. The literature suggests public and private currencies can coexist as part of an equilibrium, in which one type of money need not crowd out the other, he explained. In an equilibrium like this, he added, both are required to allow all voluntary trade to occur.

Historically, the profusion of privately issued currency created an unsatisfactory system in the U.S., he noted, pointing to the 1830s, when 90 percent of currency was privately issued. As a result, there was a call for a uniform currency in the U.S., which was implemented during the Civil War.

#### *The drift toward non-uniformity*

Turning to today, Bullard said the cryptocurrency trade could be described as “a drift toward a non-uniform currency in the U.S.,” with lots of privately issued cryptocurrencies trading at various rates minute by minute. He noted that more than 1,800 cryptocurrencies have been launched.

He explained that consumers and businesses may not like a non-uniform currency system in which many types of currency trade simultaneously at a variety of prices in a local market.

“Currencies have to be reliable and hold their value. This is probably why government backing has been important historically, combined with a stable monetary policy that promotes stability of the currency,” he said, adding that the Venezuelan bolivar devaluation is an example of what happens when a country has unstable monetary policy.

#### *Vagaries of monetary policy remain*

Bullard posed the question of whether cryptocurrencies could protect against the vagaries of monetary policy, as in the Venezuelan example.

“The problem of how to stabilize currency value is not mitigated by commodity-backed money or cryptocurrency,” he said. With cryptocurrencies, for example, there is monetary policy encoded in the system, but that system could bifurcate, creating two fixed volumes of coins instead of one—a process that can happen multiple times.

“One of the main lessons of monetary theory is that the credibility of future

issuance policy is a key aspect to the value of a currency,” he said.

### *Exchange rate chaos*

Turning back to non-uniform currency systems, Bullard noted that societies have disliked such systems because the currencies trade at different values. This can be avoided by having a uniform currency, he added.

While countries have wanted a uniform currency locally, Bullard pointed out that globally, there is not a uniform currency. Instead it is a system of competing currencies with widely fluctuating exchange rates, even in the case of the U.S. and Japan, which both have relatively stable monetary policies in place.

Bullard noted that a local non-uniform currency system may have similar volatility to that of the global currency system in place today. “I am arguing that the current cryptocurrency wave may be driving the U.S. uniform currency system toward something more like the international non-uniform currency system,” he said.

### *Conclusion*

Bullard reiterated that the U.S. is drifting toward non-uniform currency trading arrangements, a system the society has disliked historically. He also noted that, globally, there is an example of a non-uniform system of currencies, but these currencies trade at exchange rates that are often viewed as excessively volatile.

Bullard concluded, “Cryptocurrencies may unwittingly be pushing in the wrong direction in trying to solve an important social problem, which is how best to facilitate market-based exchange.”

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- **May 11, 2018.** Presentation. ["U.S. Monetary Policy: A Case for Caution."](#) Springfield Area Chamber of Commerce, Springfield Business Development Corp. Meeting, Springfield, Mo. [Presentation \(pdf\) \(bullard\\_springfield\\_chamber\\_11\\_may\\_2018pdf\)](#) | [Press Release](#) | [Photos of Visit to Springfield](#).

## **U.S. Monetary Policy: A Case for Caution**

May 11, 2018

[Presentation (pdf)]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard\\_springfield\\_chamber\\_11\\_may\\_2018.pdf](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_springfield_chamber_11_may_2018.pdf)) | [Press Release](<https://www.stlouisfed.org/news-releases/2018/05/11/bullard-a-case-for-caution>) | [Photos](<https://www.stlouisfed.org#photos>)

On a two-day visit to Springfield, Mo., St. Louis Fed President James Bullard met with area business leaders, toured tech incubators and a workforce development center, and spoke about monetary policy at an event sponsored by the Springfield Area Chamber of Commerce.

During a Friday presentation, Bullard outlined five reasons for caution in raising the policy rate (fed funds rate) further based on current macroeconomic conditions. Those reasons are: 1) inflation expectations remain low; 2) the current policy rate setting is neutral; 3) the yield curve is relatively flat and yield curve inversion is possible; 4) business investment has room to grow; and 5) labor markets are in equilibrium.

On Friday morning, Bullard spoke about monetary policy at the Springfield Area Chamber of Commerce. Around 90 people attended his presentation. [Download High Resolution Photo]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard\\_talks\\_springfield\\_11may18.jpg](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard_talks_springfield_11may18.jpg))

On Thursday, Bullard was welcomed to Missouri State University's eFactory, a tech incubator, by Jim Baker (left), vice president for research, economic development and international programs at the university, and Allen Kunkel

(right), associate vice president for economic development at the university and director of the Jordan Valley Innovation Center. [Download High Resolution Photo]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard\\_msuofficials\\_springfield\\_10may18.jpg](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard_msuofficials_springfield_10may18.jpg))

Jim Baker (center) welcomed Bullard (right) to the e-Factory, a tech incubator, on Thursday. Baker is the vice president for research, economic development and international programs for Missouri State University, which oversees the e-Factory. [Download High Resolution Photo]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard\\_efactory\\_welcome\\_springfield\\_10may18.jpg](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard_efactory_welcome_springfield_10may18.jpg))

Bullard tried out a virtual reality headset from one of the startup business owners at the eFactory on Thursday. [Download High Resolution Photo]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard\\_efactory\\_vrhandset\\_springfield\\_10may18.jpg](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard_efactory_vrhandset_springfield_10may18.jpg))

At a dinner for bankers Thursday night, Karen Branding, a senior vice president at the St. Louis Fed, introduced Bullard. Bullard often travels around Missouri and six other states that make up the St. Louis Fed's District so that he can hear from "Main Street." In return, he shares his views on the state of the economy. [Download High Resolution Photo]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard\\_branding\\_springfield\\_10may18.jpg](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard_branding_springfield_10may18.jpg))

On Friday, Bullard met with leaders from Ozarks Technical Community College (OTC) and the college's Center for Workforce Development (CWD). Shown above, from left to right, are Stephanie Sumners, chief of staff and executive director of the OTC Foundation; Matt Simpson, chief research and planning officer, OTC; Sherry Coker, director, business development, CWD; Jim Abramovitz, executive director, CWD; Bullard; Hal Higdon, chancellor, Ozarks Technical Community College System, and president, OTC Springfield Campus; Matt Hudson, dean of technical education, OTC; Tim

Baltes, associate vice chancellor for human resources and workforce development, OTC. [Download High Resolution Photo]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard\\_workforcedevelopment\\_springfield\\_11may18.jpg](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/images/bullard/photos/2018-st-louis-zone-tour/bullard_workforcedevelopment_springfield_11may18.jpg))

### **St. Louis Fed's Bullard Discusses "U.S. Monetary Policy: A Case for Caution"**

SPRINGFIELD, Mo. – Federal Reserve Bank of St. Louis President James Bullard discussed ["U.S. Monetary Policy: A Case for Caution"]([https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard\\_springfield\\_chamber\\_11\\_may\\_2018.pdf](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/files/pdfs/bullard/remarks/2018/bullard_springfield_chamber_11_may_2018.pdf)) on Friday at the Springfield Area Chamber of Commerce.

In the talk, Bullard explained that U.S. monetary policy has been normalizing during the last two and a half years, with the Fed's balance sheet shrinking relative to U.S. GDP and the Fed's policy rate (i.e., the federal funds rate target) increasing relative to policy rates in key foreign economies.

He posed the question: "How far can the Fed go along the current normalization path?" He then presented five reasons for caution in deciding whether to raise the policy rate further in the near term. The reasons spanned the following areas: inflation expectations, the neutral policy rate, the flattening yield curve, room to grow business investment, and labor markets in equilibrium.

#### *Inflation expectations remain low*

Bullard noted that market-based inflation expectations are still low. On a PCE basis, they remain centered somewhat below the Federal Open Market Committee's (FOMC) 2 percent inflation target, inhibiting the FOMC's ability to maintain the credibility of the target, he explained. 1

"By keeping the policy rate steady, the FOMC may be able to appropriately

re-center inflation expectations at the target outcome for the next several years,” he said.

*The current policy rate is neutral*

Bullard noted that the policy rate setting is likely neutral today, putting neither upward nor downward pressure on inflation. “This suggests that it is not necessary to change the policy rate to keep inflation at target,” he said.

In recalling analysis he did earlier this year, he said the level of the trend short-term safe real interest rate, the so-called “r-star,” is a starting point for the appropriate nominal policy rate. He suggested that r-star remains in negative territory.

“That analysis also suggests that the nominal policy rate set by the FOMC is already pressing against the upper bound of a neutral setting,” he said.

*The yield curve is relatively flat*

Bullard noted that the U.S. nominal yield curve has flattened since 2014. The spread between the 10-year and one-year Treasury yields went from close to 300 basis points at the beginning of 2014 to only 72 basis points as of the week of May 2.

“The yield curve could invert later this year or early next year if the Committee continues increasing the policy rate and longer-term yields do not move higher,” he said.

He cited research by the Federal Reserve Bank of San Francisco, which suggests that yield curve inversion is a reliable bearish signal for the U.S. economy. “It is unnecessary to press policy rate normalization to the point of inverting the yield curve since inflation and inflation expectations are either at or below target,” he said.

*Business investment has room to grow*

Bullard noted that investment in the U.S. economy as a fraction of GDP remains low and that it has room to grow. He also noted that the corporate tax reform recently signed into law was meant in part to address the dearth of investment.



“To the extent the corporate tax reform is successful today and over the next few years, the economy could grow more rapidly without inflationary side effects,” he said. “For this reason, I would caution against translating faster real GDP growth into increased inflationary pressures.”

### *Labor markets are in equilibrium*

Bullard recalled that after being dislocated during the aftermath of the 2007-2009 recession, U.S. labor markets have recovered to an equilibrium state. This means that the suppliers of labor (households) and the employers of labor (firms) are now on the same footing in the labor market, he explained, adding that this is an appropriate situation that the Fed should not disturb.

He also noted that labor market outcomes are not tightly associated with inflation. He explained that when compensation paid to workers increases, firms have increased incentives to substitute away from labor and toward capital investment, an effect that keeps the labor market in equilibrium without inflationary consequences.

“It is not necessary to disrupt this equilibrium to keep inflation under control given the current macroeconomic circumstances,” he said.

<sup>1</sup>The FOMC’s inflation target is in terms of the annual change in the price index for personal consumption expenditures (PCE). Bullard explained that market-based measures of inflation expectations, which are for CPI inflation, need to be adjusted downward somewhat to roughly translate into PCE inflation.

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