SHIFTING GEARS: MONETARY POLICY SPILLOVERS DURING THE RECOVERY FROM COVID-19

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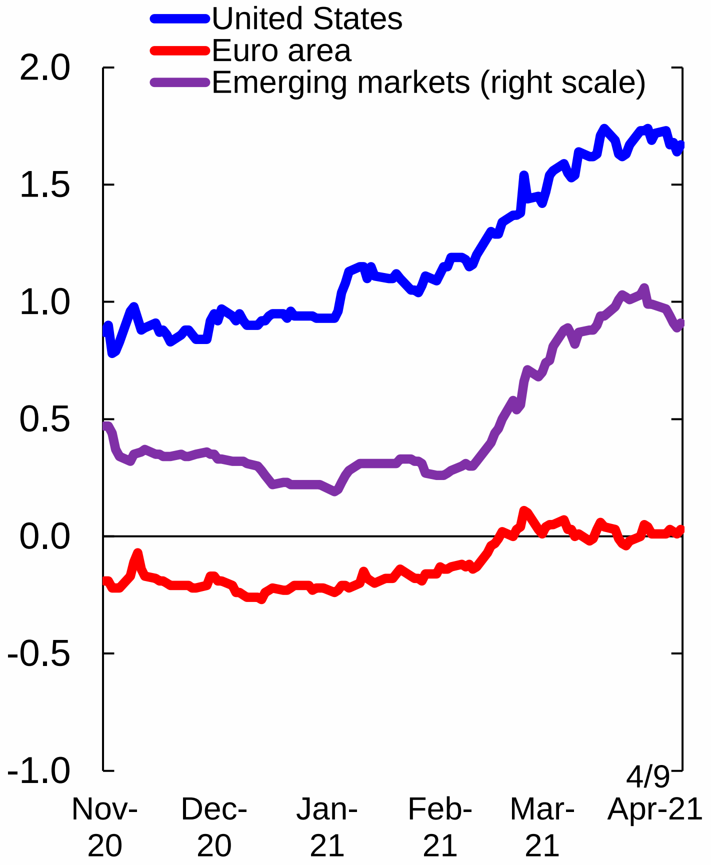
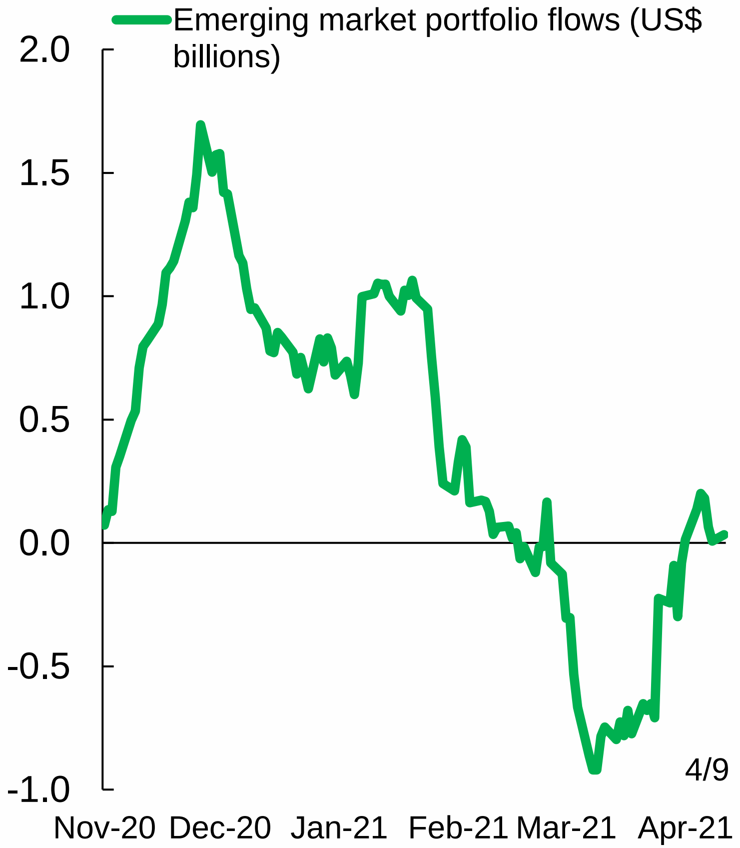
Worries of another taper tantrum

Interest Rates in Advanced Economies and Emerging Markets
(percent per year; unless otherwise noted)



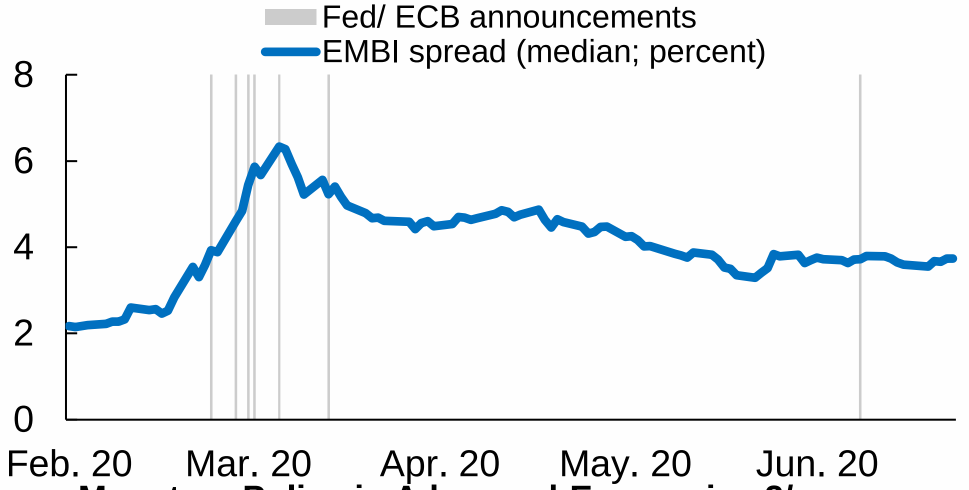


- Interest rates are up significantly in 2021
- Portfolio flows to emerging market economies (EMs) have been volatile
- Policy rate hikes in Turkey, Brazil and Russia. Rates on hold in Thailand, South Africa.

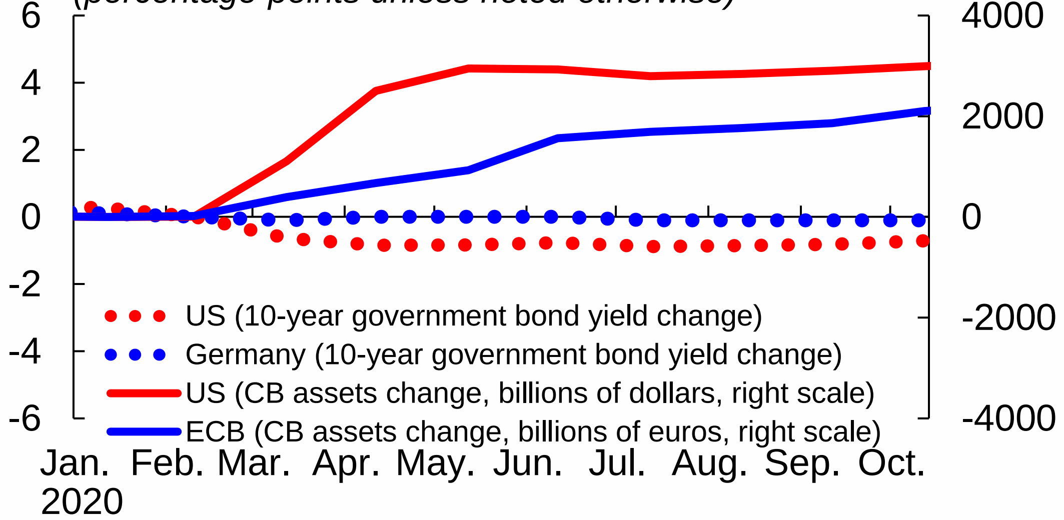
Sources: Haver Analytics; Institute of International Finance; and IMF staff calculations.
Notes: Interest rates show 10-year government bond yields for the United States and euro area. In the euro area, these are averages across countries, weighted by purchasing power parity gross domestic product. The yields for emerging markets are the JP Morgan GBI-EM Global Diversified Index. Portfolio flows are 4-week moving averages and cover Brazil, China, Colombia, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Philippines, Poland, Qatar, Saudi Arabia, South Africa, Sri Lanka, Taiwan Province of China, Thailand, Turkey, Ukraine and Vietnam.

Significant monetary support in the crisis

Credit Risk Premiums in Emerging Market Economies 1/
(median, percent)



Monetary Policy in Advanced Economies 2/
(percentage points unless noted otherwise)



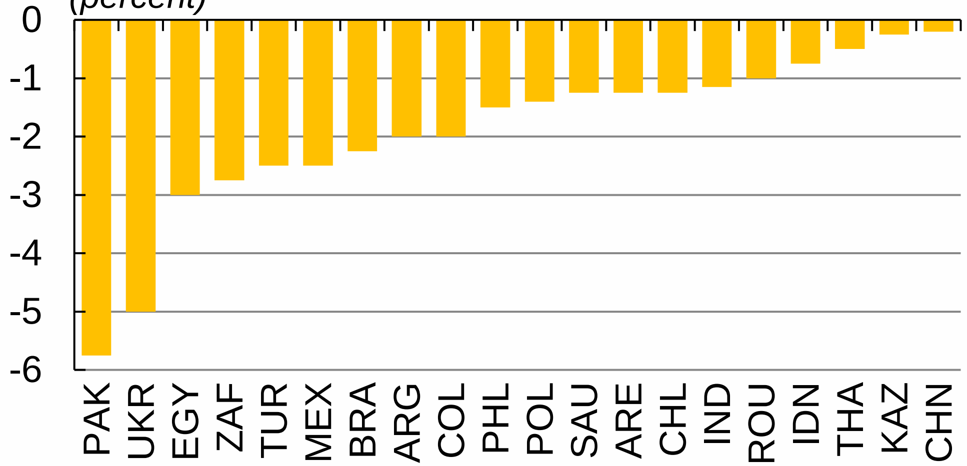
- When the pandemic struck, EMs faced a dramatic tightening of financial conditions

- Central banks in major advanced economies (AEs) provided massive monetary accommodation

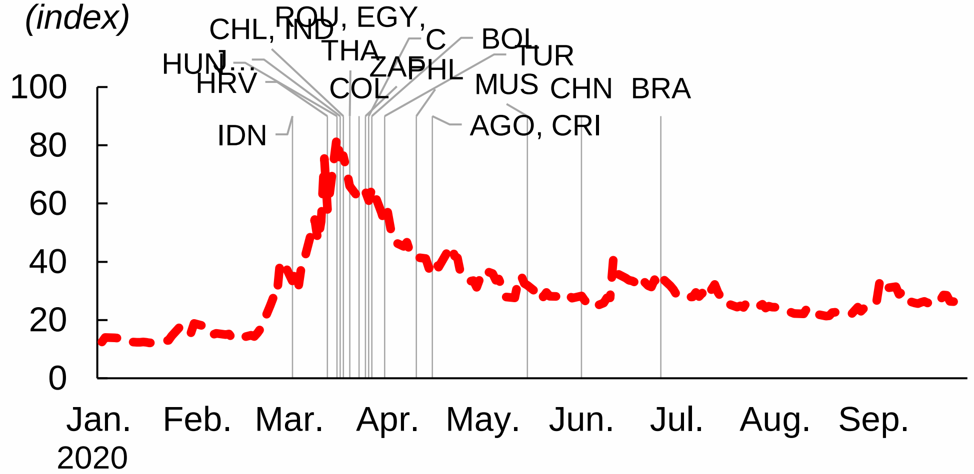
Sources: Bloomberg Finance, L.P.; Federal Reserve Bank of St. Louis; and Haver Analytics.
1/ ECB = European Central Bank; EMBI = J.P. Morgan Emerging market Bond Index; Fed = Federal Reserve.
2/ Ten-year government bond yields are in changes from their Feb. 2020 levels. Central bank assets are in changes from their Jan. 2020 levels. CB = central bank; ECB = European Central Bank.

EM central banks showed autonomy

Policy rate Cuts in Emerging Market Economies between March and August 2020
(percent)



Asset Purchase Program Announcement Dates in Emerging Market Economies and the VIX
(index)



- EM central banks cut policy rates even in the face of capital outflows
- Many EMs launched asset purchase programs for the first time

Sources: Bloomberg Finance, L.P., IMF staff calculations.
Note: VIX = Chicago Board Options Exchange Volatility Index. Data labels in the figure use International Organization for Standardization (ISO) country codes.

Questions and analytical approach

Questions

How large are spillovers from the US and euro area to EMs?

- Are monetary policy surprises different from news about the economy or vaccines?

Which EMDEs could provide more monetary support?

- Which economies used APPs?
- Which economies cut policy rates more?

Analyses

Event study analysis

- Panel regressions
- On announcement days of the Fed, ECB, US non-farm payrolls and US core CPI. On days of vaccine news.
- Source economy monetary policy = 2-year government bond yield

Cross-section analysis

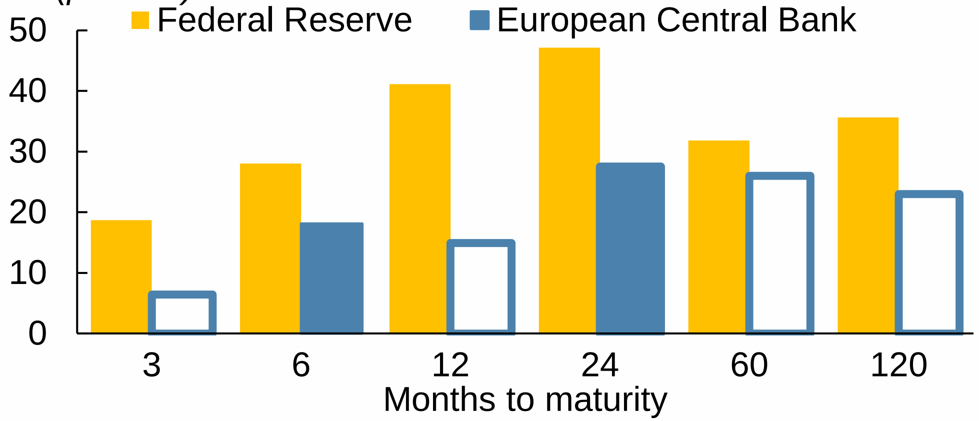
- Logit model for APPs, linear model for policy rate cuts

Impact of
- Swap lines
- APPs

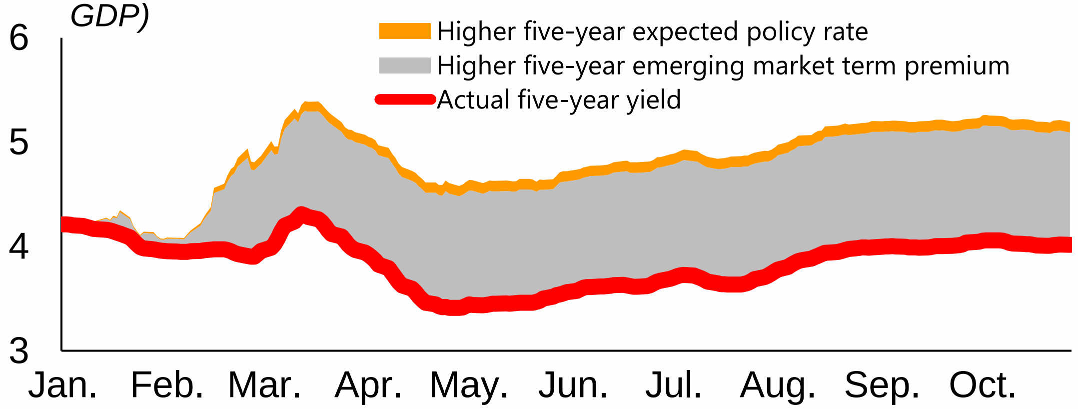
Monetary policy spillovers

Large monetary policy spillovers

Change in Emerging Market Government Bond Yield Curves in Response to Monetary Policy Surprises 1/
(percent)



Effects of US Monetary Policy Surprises on Selected Variables
*(basis points; * = percentage points; ** = basis points of annual GDP)*

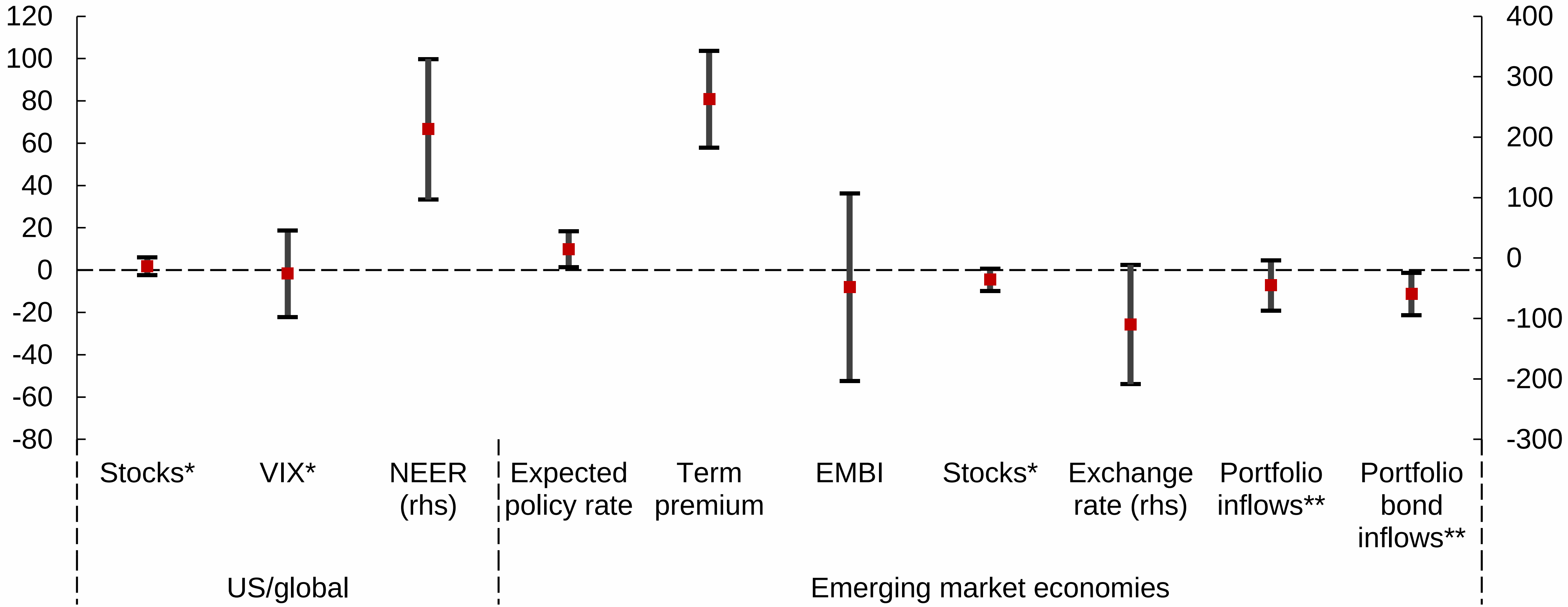


- Large monetary policy spillovers from the US to EM government bond yields. From the euro area, spillovers are more regional.
- During the crisis, Federal Reserve easing lowered bond yields by at least 1 percentage point in most EMs.

Sources: Haver Analytics; and IMF staff calculations.
Note: 1/ The figure shows the two-day changes in emerging market local currency government bond yield curves in response to a 100 basis point surprise tightening of US or euro area monetary policy. Solid bars show maturities that are statistically significant; hollow bars show those that are not.
2/ The figure shows the contribution of Federal Reserve monetary policy easing during the pandemic to government bond yields in the average emerging market.

Harmful spillovers from US monetary tightening

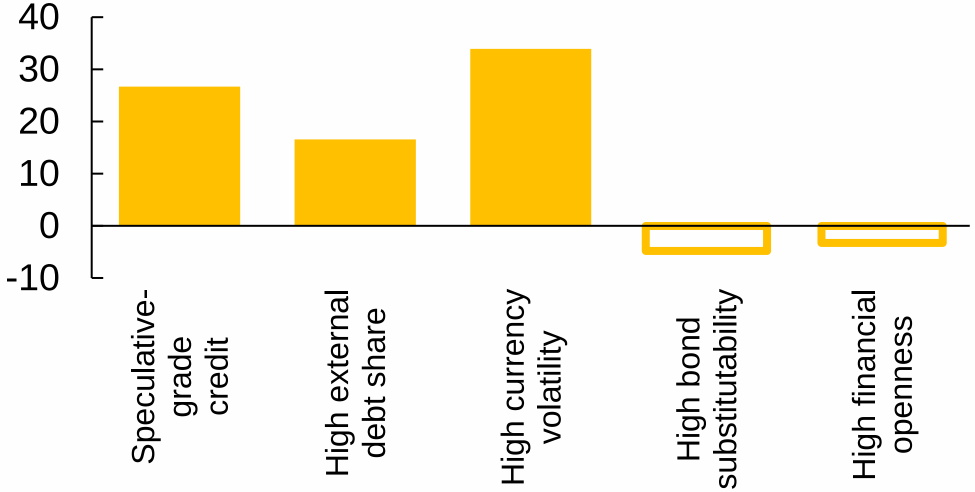
Effects of US Monetary Policy Surprises on Selected Variables
*(basis points; * = percentage points; ** = basis points of annual GDP)*



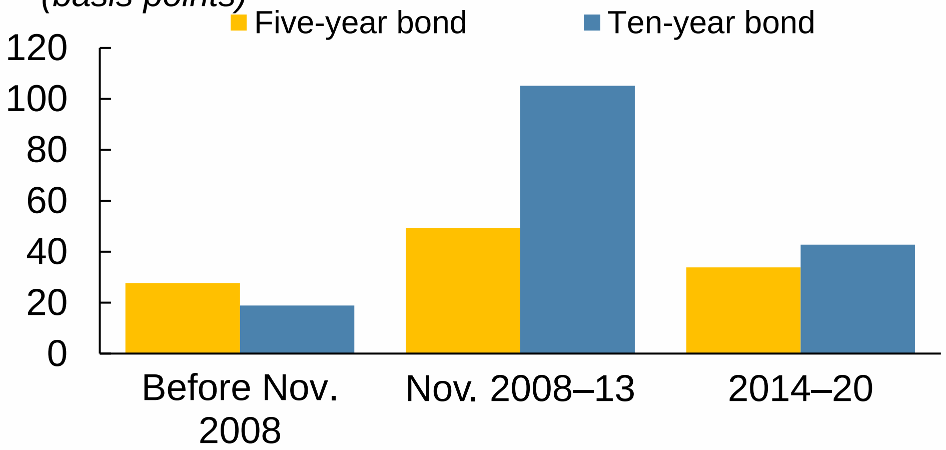
Source: IMF staff calculations.
Notes: The squares show the response of each variable to a 100 basis point surprise monetary policy tightening in the U.S. The whiskers show 90 percent confidence intervals. An increase in the nominal effective exchange rate (NEER) for the US, or in the nominal exchange rate vis-à-vis the US for the emerging market economies, denotes appreciation. EMBI = J.P. Morgan Emerging Bond Index; VIX = Chicago Board Options Exchange Volatility Index.

The risk channel and spillovers during crisis

Spillover Amplifiers from US Monetary Policy Surprises1/
(basis points)



Time Variation in the Sensitivity of Emerging Market Yields to US Monetary Policy Surprises 2/
(basis points)



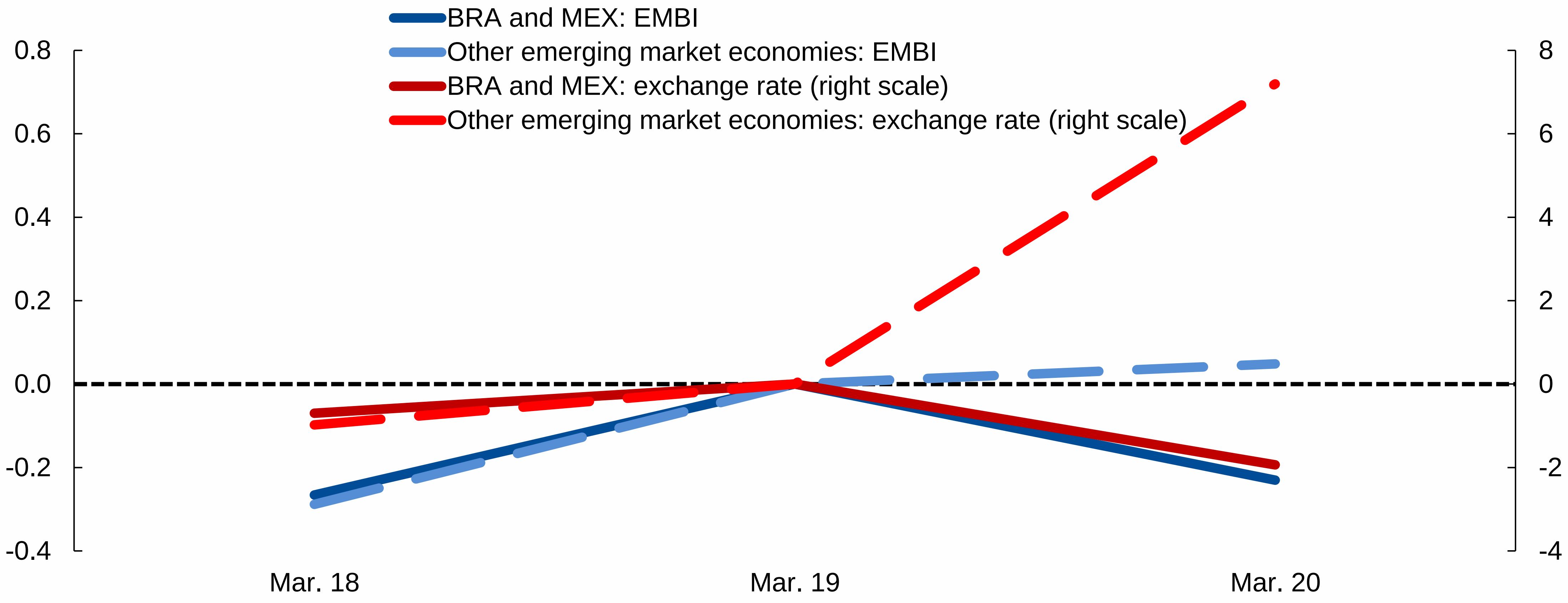
- Spillovers are stronger to *ex ante* “riskier” economies.
- Spillovers were stronger during the GFC and euro crisis. They may be increasing over time.

Source: IMF staff calculations.
Note: 1/ The figure shows how the sensitivity of emerging market ten-year yields to each 100-basis-point US monetary policy surprise depends on economy characteristics. “High” refers to the 75th percentile of the distribution of the economy characteristic in the latest available year. Not shown in the figure, the values for investment-grade credit rating, low external debt share, low currency volatility, low bond substitutability, and low financial openness are 0, 0, 14, –2, and 3, respectively. Solid bars show economic characteristics that are statistically significant; hollow bars show those that are not.
2/ The bars show the effects of a 100 basis point surprise US monetary policy tightening on five- and ten-year emerging market government bond yields during various periods. The 2014-20 bars are not statistically significantly higher than the pre-Nov. 2008 bars.

Swap lines seemed to calm markets

Effects of Swap Line Announcements for Brazil and Mexico

(percent; changes from March 19, 2020)



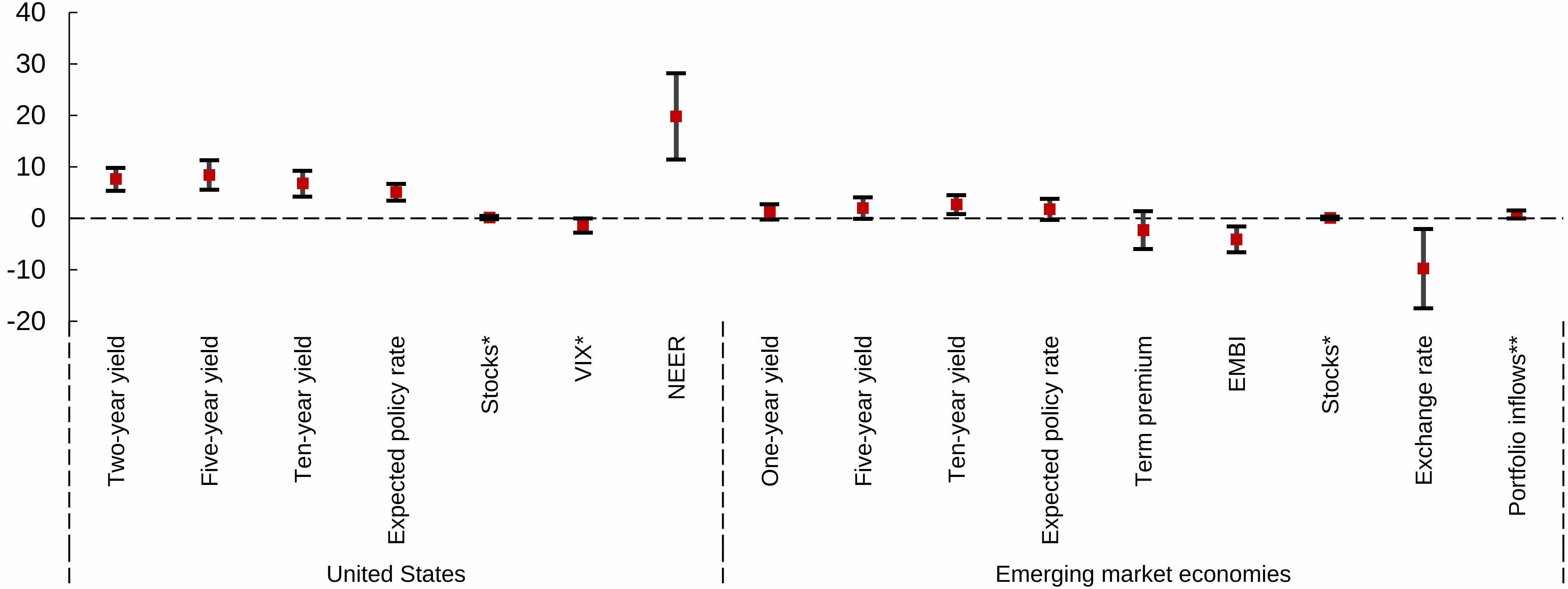
Sources: Bloomberg Finance L.P.; Haver Analytics; and IMF staff calculations.
Note: BRA and MEX denote Brazil and Mexico, respectively. EMBI spreads are in percentage point deviations from those of March 19; exchange rates are in percent changes from those of that date. Increases denote depreciation. EMBI = J.P. Morgan Emerging Market Bond Index.

Spillovers from US economic news and vaccine news

Benign spillovers from US economic news

Effects of Positive News about US Employment

*(basis points; * = percentage points; ** = basis points of annual GDP)*



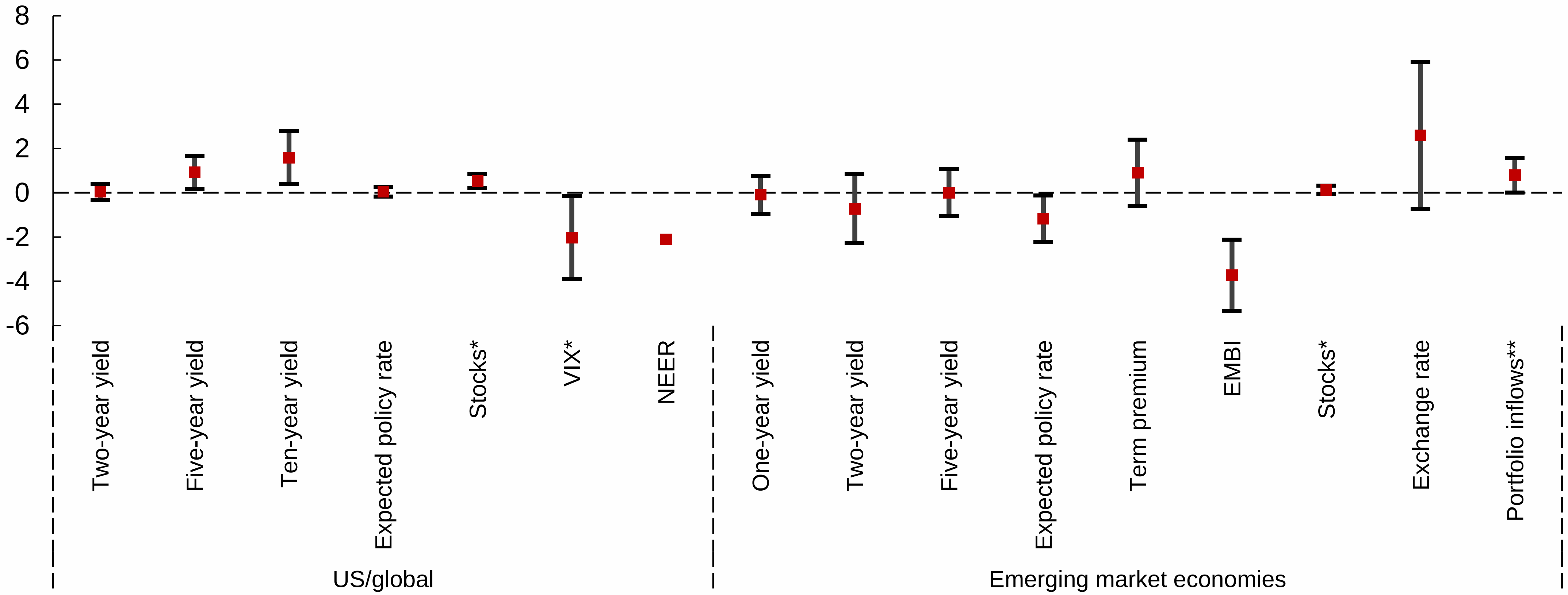
Source: IMF staff calculations.

Notes: The squares show estimates of the effect of a two standard deviation surprise in US nonfarm payrolls. The whiskers show 90 percent confidence intervals. Average expected policy rates are calculated at the ten-year maturity for the United States and at the five-year maturity for emerging market economies. An increase in the nominal effective exchange rate (NEER) for the United States, or in the nominal exchange rate vis-à-vis the United States for emerging market economies, denotes appreciation. Portfolio inflows denote bond inflows. EMBI = J.P Morgan Emerging Market Bond Index; VIX = Chicago Board Options Exchange Volatility Index.

Benign spillovers from vaccine news

Effects of Positive News about COVID-19 Vaccines

*(basis points; * = percentage points; ** = basis points of annual GDP)*



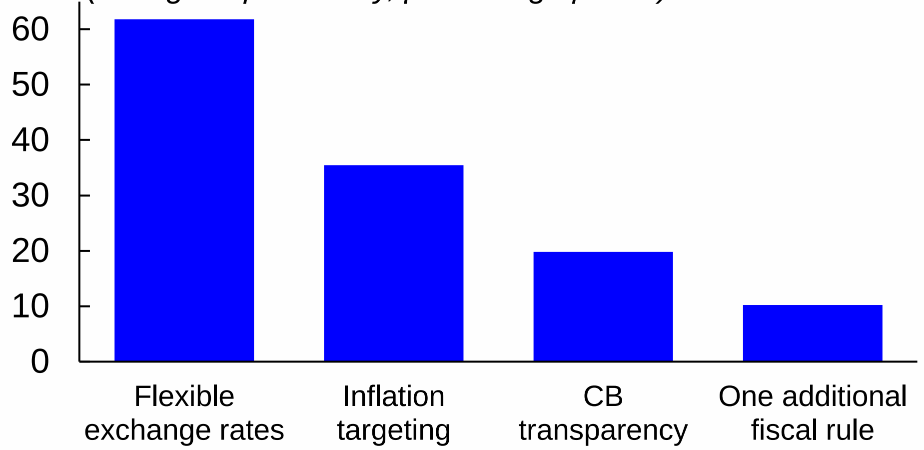
Source: IMF staff calculations.

Notes: The squares show estimates of the effect of positive vaccine news. The whiskers show 90 percent confidence intervals. Average expected policy rates are calculated at the ten-year maturity for the US and at the five- year maturity for emerging market economies. An increase in the nominal effective exchange rate (NEER) for the US, or in the nominal exchange rate vis-à-vis the US for emerging market economies, denotes appreciations. Confidence bands on the NEER are wide; they are not shown to save space. EMBI = J.P Morgan Emerging Market Bond Index; VIX = Chicago Board Options Exchange Volatility Index.

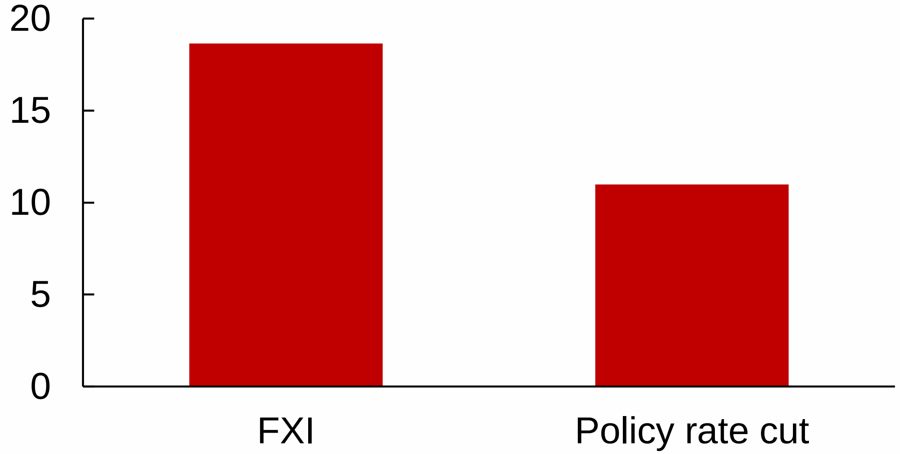
EM monetary policy support in the pandemic

Policy determinants of APPs

Determinants of Asset Purchase Program Choice during COVID- 19: Policy Frameworks 1/
(change in probability, percentage points)



Determinants of Asset Purchase Program Choice during COVID- 19: Policy Choices 2/
(change in probability, percentage points)

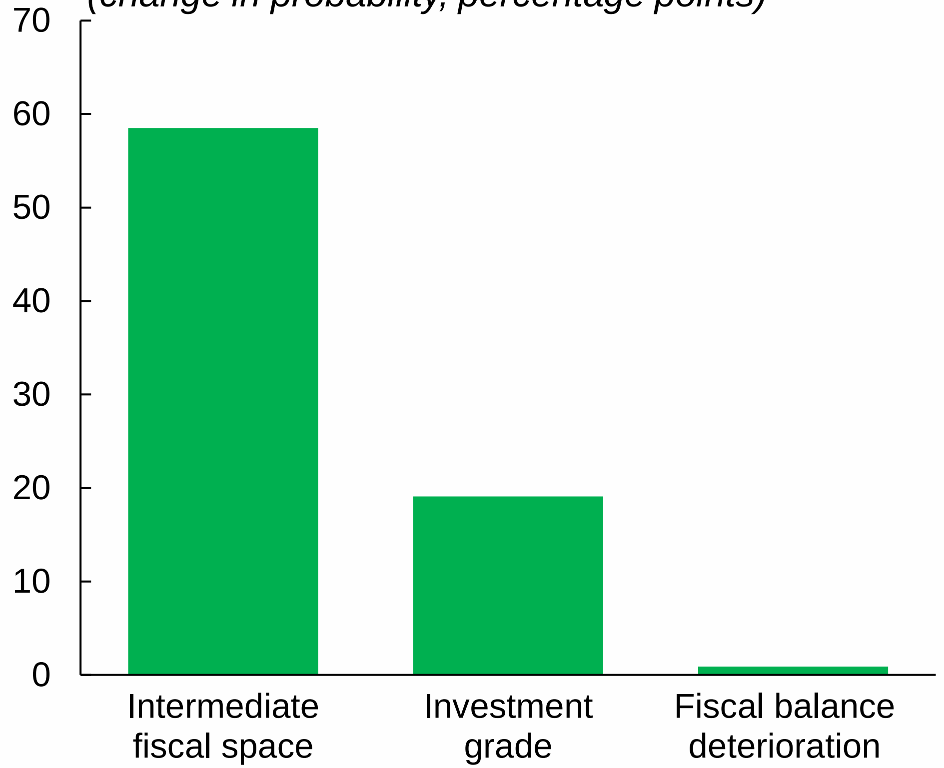


- Asset purchase programs (APPs) were more likely in economies with flexible exchange rates, rules-based monetary and fiscal frameworks, and high central bank transparency.
- APPs were more likely when using FXIs and when policy rate cuts were larger.

Sources: National authorities; Dinçer, Eichengreen, and Geraats (2019), Standard & Poor’s; IMF (2020); and IMF staff calculations.
Note: 1/ Flexible exchange rates and inflation targeting represent, respectively, floating and free floating exchange rate regimes and inflation-targeting central banks. CB transparency reports the effect of a one-standard-deviation increase in the transparency index. Coefficients are significant at the 5 percent level.
CB = central bank.
2/ FXI is a dummy for countries that have used foreign exchange interventions to address disorderly market conditions during the COVID-19 crisis. Policy rate cut is based on a one-standard-deviation increase in the policy rate, as a percentage of its pre-pandemic level. Coefficients are significant at the 5 percent level.

Fiscal determinants of APPs

Determinants of Asset Purchase Program Choice During COVID-19: Fiscal Position
(change in probability, percentage points)

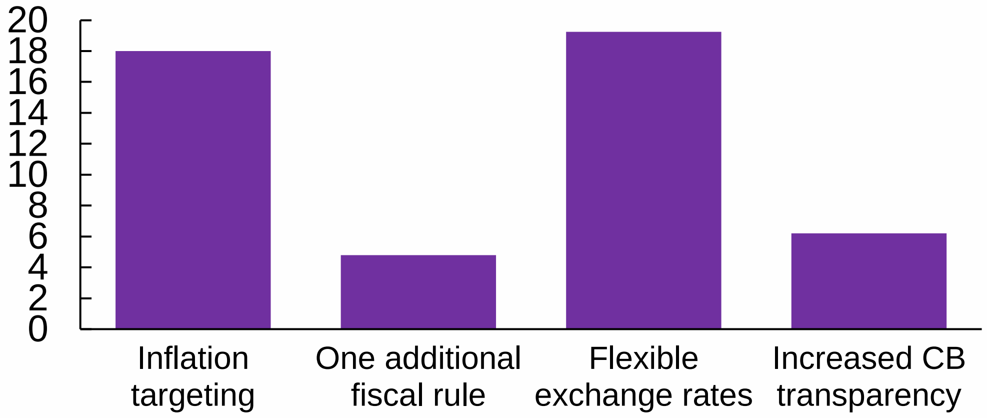


Sources: Dinçer, Eichengreen, and Geraats (2019), Standard & Poor’s; IMF (2020); and IMF staff calculations.
Note: The fiscal space indicator is calculated by the IMF. Investment-grade ratings are from Standard & Poor’s. Fiscal balance deterioration is the change in the 2020 projected fiscal balance between the January 2020 *World Economic Outlook* (WEO)*Update* and the April 2020 WEO, relative to 2019 GDP. Bars are significant at the 5 percent level; the fiscal balance deterioration bar is not significant.

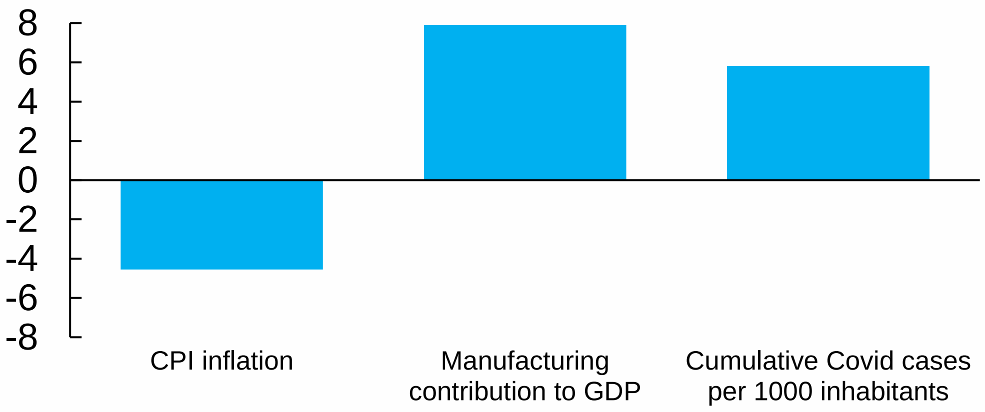
- APPs were more likely in economies with intermediate fiscal space and an investment grade credit rating.

Determinants of policy rate cuts

Determinants of Policy Rate Cuts during COVID-19: Policy Frameworks
(changes, percentage points)



Determinants of Policy Rate Cuts during COVID-19: Domestic Conditions
(changes, percentage points)



- Policy rate cuts were deeper in economies with rules-based monetary and fiscal frameworks, flexible exchange rates, and high central bank transparency.
- More monetary policy support where the demand effects were larger, where tradables were more important, and where the pandemic hit harder.

Sources: Dinçer, Eichengreen, and Geraats (2019); IMF (2020); Johns Hopkins University; IMF, World Economic Outlook; and World Bank, World Development Indicators; and IMF staff calculations.
Note: Manufacturing contribution to GDP and Cumulative COVID-19 cases per 1,000 inhabitants report the effects of a one-standard-deviation increase in the indicator. Coefficients are significant at the 10 percent level or less. Flexible exchange rates and inflation targeting represent, respectively, floating and free floating exchange rate regimes and inflation-targeting central banks. CB transparency reports the effect of a one-standard-deviation increase in the transparency index. Coefficients are significant at the 5 percent level. CB = central bank. CPI = consumer price index.

Policy discussion

- Rising US interest rates reflect many factors, but so far, good economic news seems to be the main driver.

- Even so, financial conditions are volatile. AE central banks can provide further guidance to avoid deteriorating investor sentiment towards EMs.

- Many EMs would like to maintain monetary policy support, but their ability to do so depends on inflation, capital flows, vulnerabilities etc.

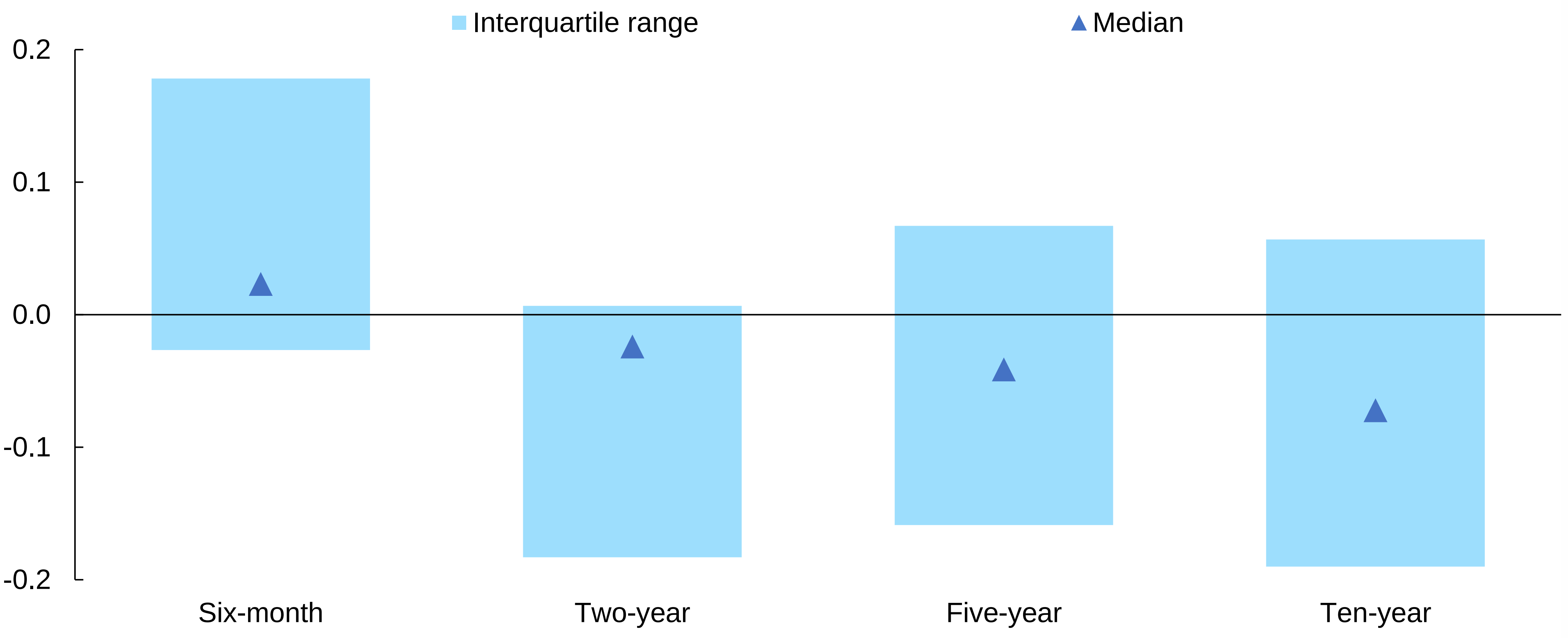
- Now is the time for EMs to reduce vulnerabilities, e.g. lengthen maturities, reduce currency mismatches, or proactively activate macroprudential tools

- Multilateral cooperation can enhance stability, e.g. swap lines, SDR allocation, and sovereign debt arrangements.

Thank you!

Effects of APPs

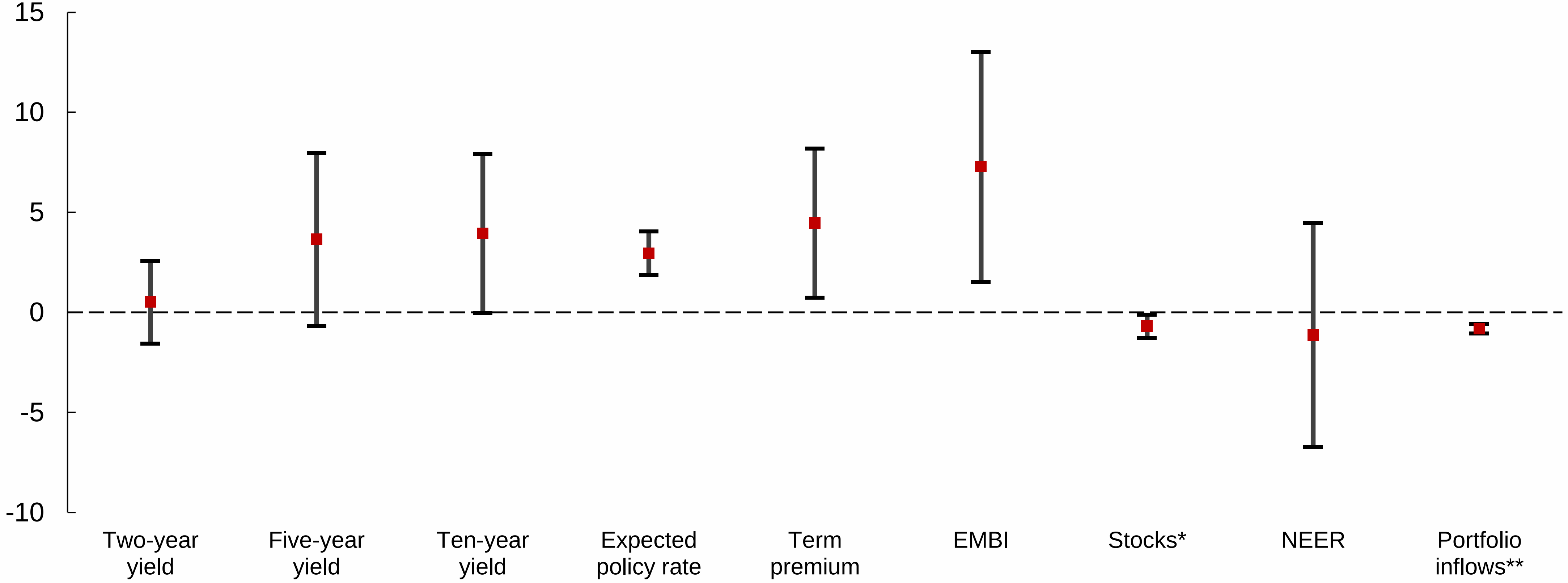
Asset Purchase Program Announcement: Effect on Bond Yields
(percentage point change)



Source: Fratto and others (2021).

Spillovers from ECB announcements

Effects on EMs of Increases in the Spread Between Italian and German Yields
(*basis points; * = percentage points; ** = basis points of annual GDP*)

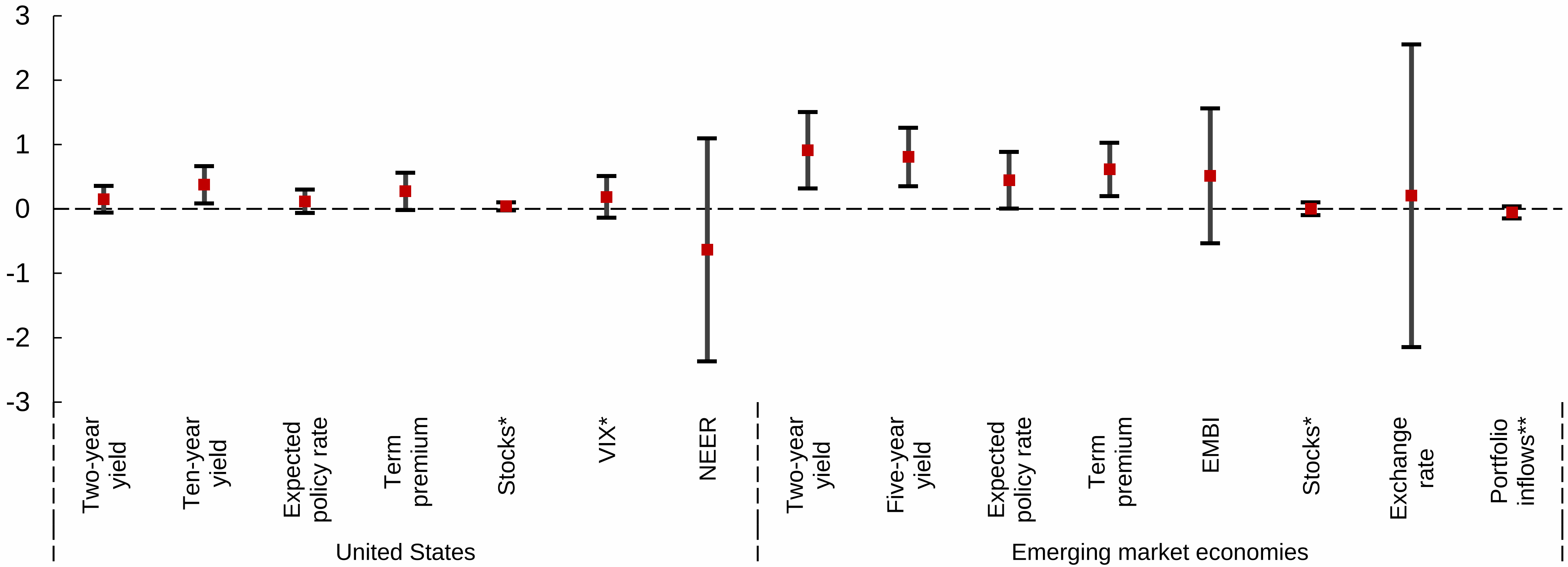


Source: IMF staff calculations.
Notes: The squares show estimates of the effect of a two standard deviation surprise in the spread between 10-year yields on Italian and German government bonds. The whiskers show 90 percent confidence intervals. The expected future short-term interest rate and term premia are at the 5-year maturity for emerging market economies. The emerging market nominal effective exchange rate (NEER) is trade-weighted and increases denote appreciations. EMBI = J.P Morgan Emerging Market Bond Index; VIX = Chicago Board Options Exchange Volatility Index.

Spillovers from US economic activity

Effects of Positive News about US Economic Activity: Citi Index

*(basis points; * = percentage points; ** = basis points of annual GDP)*



Source: IMF staff calculations.

Notes: The squares show estimates of the effect of a two standard deviation surprise in US economic activity. The whiskers show 90 percent confidence intervals. The expected future short-term interest rate and term premia, are at the 10-year maturity for the United States and at the 5-year maturity for Emerging market economies. Exchange rate increases denote appreciations. The United States nominal effective exchange rate (NEER) is trade-weighted, while the emerging market exchange rate is against the US dollar. EMBI = J.P Morgan Emerging Market Bond Index; VIX = Chicago Board Options Exchange Volatility Index.