First Annual Bank of England Agenda for Research (BEAR) Conference The Monetary Toolkit February 24, 2022 Speech by Tobias Adrian

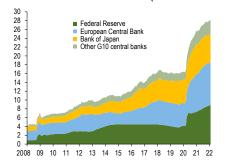
It is my pleasure to be with you for this discussion on unwinding the monetary policy toolkit.

In my remarks today, I will present the current picture for central banks in advanced economies and emerging markets, offering data and figures. I will then touch upon some of the important considerations that arise at the current conjuncture, which will help to explain the mechanics of how monetary policy normalization can be expected to tighten financial conditions, and at what pace. Finally, this will then inform a brief discussion of the expected implications of unwinding asset purchase programs.

Advanced economy central banks

Central bank balance sheets in advanced economies have grown considerably during the COVID-19 pandemic in an effort to ease financial conditions and maintain the flow of credit to households and firms.

Across G10 central banks, balance sheets have expanded to over \$28 trillion dollars, increasing by about \$12 trillion since mid-January 2020.

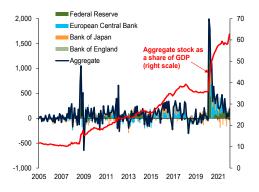


Balance Sheets of Advanced Economy Central Banks Have Swelled G10 Central Bank Assets (USD trillions)

This rapid expansion is more than six times the increase seen during the two years of the global financial crisis from December 2007. In addition, monetary authorities have increased the assets held on their balance sheets to over 60 percent of GDP, almost double the level prevailing before the pandemic.

Change in Central Bank Balance Sheet Assets

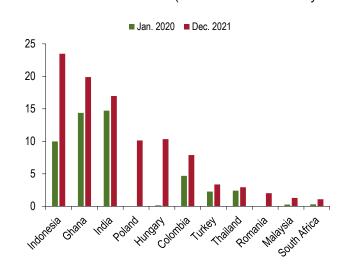
(Month-over-month change, USD billions; percent of GDP)



With the economy rebounding from the pandemic and inflation significantly above target, major central banks have accelerated the monetary policy normalization process. Investors anticipate that the US Federal Reserve will begin the process of policy normalization already in March. Other central banks in advanced economies have already started, with more likely to follow suit this year or the next. During this process, a key financial stability challenge faced by the monetary authorities will be to avoid an unwarranted tightening of financial conditions that may hurt the recovery.

Emerging markets on a similar but more advanced path

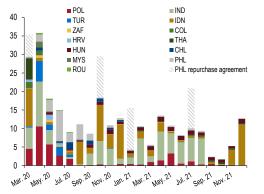
Emerging market central banks' share of domestic debt outstanding has also increased sharply due to asset purchase programs, and now accounts for over 20 percent of total debt in Indonesia, while rising from close to 0 percent in Poland and Hungary pre-COVID to over 10 percent currently. Other countries have seen substantial increases in central bank ownership as well.



Central Banks Increase Holdings of Domestic Debt Central bank share of domestic debt (share of debt owned by central banks)

Note: Indonesia uses gross central bank holdings and aggregates the total.

Asset purchase programs by emerging market central banks have largely been wound down, with India, Hungary, and Poland ceasing outright purchases of government bonds in the fourth quarter of 2021, and others stopping well before then. Indonesia is an outlier—having committed to purchasing additional bonds in 2022 (primary market) up to approximately 1.2 percent of GDP as direct fiscal support. The Fund has recommended Indonesia's central bank limits purchases to periods of market distress, but regardless expects all purchases to end by end-2022.



Emerging Market Asset Purchases Have Mostly Come to an End

Emerging market central bank asset purchases (US billions)

Note: Indonesia: The December 2022 jump for Indonesia does not represent a sustained increased, rather a one - off health/Covid related bond. Hungary: The National Bank of Hungary has continued to buy some corporate bonds through a pre -Covid program, though that is also expected to end shortly. Philippines: The authorities have continued to rollover short term repurchase agreements between the central bank and Treasury.

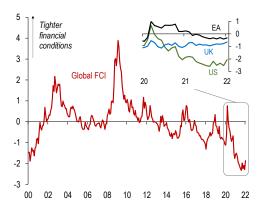
Most emerging markets, however, have yet to announce formal plans to wind down the balance sheet, though BanRep (Colombia) has actively sold some of its holdings.

Global financial conditions have tightened somewhat in recent weeks.¹ Such modest tightening reflects higher long-term interest rates—driven by market expectations of an earlier and faster normalization of monetary policy and a decline in corporate valuations.

Financial Conditions Undergo Modest Tightening

Global FCI Index (in standard deviation)

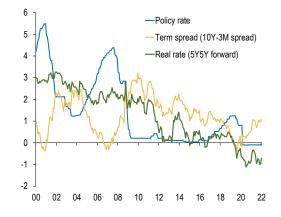
¹ The analysis is based on the Goldman Sachs global FCI which is based on policy rates, long-term government bond yields, corporate credit spreads, sovereign spreads, and exchange rates. The analysis was based on data up to end January 2022, before the start of the Russia-Ukraine conflict on February 24.



But overall financial conditions remain accommodative in advanced economies, as policy rates, term spreads and long-term real rates (5-year-5-year forward) remain at historically low levels.

Historic Lows for Various Key Metrics

Global policy rate, term spreads, and real rate (percent)



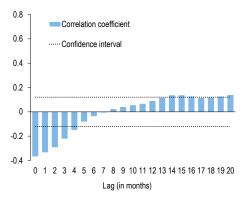
Pace of tightening

Looking back at past tightening cycles, higher policy rates tighten financial conditions with some lags. This is because term spread typically flattens during the early phase of the hiking cycle. In contrast, a rise in long-term real rates would have a more immediate impact on financial conditions. The pace of tightening depends on the interplay by these key components, but taken together, monetary policy normalization will tighten financial conditions.

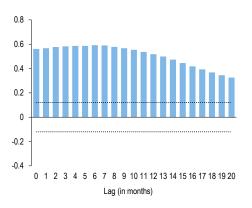
Normalization Will Tighten Financial Conditions Through Key Components

(Correlation Coefficients (ACF) with Global FCI Index for the following set of figures)

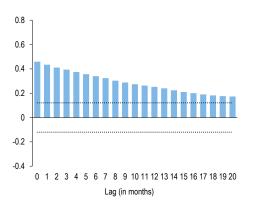
3-month change in policy rates



Term spread (10Y-3M spread)



Long-term real rate (5Y5Y forward)



Looking ahead

An important trade-off that central banks face when choosing how to tighten monetary policy is that a more gradual quantitative tightening allows policy rates to rise more and thus creates policy space. This was the playbook for monetary policy normalization before COV ID-19: central banks should start tightening with policy rate hikes and reduce the balance sheet later and do so gradually.

The trade-off arises because policy rates cannot rise as much and move away from the zero lower bound if central banks decide to do aggressive quantitative tightening.

In the current environment of rising inflation, however, the benefits of gradual quantitative tightening seem less evident and there appears to be a stronger rationale for reducing the balance sheet faster than in the pre-COVID period.

A more gradual quantitative tightening this time can only be justified if, for example, we remain uncertain about the necessary balance sheet size for an effective monetary policy (i.e., the demand for bank reserves) or about the effects of quantitative tightening on broader financial conditions or on market functioning.

Still, everything else equal, the case for winding down balance sheets more gradually seems weaker now than what it was in 2017–19.