

The Federal Reserve and the International Financial System

Presentation at University of Wisconsin



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American Enterprise Institute
April 2021

Disclaimer: This presentation represents my own views and not necessarily those of the Federal Reserve Board of Governors or its staff.

Today's Discussion

- Centrality of the dollar in the global financial system.
- Monetary “spillovers” of Fed policy to other economies.
- The Fed’s actions after the pandemic emerged last year, and how spillovers from those actions saved the global economy.
- Challenges for the Fed posed by President Biden’s covid relief package, overheating, and inflation
- What that means for emerging market economies



I. Centrality of the dollar (review!)

The U.S. dollar is the world's preeminent funding and investment currency, playing a critical role in the global financial system.

- Foreign corporations borrow in dollars to fund dollar business activities or lower borrowing costs.
- Foreign governments borrow in dollars, as their own currencies can too volatile for investors.
- Foreign financial institutions borrow dollars to lend to both foreign borrowers and to U.S. households and firms.



II. Monetary “spillovers” of Fed policy to other economies.

In part because of the dollar’s centrality, U.S. monetary policy actions don’t just affect the U.S. economy, but spill over to the rest of the world (ROW).

For example, tightening U.S. monetary policy. Affects ROW via various channels:



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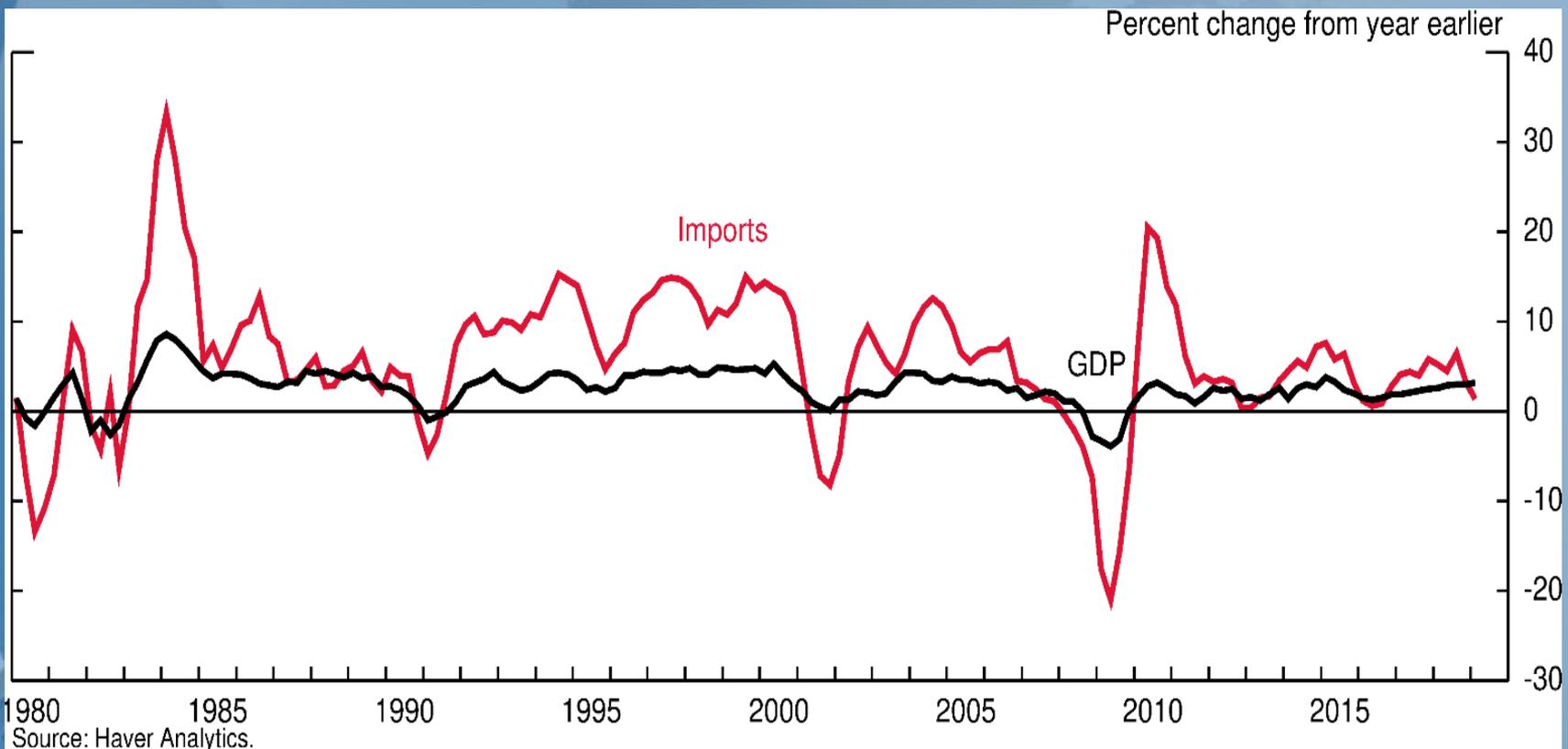
For example, tightening U.S. monetary policy. Affects ROW via various channels:

1. Reduces U.S. GDP and thus imports, which depresses exports by ROW to U.S.



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Figure 3: U.S. Real GDP and Imports



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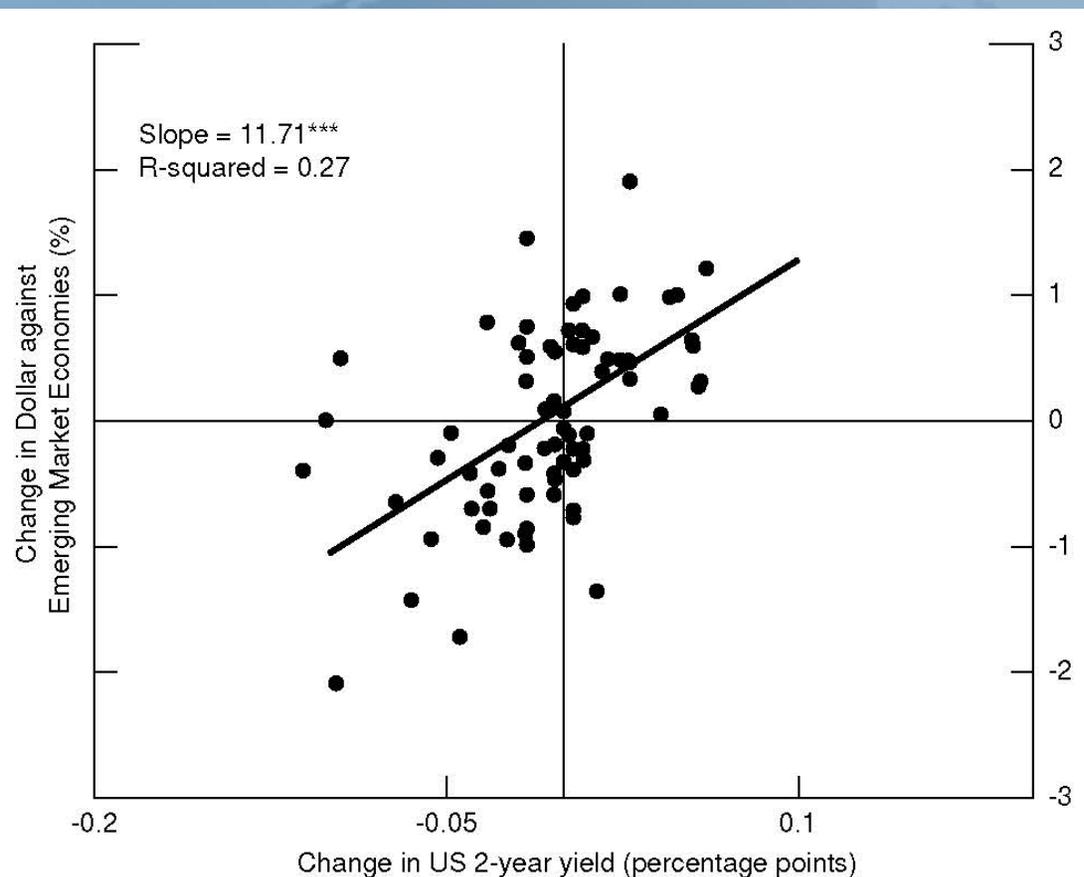
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1. Reduces U.S. GDP and thus imports, which depresses exports by ROW to U.S.
- 2. Appreciates the dollar.**



II. Monetary “spillovers” of Fed policy to other economies.

Figure 1: Response of EME Dollar Exchange Rates to US Treasury Yield Surprises



The data are changes in a narrow-window around FOMC announcement dates. The sample is from 2010-2019. The US 2-year yield is the generic government bond yield from Bloomberg. The EME index is an equally weighted average of EME exchange rates. ***, **, and * denote significance at the 1, 5, and 10 percent levels, respectively.

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1. Reduces U.S. GDP and thus imports, which depresses exports by ROW to U.S.
2. **Appreciates the dollar.**
 - **Helps ROW by making its currencies more competitive, so it can export more.**
 - **But hurts ROW because it’s more expensive for them to repay dollar-denominated debts.**



II. Monetary “spillovers” of Fed policy to other economies.

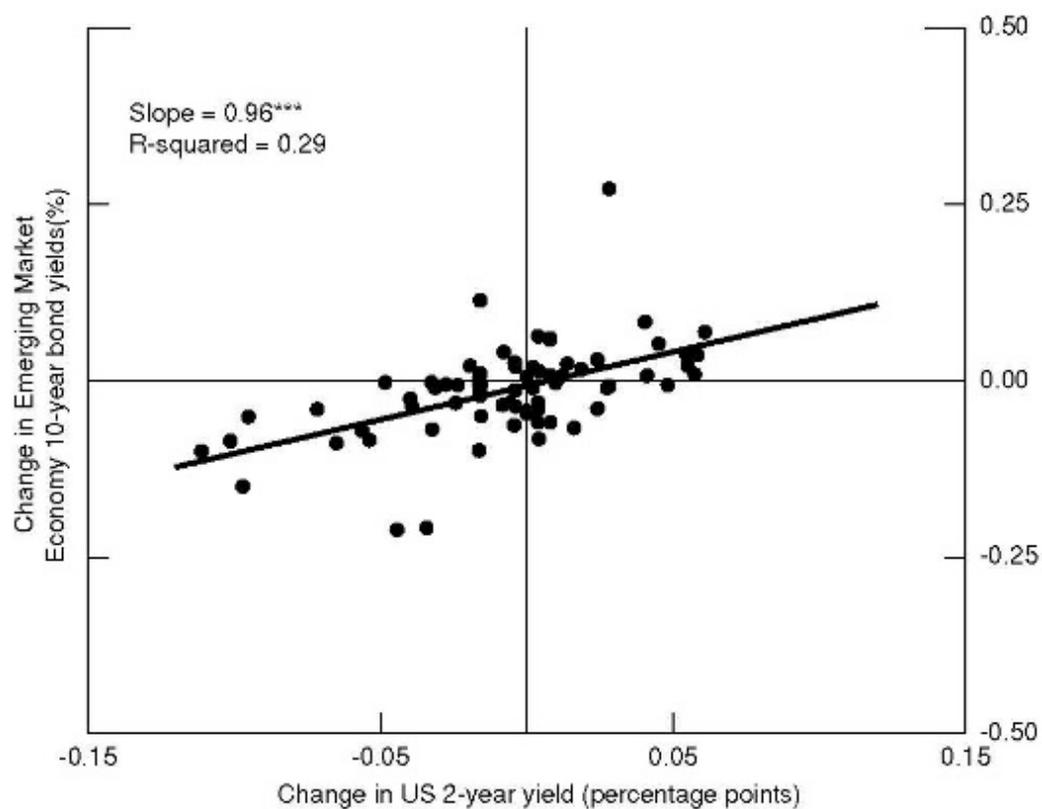
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3. **Raises US interest rates and tightens financial conditions: this leads through portfolio balance effects to higher foreign interest rates and lower asset prices.**

II. Monetary “spillovers” of Fed policy to other economies.

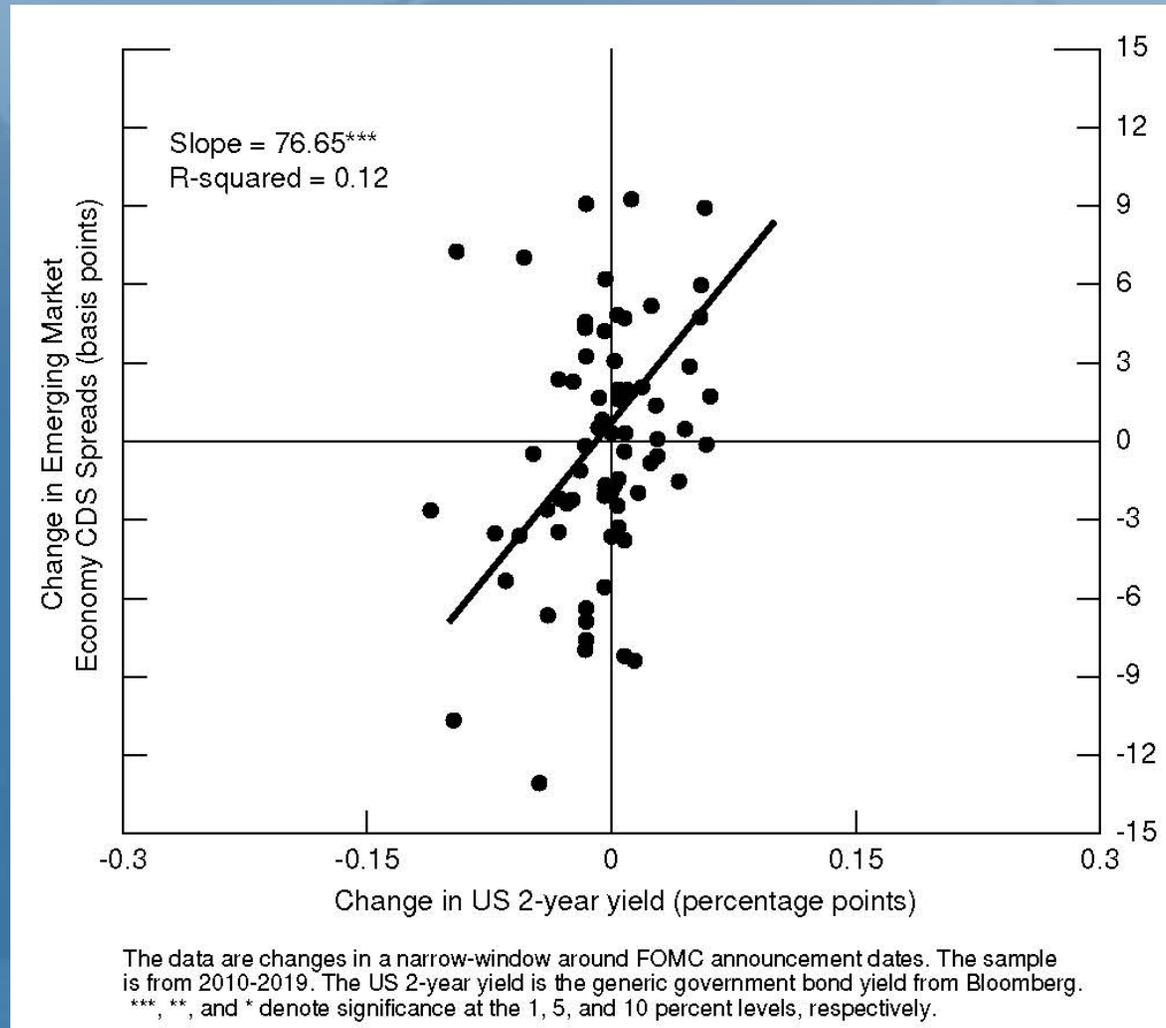
Figure 4: Response of EME local-currency bond yields to US Treasury Yield Surprises



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II. Monetary “spillovers” of Fed policy to other economies.

Figure 3: Response of EME CDS spreads to US Treasury Yield Surprises



II. Monetary “spillovers” of Fed policy to other economies.

All told, a large literature suggests that Fed easing leads to easier financial conditions in ROW, and Fed tightening leads to tighter conditions in ROW.

Rogers, Scotti and Wright (2014)

Chen, Mancini-Grifolli and Sahay (2014),

Ferrari, Kearns, and Schrimpf (2017), Kearns, Schrimpf, and Xia (2018)

Bruno and Shin (2014, 2015), Brauning and Ivashina (2019)

Rey (2013, 2016), Miranda-Agrippino and Rey (2019)

Curcuru, Kamin, Li, and Rodriguez (2018)

Kalemli-Ozcan (2019)

Gilchrist, Yue, and Zakrajsek (forthcoming),

II. Monetary “spillovers” of Fed policy to other economies.

Fed spillovers often criticized as being unhelpful to other economies, especially EMEs.

- Immediately after GFC, concern that U.S. monetary easing was bad for EMEs:
 - EME growth had already rebounded, so they didn’t need more stimulus.
 - Concerns of large spillovers, pushing waves of capital to EMEs, appreciating their currencies, blowing financial bubbles.
- Later, concern that U.S. monetary tightening bad for EMEs:
 - 2013 “taper tantrum” – global financial market volatility
 - U.S. tightening blamed for depreciating local currencies, increasing debt servicing costs, triggering capital outflows, depressing local asset prices.



II. Monetary “spillovers” of Fed policy to other economies.

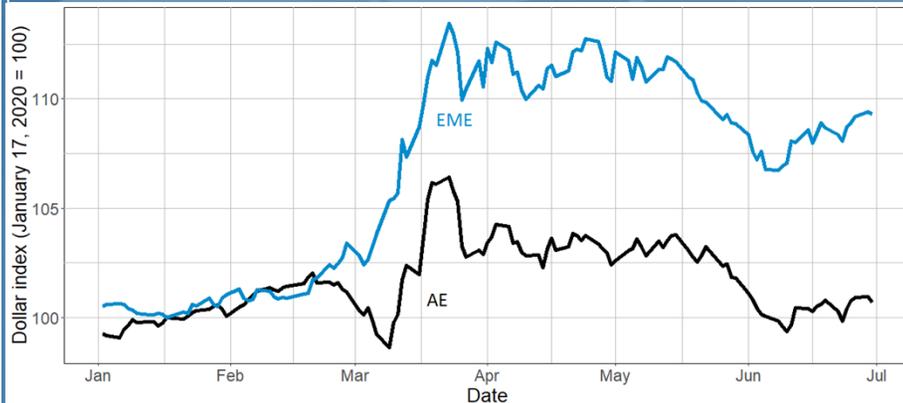
But spillovers are not all bad, especially during a global shock that hits all countries, like the COVID-19 pandemic



III. Fed spillovers helped avert global pandemic depression

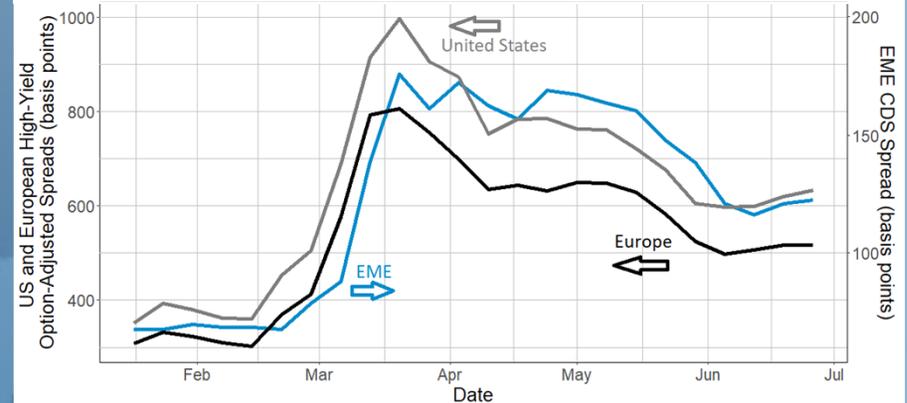
Emergence of coronavirus disrupted global financial markets, threatened to turn global recession into global depression.

Dollar indexes

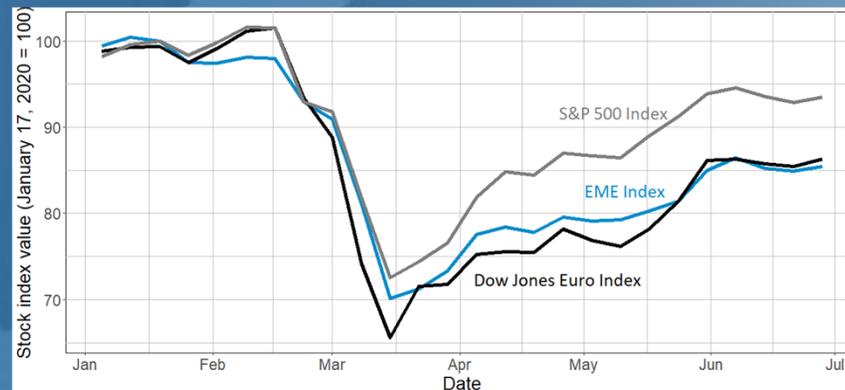


Source: Federal Reserve Board of Governors
 Note: Time series show weighted averages of the foreign exchange value of the U.S. dollar against a subset of the broad index currencies that are advanced foreign economies or emerging market economies.

Credit Spreads



Source: Federal Reserve Bank of St. Louis FRED
 Note: Lines come from weekly averages of daily data. EME spreads are computed as the equally-weighted average across 20 EMs.



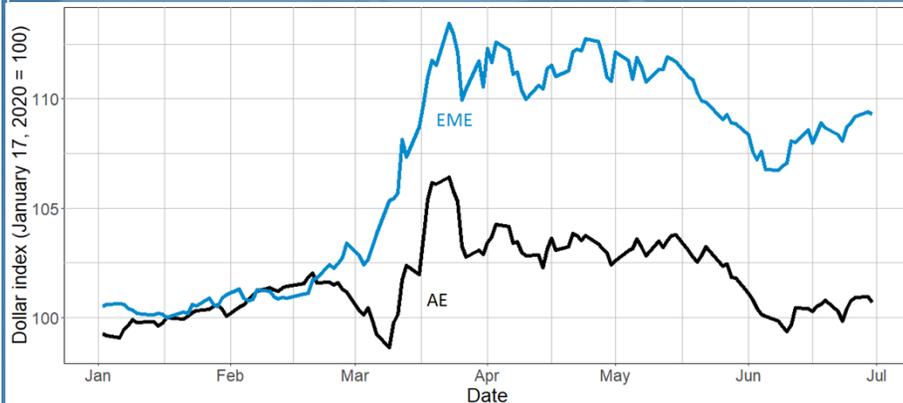
Source: Federal Reserve Bank of St. Louis FRED; CEIC
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Stock indexes

- III. Fed spillovers helped avert global pandemic depression

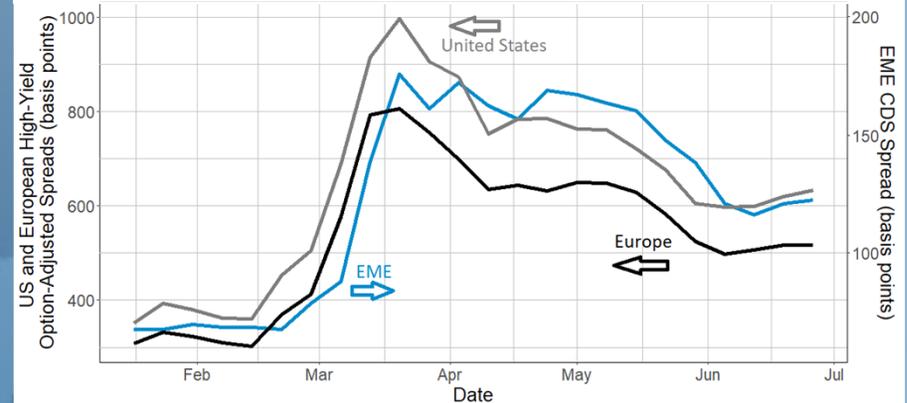
But by April, financial markets started recovering...why?

Dollar indexes

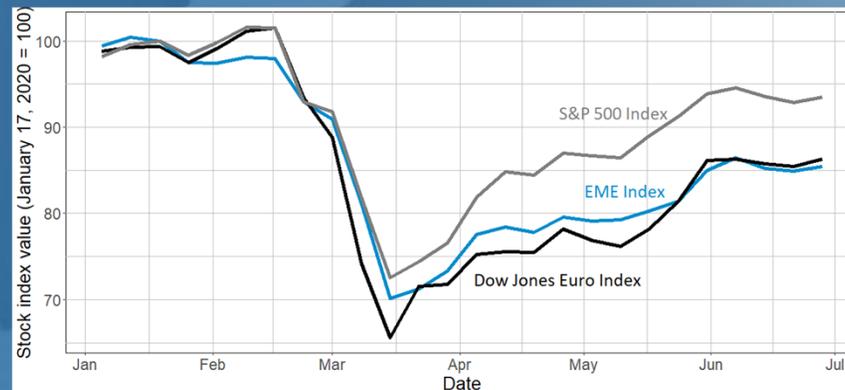


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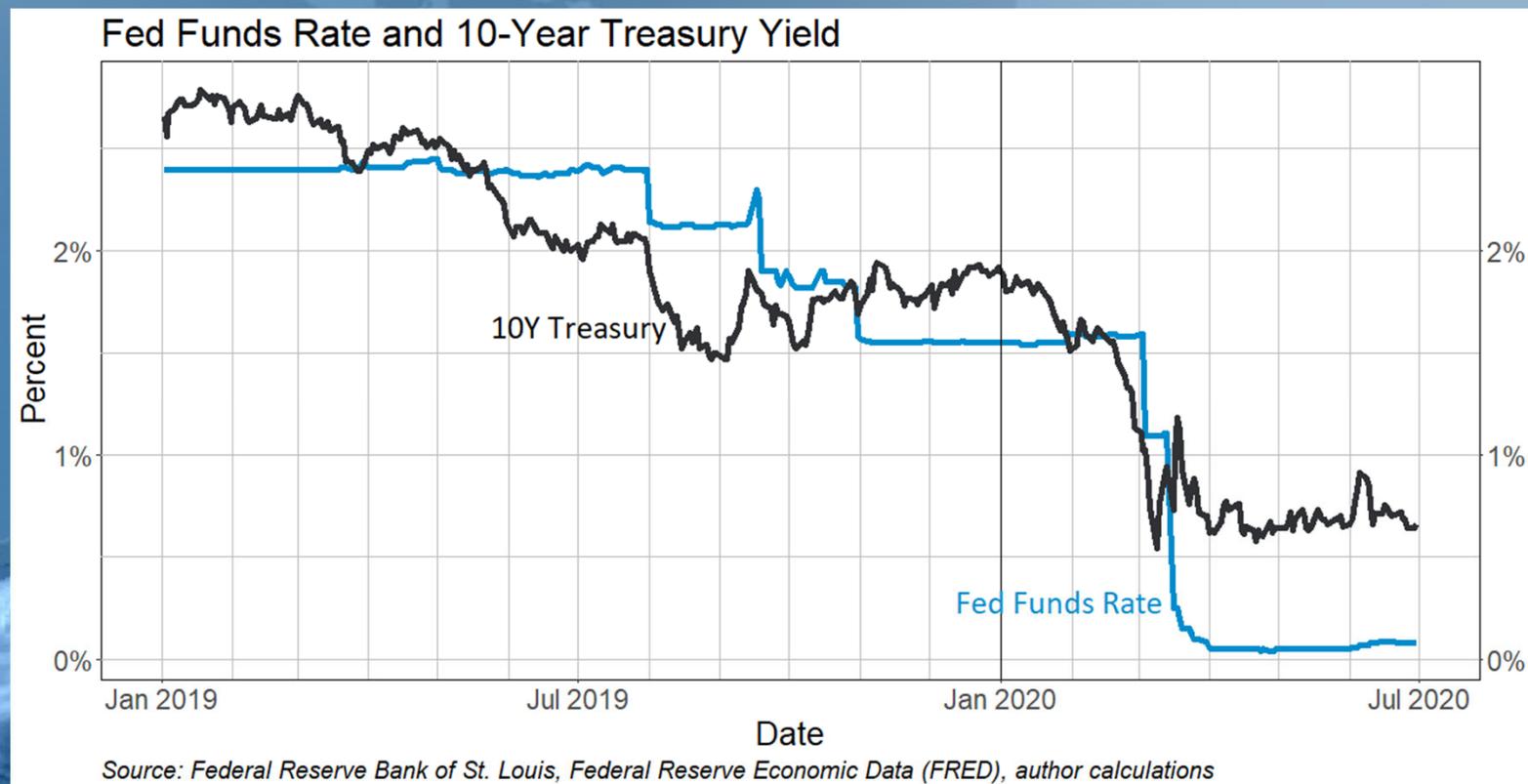
- Some (tentative!) indications that the spread of the coronavirus might be slowing
- Actions by U.S. and foreign governments to provide fiscal stimulus
- Actions by U.S. and foreign central banks to loosen monetary policy and support market functioning



- III. Fed spillovers helped avert global pandemic depression

Fed actions to support domestic markets:

1. Cut Fed funds rate to near zero, and buy huge quantities of government bonds (quantitative easing, or QE).



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2. **Provided liquidity (ie, lend) to key financial market: commercial paper, money market mutual funds, etc.**



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2. Provided liquidity (ie, lend) to key financial market: commercial paper, money market mutual funds, etc.
3. **Lent to (or bought bonds from) banks, businesses, and local governments (states, cities, etc.)**



- III. Fed spillovers helped avert global pandemic depression

Fed actions to support foreign dollar funding markets:

- Foreign banks do much business in dollars, but lack access to stable dollar deposits or Fed lending.
- During the pandemic surge last March, their sources of dollar funding dried up.
- The Fed took several steps in response:
 1. Created a Treasury repo facility
 - Allows foreign central banks to borrow from Fed, using its U.S. Treasury bonds as collateral
 2. Expanded its network of swap lines from 5 to 14 central banks, including 4 EMEs



- III. Fed spillovers helped avert global pandemic depression

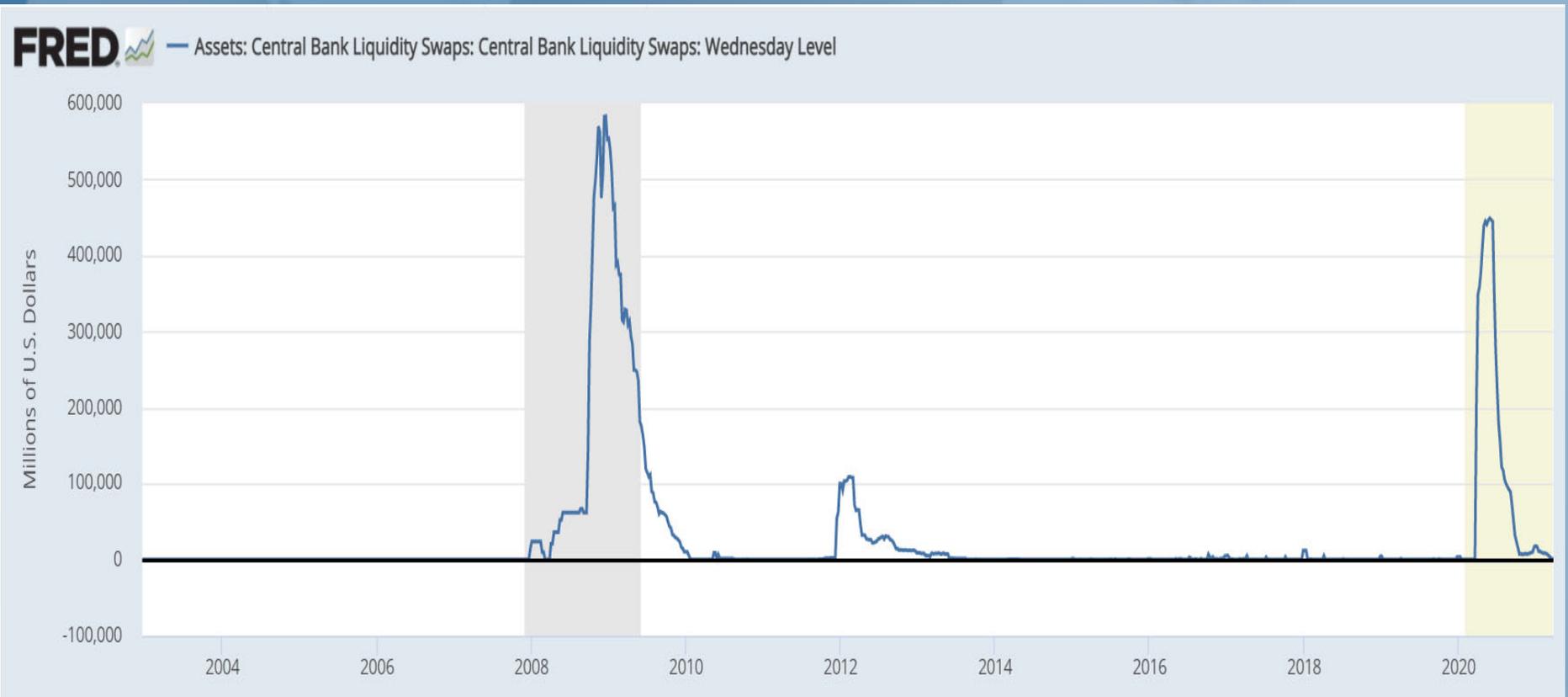
Fed actions to support foreign dollar funding markets:

- How the swap lines work:
 - The Fed provides U.S. dollars to a foreign central bank in exchange for the equivalent amount of funds in the foreign central bank's currency.
 - This “swap” provides the foreign central bank with dollars that it can supply to financial institutions in its jurisdiction.
 - The Fed and the foreign central bank agree to swap back the same quantities of their two currencies at a specified date in the future.



- III. Fed spillovers helped avert global pandemic depression

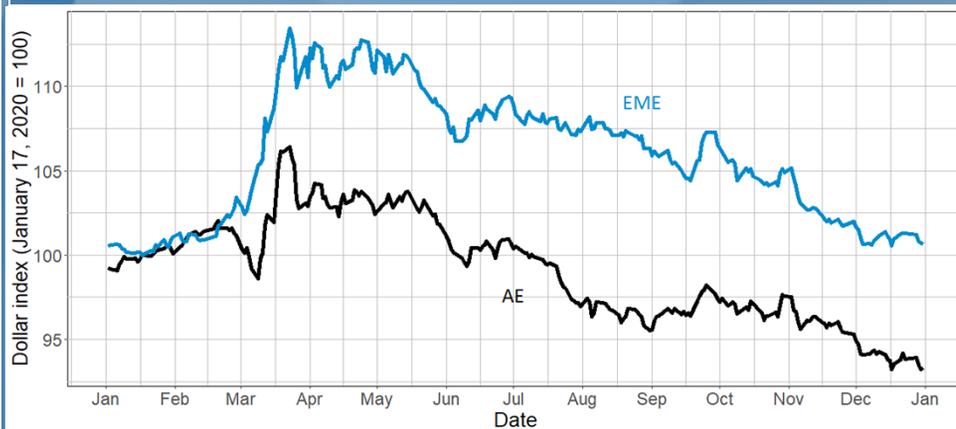
Use of Fed liquidity swap lines during pandemic nearly hit GFC levels:



- III. Fed spillovers helped avert global pandemic depression

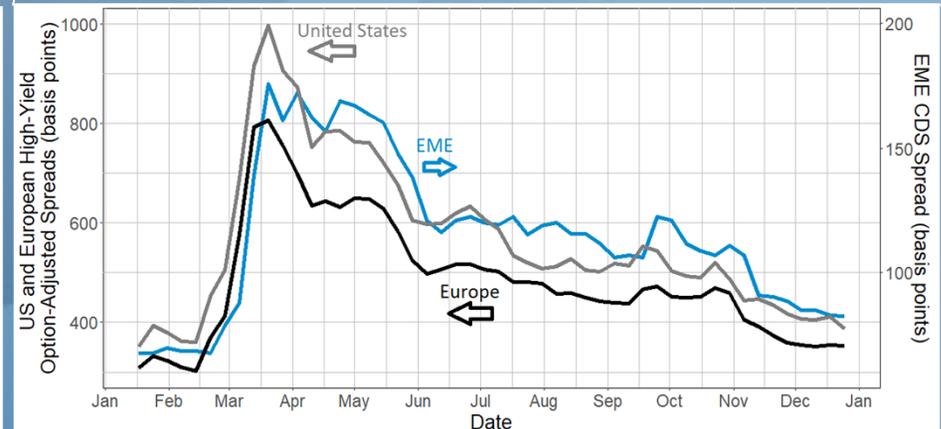
All told, financial markets recovered from initial pandemic shocks:

Dollar index

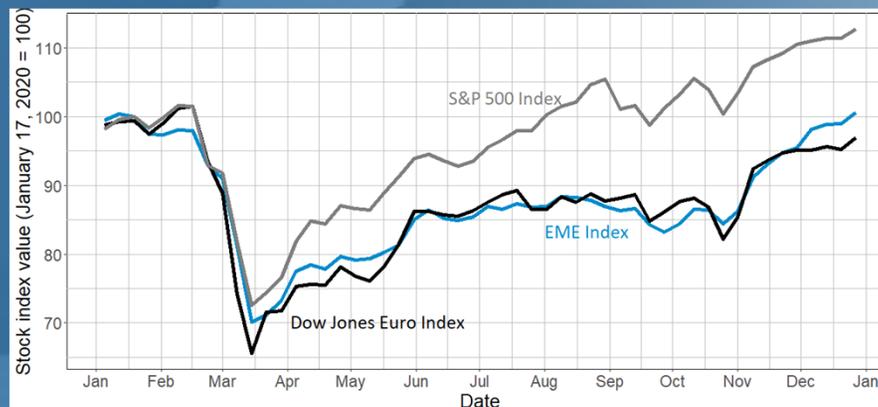


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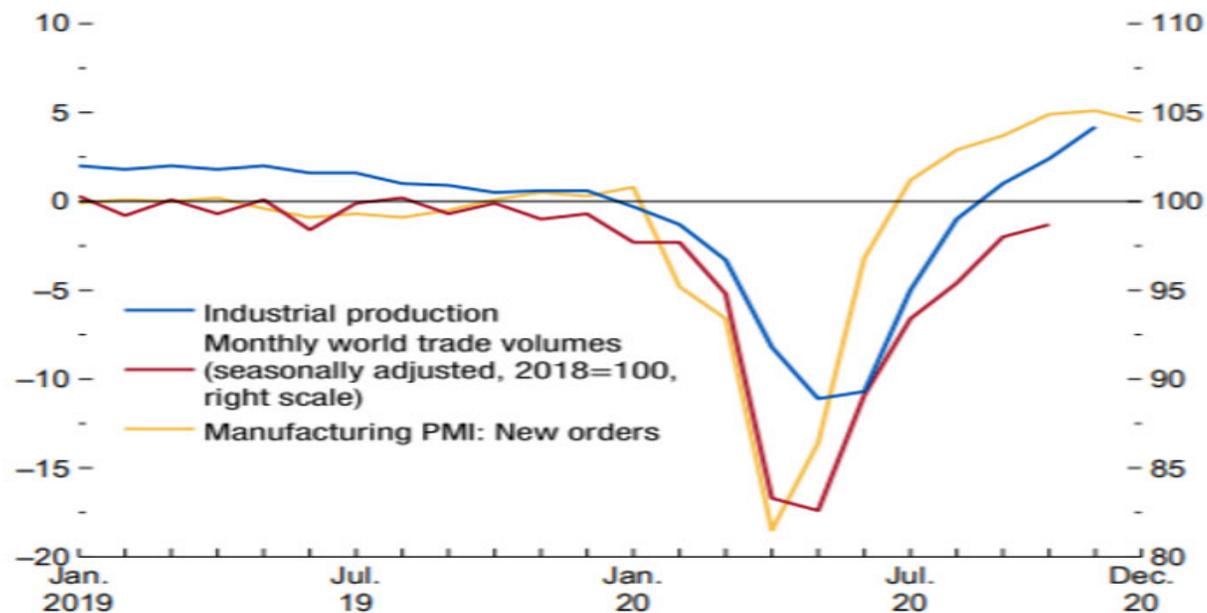
Stock indexes

- III. Fed spillovers helped avert global pandemic depression

And prospects of global depression transformed into sharp but short downturn in global economy, followed by rebound.

Figure 3. Global Activity Indicators

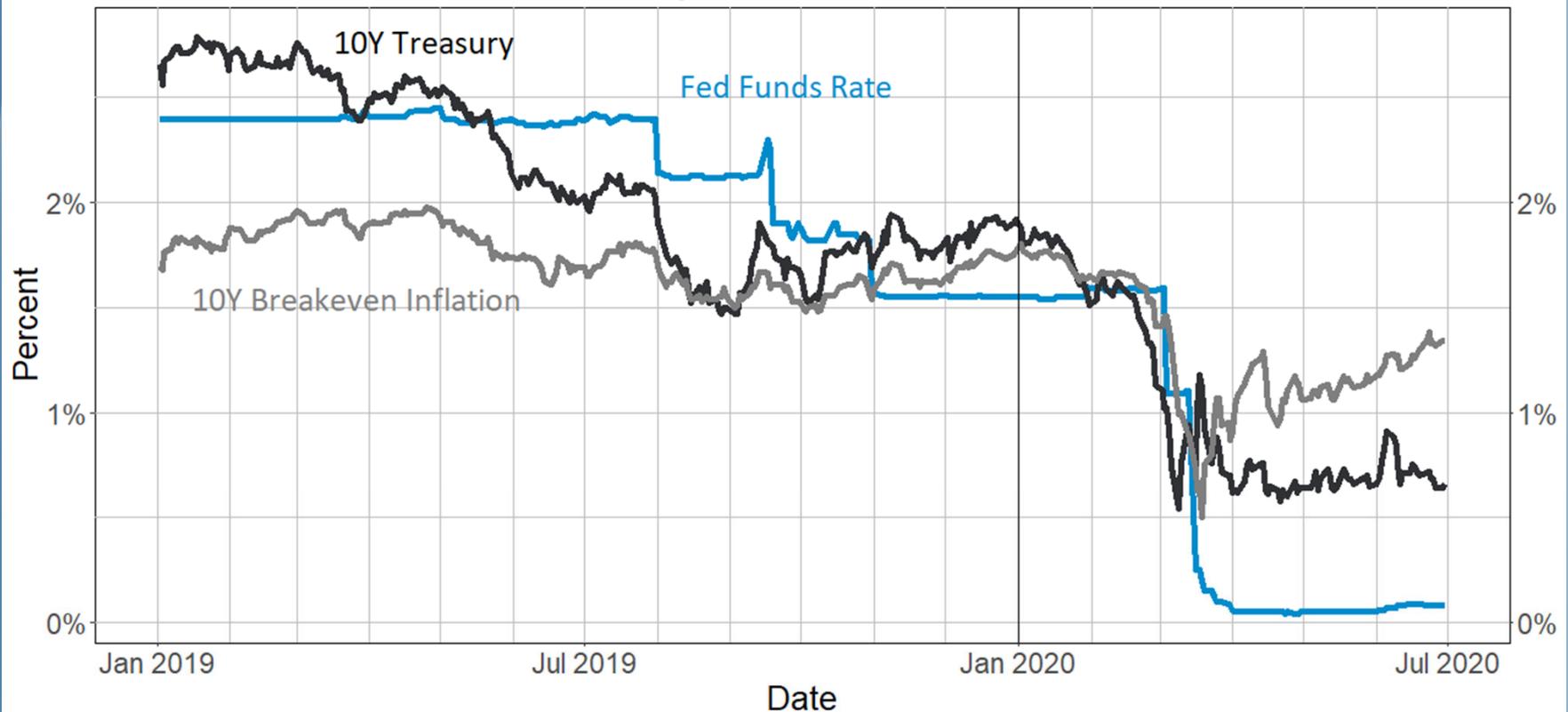
(Three-month moving average, annualized percent change; deviations from 50 for manufacturing PMI, unless noted otherwise)



Sources: CPB Netherlands Bureau for Economic Policy Analysis; Haver Analytics; Markit Economics; and IMF staff calculations.
Note: PMI = purchasing managers' index.

IV. Challenges for the Fed and emerging markets posed by Biden's covid relief package, overheating, and inflation

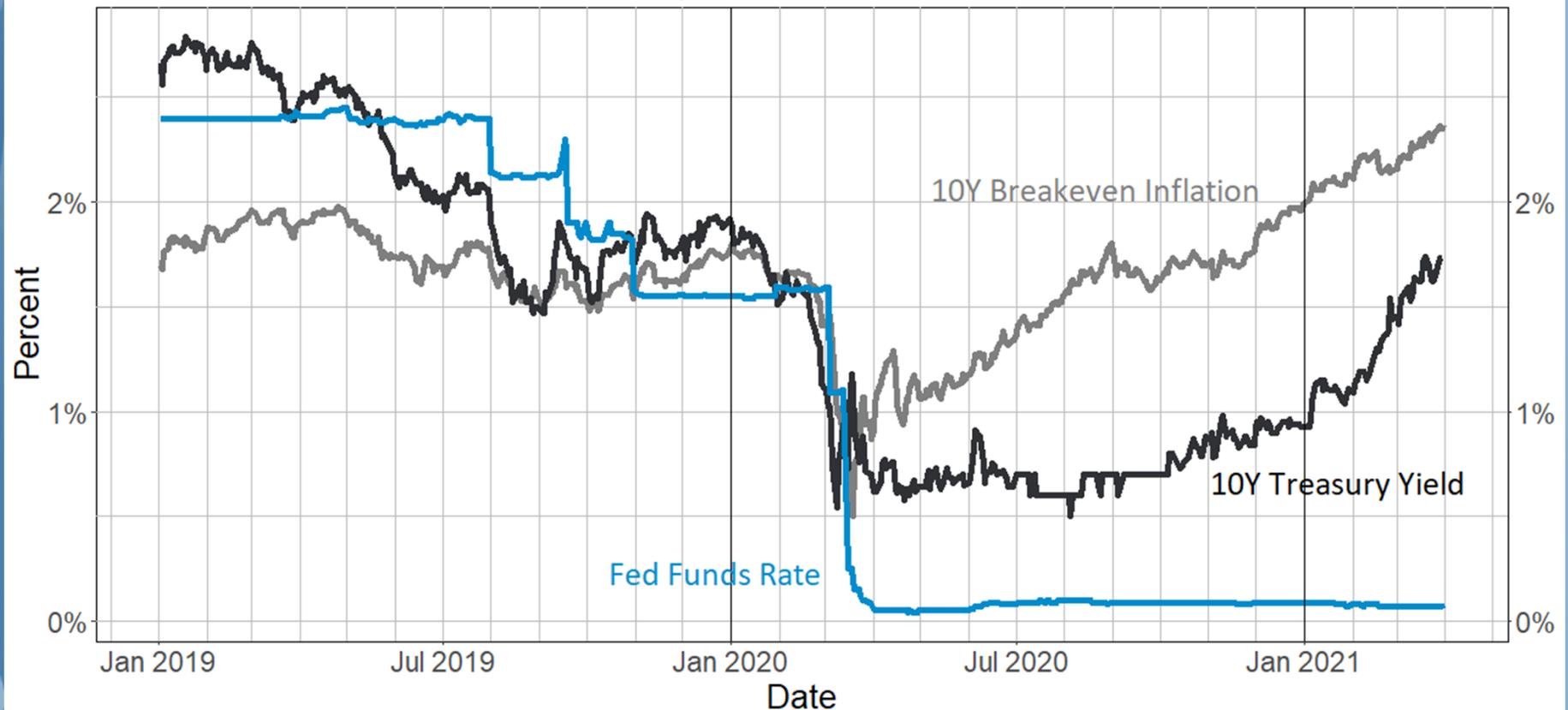
Fed Funds Rate, 10-Year Treasury Yield, and 10-Year Breakeven Inflation



Source: Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED)

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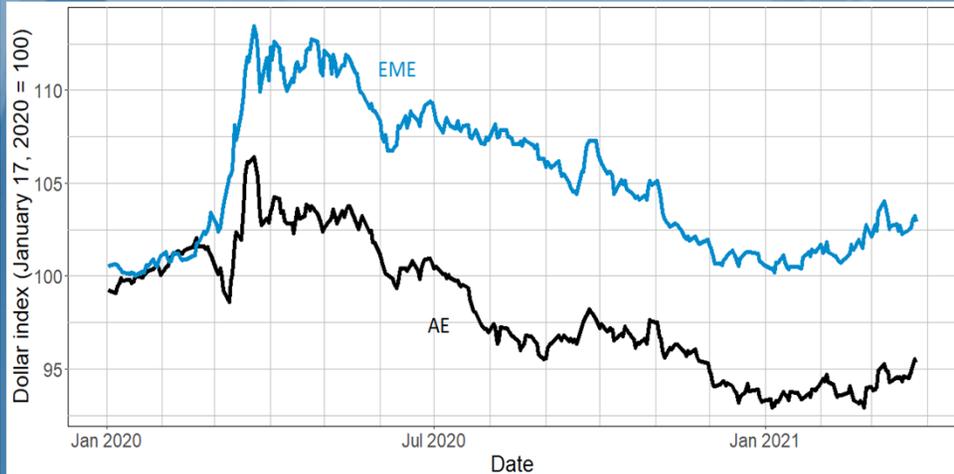
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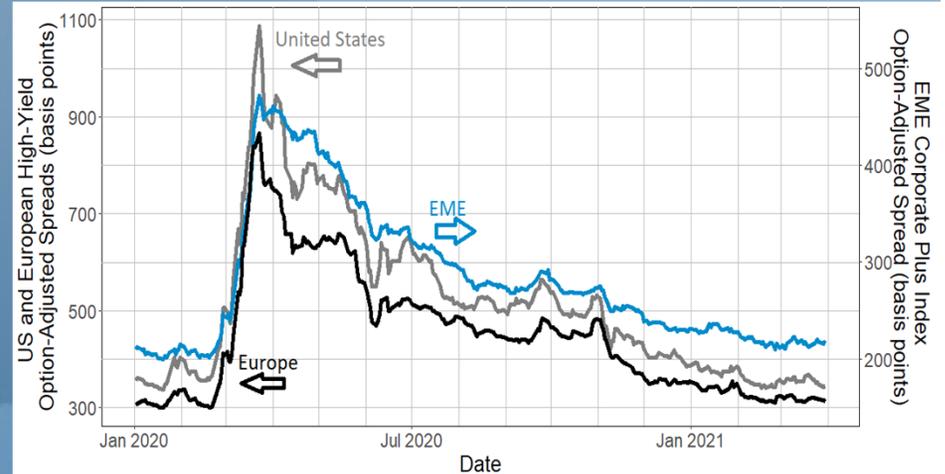
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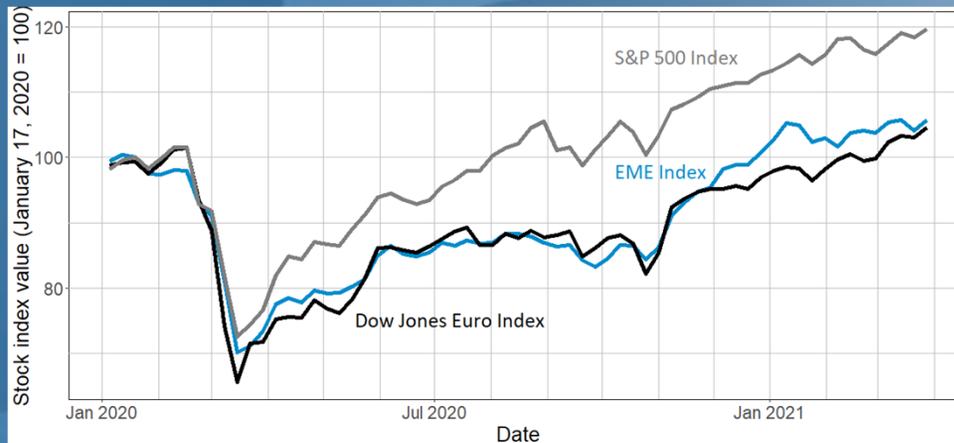


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Stock indexes

IV. Challenges for the Fed and emerging markets posed by Biden's covid relief package, overheating, and inflation

Why the increase in Treasury yields and inflation expectations?

Expected rapid recovery in U.S. economy:

- Vaccinations should eliminate the pandemic
- Fiscal stimulus programs
 - December relief package: 4 percent of GDP
 - March relief package: 9 percent of GDP
 - Unspent, excess saving from 2020 relief packages

IV. Challenges for the Fed and emerging markets posed by Biden's covid relief package, overheating, and inflation

Combination of these factors: possible overheating of the economy, as aggregate demand rises above the economy's capacity.

Two big questions:

1. What will inflation do?
2. What will the Fed do?



IV. Challenges for the Fed and emerging markets posed by Biden's covid relief package, overheating, and inflation

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Two big questions:

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2. What will the Fed do?

 Nobody knows!!

IV. Challenges for the Fed and emerging markets posed by Biden's covid relief package, overheating, and inflation

Three scenarios:

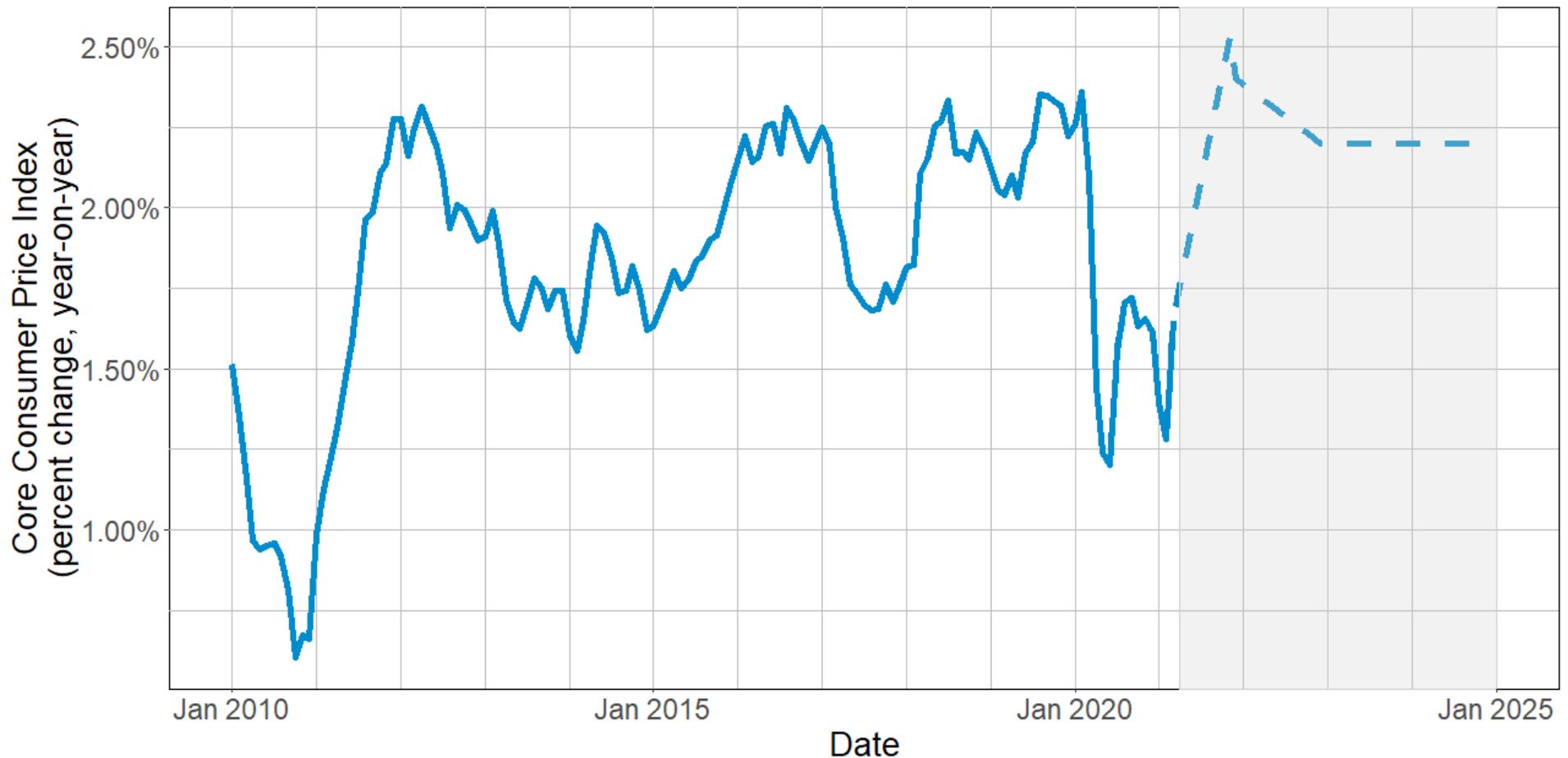
1. The good

- Inflation remains quiescent
- The Fed waits till 2024 to start raising interest rates
- 10-year Treasury yields stay low



IV. Challenges for the Fed and emerging markets posed by Biden's covid relief package, overheating, and inflation

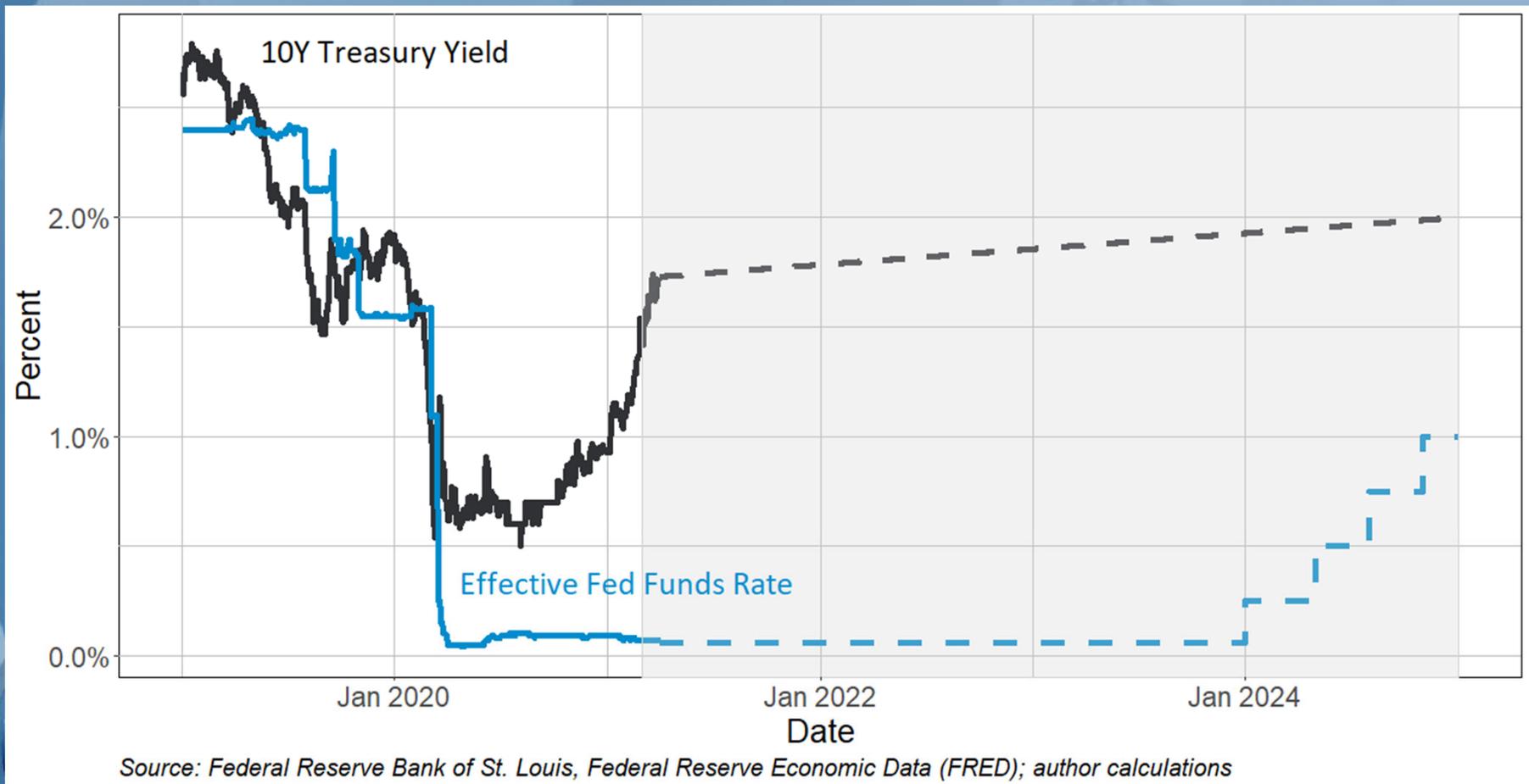
Inflation in the good scenario:



Source: Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED); author calculations

IV. Challenges for the Fed and emerging markets posed by Biden's covid relief package, overheating, and inflation

Interest rates in the good scenario:



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Implications for emerging markets:

- Most EMEs adjust smoothly, helped by US economic recovery
- Some financially fragile and indebted EMEs run into problems: Brazil, Turkey, South Africa



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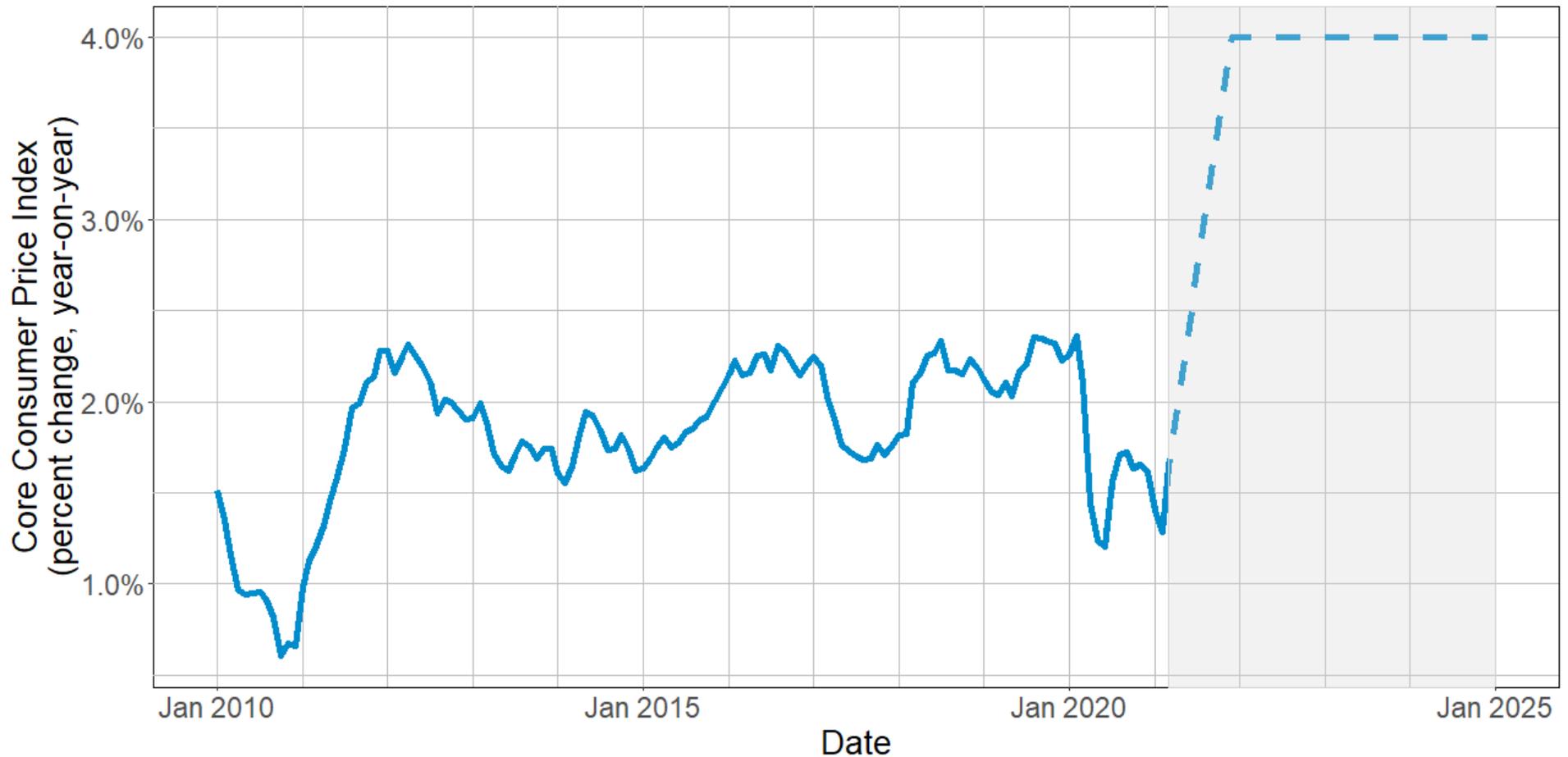
1. The bad

- Inflation soars
- The Fed starts raising interest rates in 2022
- 10-year Treasury yields soar



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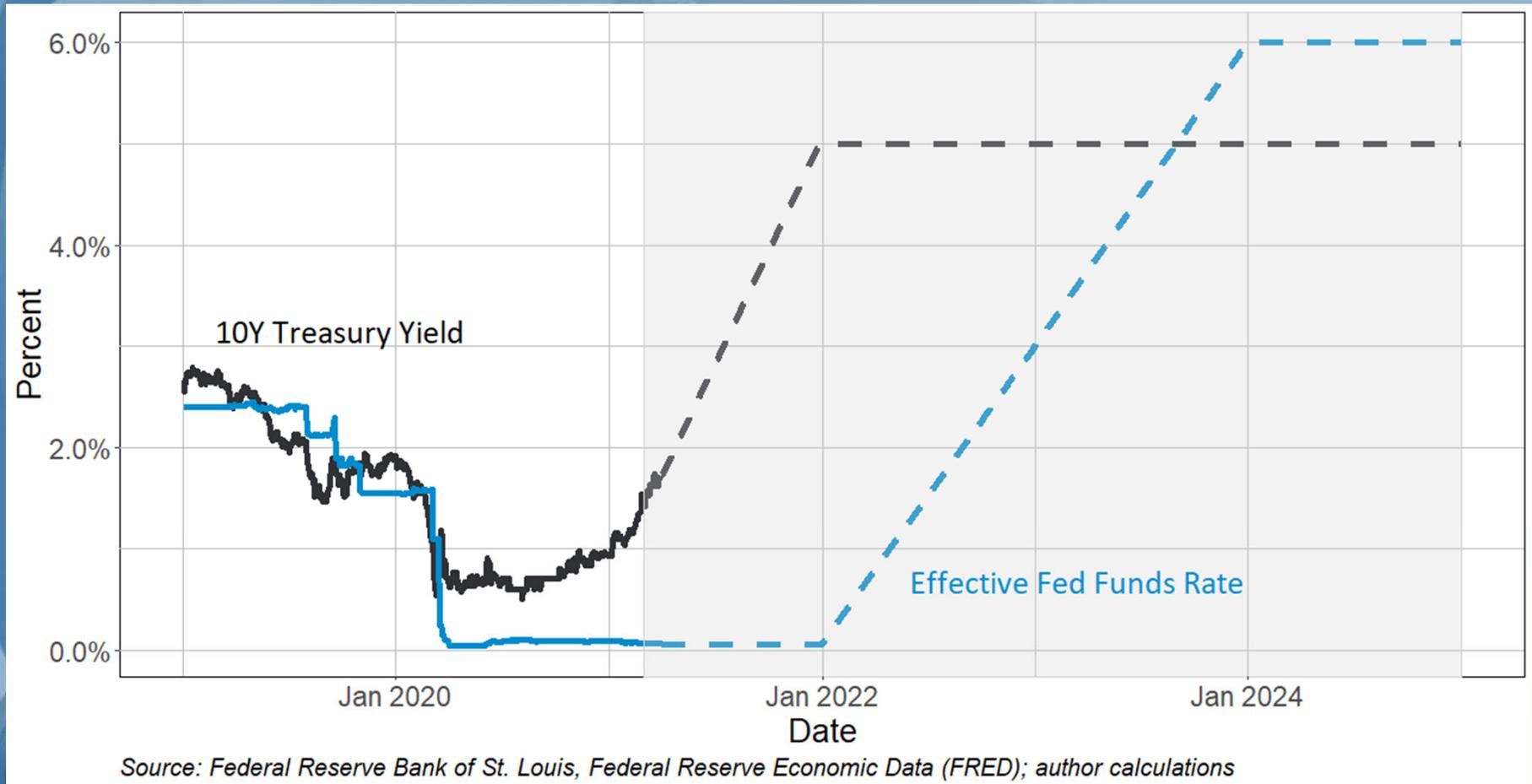
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Implications for emerging markets:

- Defaults by many EMEs
- Capital flow reversals and financial volatility
- Much of global economy falls back into recession



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Three scenarios:

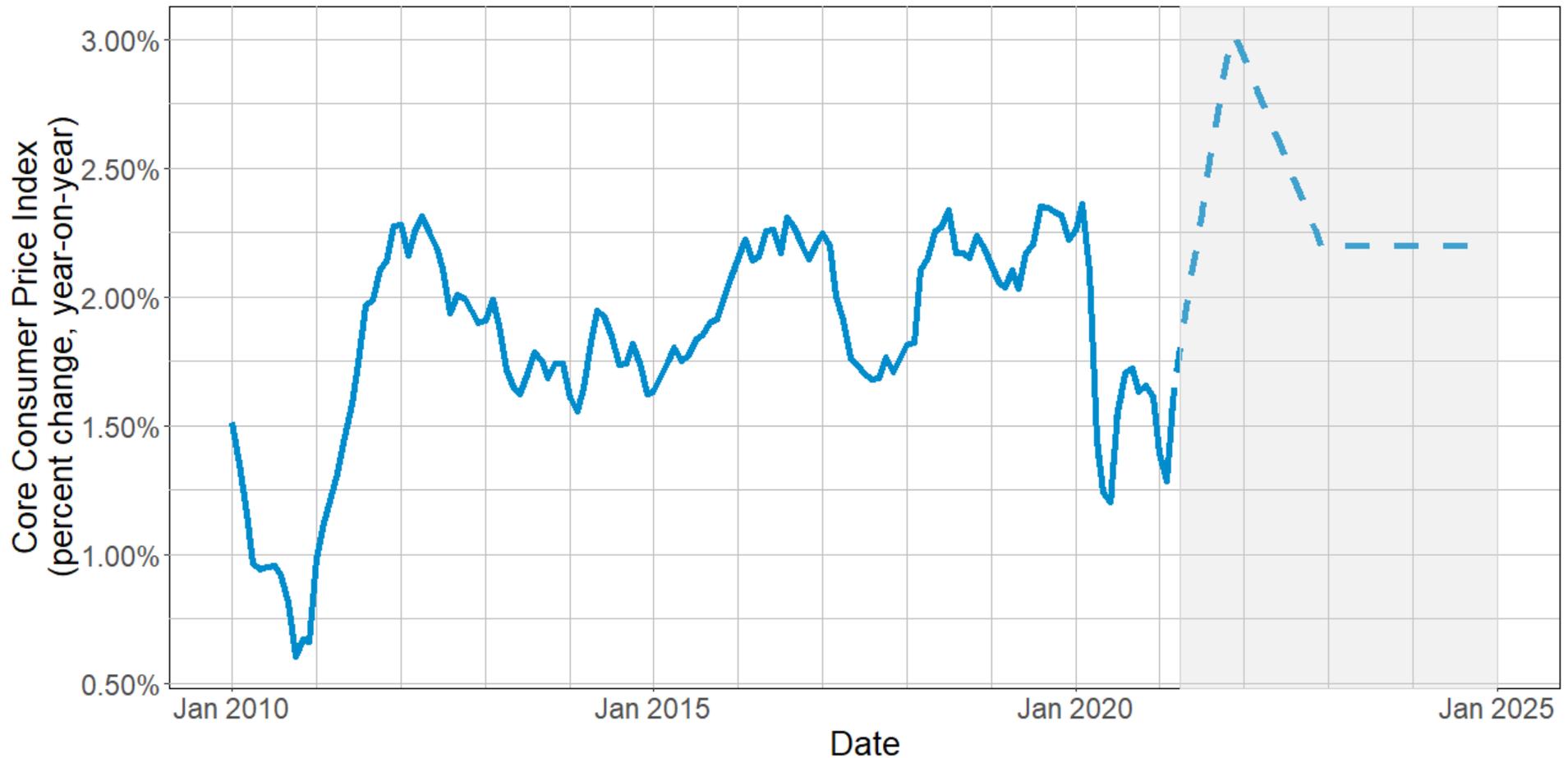
1. The ugly

- Inflation spikes in 2021 and then recedes
- The Fed holds tight, not raising rates till 2025
- 10-year Treasury yields spike and then recede



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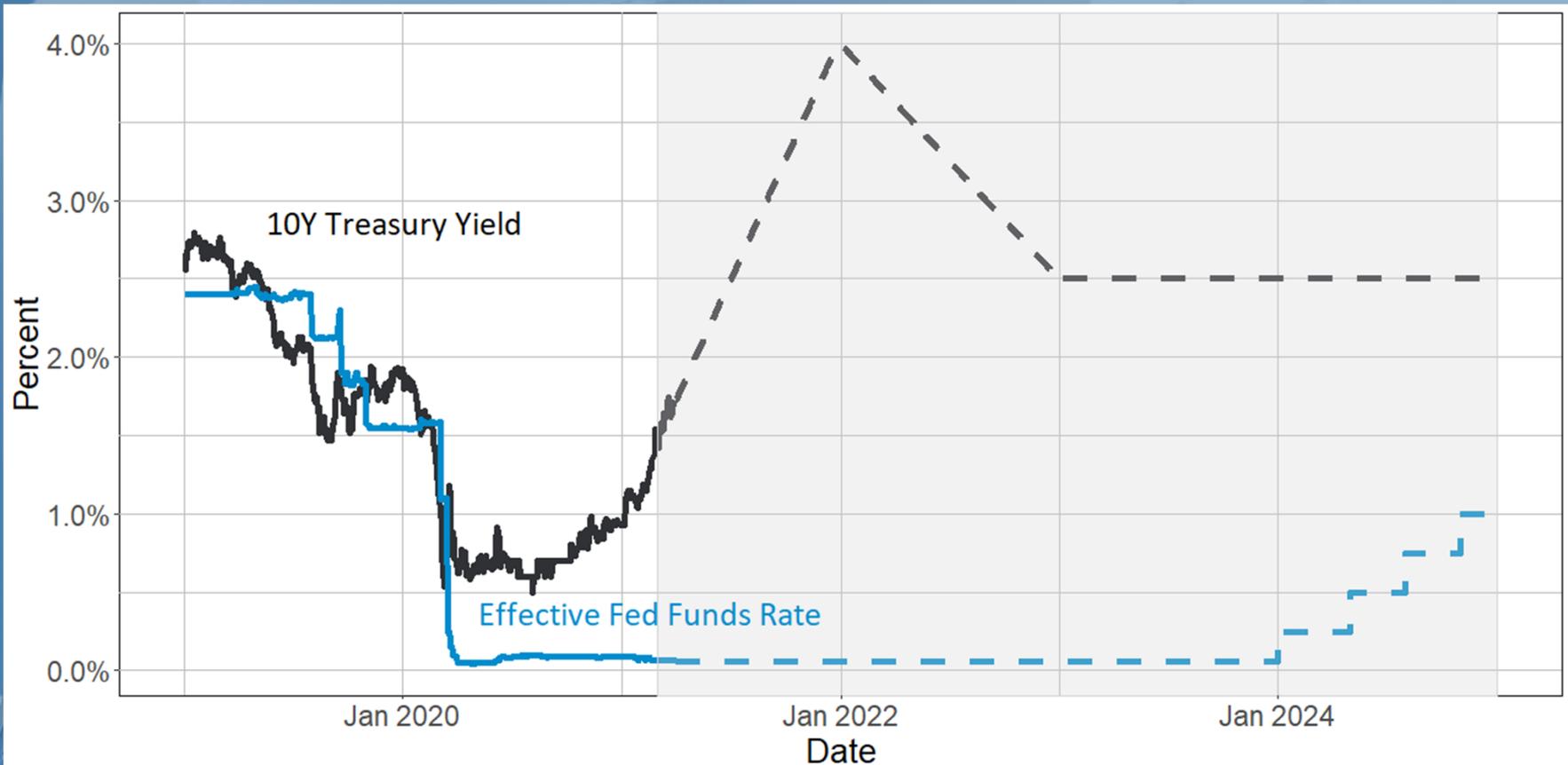
Inflation in the ugly scenario:



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Three scenarios:

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Implications for emerging markets:

- Defaults among most vulnerable EMEs: Brazil, Turkey, S. Africa
- Widespread financial volatility and capital outflows
- Many EMEs fall back into recession, but fewer than in bad scenario

THE END



Grazie!



Extra slides



The Federal Reserve's Monetary Policy Actions and Facilities to Aid the Economy Since the Coronavirus Outbreak

Actions to Support Liquidity in Key Financial Markets

Reduced discount rate to encourage banks to borrow at “discount window”

Established Primary Dealer Credit Facility – lends to “primary dealers” (like in 2008)

Commercial Paper Funding Facility – buys commercial paper from highly rated issuers

Money Market Mutual Fund Liquidity Facility – lends to financial institutions, using high-quality assets of money market mutual funds as collateral



The Federal Reserve's Monetary Policy Actions and Facilities to Aid the Economy Since the Coronavirus Outbreak

Actions to Directly Support the Flow of Credit to Households, Businesses, and Municipalities

Primary Market Corporate Credit Facility and Secondary Market Corporate Credit Facility – buys bonds and syndicated loans from U.S. investment-grade (as March 22) corporations

Municipal Liquidity Facility – buys short-term bonds from states, large counties, large cities

Term Asset-Backed Securities Loan Facility — lends to U.S. entities, collateralized by AAA-rated ABS

Main Street Lending Program — purchases 95% participations in loans to small & medium-sized businesses (which commit to maintain payrolls, etc.)

Paycheck Protection Program (PPP) Liquidity Facility — lends to banks that make PPP loans under the CARES Act to small business, taking those loans as collateral.

Federal Reserve Tools to Lessen Strains in Global Dollar Funding Markets

History of Federal Reserve dollar swap lines

Initially established 2007 between the Fed and the ECB, Bank of England (BOE), Bank of Japan (BOJ), and Swiss National Bank (SNB).

As GFC deepened, extended to Australia, Canada, Denmark, New Zealand, Norway, Sweden, Brazil, Korea, Mexico, and Singapore.

Lapsed in early 2010, but later re-established with ECB, BOE, BOJ, SNB, and BOC with the euro crisis.

In March 2020, Fed increased its effectiveness and scope:

- Reduced fee for use of swaps
- Added 84-day swaps to the 7-day swaps.
- Established daily auctions (as opposed to weekly)
- Expanded availability to the 14 central banks with swaps during GFC.

Federal Reserve Tools to Lessen Strains in Global Dollar Funding Markets

Federal Reserve's temporary FIMA (Foreign International and Monetary Authority) Repo Facility

Allows foreign authorities with accounts at Federal Reserve Bank of NY to enter into overnight repurchase agreements (repos) with the Fed.

Foreign authorities exchange their U.S. Treasuries for U.S. dollars, which can then be provided to institutions in their respective jurisdictions. Subsequently, the foreign authorities repurchase their Treasuries, returning dollars to the Fed.

The FIMA Repo Facility gives central banks a way to obtain dollars for liquidity purposes without selling their Treasury securities outright.

- Helps foreign authorities, because may be difficult to unload Treasuries when Treasury markets are stressed.
- Helps the U.S. financial system by preventing strains in the Treasury market and resultant upward pressures on yields.