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ECONOMIC RESEARCH DEPARTMENT

# Spillover risks from emerging market economies

**■ In the latest edition of its Global Financial Stability Report (GFSR), the IMF argues that the importance of financial spillovers has grown significantly over the last two decades. In particular, spillovers from emerging economies' financial markets may now account for more than a third of the variation in advanced economies' equity and foreign exchange returns.**

**■ The importance of financial integration has increased relative to the trade channel in explaining these spillovers. Moreover, the evidence suggests that sectors which are more dependent on external finance are more prone to spillovers as are firms with lower liquidity or higher leverage.**

**■ In addition to spillovers originating in financial markets, the report also provides evidence that surprises about macroeconomic fundamentals in emerging market economies (in particular Chinese industrial production) have had an increasing impact on stockmarkets around the world.**

**■ These findings suggest that the transmission of shocks from emerging markets to the rest of the world has become more powerful than it has been in the past. This is of some concern at a time when corporate leverage in emerging markets has been rising significantly and when a number of commodity-exporting countries are starting to feel the brunt of lower commodity prices.**

The latest edition of the IMF's Global Financial Stability Report (GFSR) includes a chapter which takes a detailed look at financial spillovers. For the purpose of the analysis, spillovers are defined as the impact of changes in domestic asset price movements on asset prices in other economies.

## The rise in financial integration

There are good *a priori* reasons to believe that these spillovers have become more significant with the advance in global financial integration over the last two decades. For instance, Chart 1, taken from the GFSR, illustrates the spectacular growth in foreign assets and liabilities of major advanced and emerging economies over this time period.

Chart 2, also taken from the GFSR, illustrates the evolution of advanced economies' financial exposures to emerging market economies by splitting them into portfolio exposures and bank exposures. Again, this chart illustrates the fact that these exposures have increased significantly over the last two decades and that most of the increase has come through investment funds as opposed to traditional bank lending.

■ **Gross foreign assets and liabilities**

USD trillion

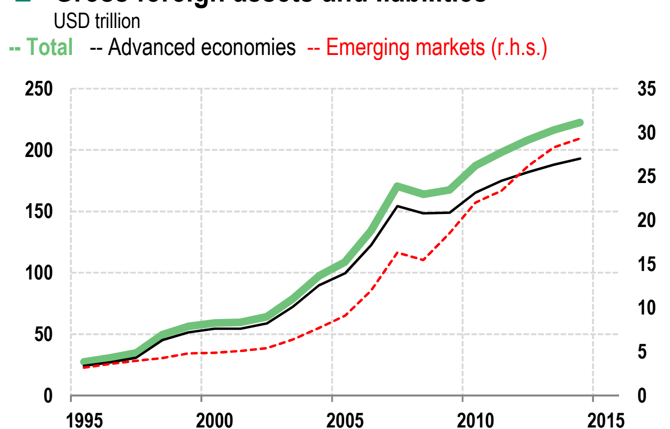


**Chart 1** Sources: IMF, GFSR April 2016

■ **Financial market exposure to emerging markets**

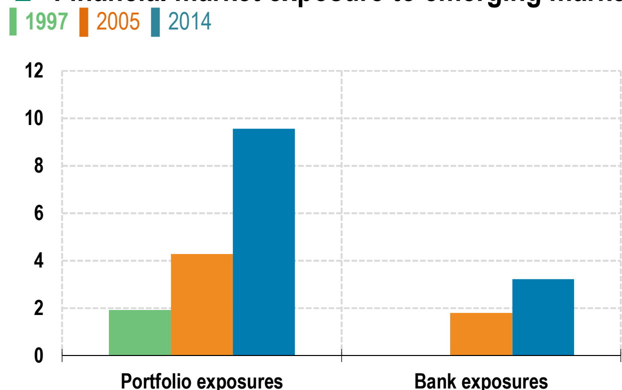


**Chart 2** Sources: IMF, GFSR April 2016

## The increasing importance of financial market spillovers

In order to identify financial market spillovers between countries, the authors of the report use a vector autoregression

model of daily asset returns which includes global control variables. Broadly speaking, they define a financial market spillover from country A to country B as the share of the variation in country B's market return shocks that can be attributed to contemporaneous or preceding shocks in country A's market returns.

Using this methodology a first general finding is that globally spillovers in equity and foreign exchange markets have risen significantly over the last two decades. For equity markets the share of the variation in advanced and emerging economies' returns attributable to other countries' equity return variations has risen from 50% to 80%. In foreign exchange markets the corresponding rise has been from 50% to 71%. Interestingly, there is no evidence of such a trend in bond markets, which the authors attribute to the importance of global factors (e.g. the VIX) in explaining the returns in these markets.

## Spillovers from emerging markets to advanced economies

Looking more specifically at spillovers from emerging markets to advanced economies, the evidence in the report suggests that these now account for more than a third of the variation in equity and foreign exchange returns of advanced economies. This is illustrated in Chart 3, taken from the GFSR.

Looking at individual emerging market countries, those with more integrated financial markets generate larger spillovers in market returns. In contrast, the evidence in the report suggests that financial market spillovers are limited for key large emerging economies with more segmented financial markets, particularly China and India.

## Factors behind the increase in spillovers

Turning to the factors behind this rise in spillover effects, the report presents evidence suggesting that the relative importance of financial integration compared to the trade channel has increased over time. Across countries, spillovers are stronger within sectors and sectors which are more dependent on external finance are more prone to spillovers, as are firms with lower liquidity or higher leverage.

This finding is concerning at a time when corporate leverage in emerging markets has been rising substantially and now stands at record levels, as pointed out recently by the Bank for International Settlements[1]. Moreover, in its April 2015 GFSR, the IMF had pointed out a sharp rise in dollar-denominated corporate debt in some sectors of some emerging market countries[2].

The April 2016 GFSR also presents evidence that the rise in the asset allocations of investment funds to emerging market economies is likely to have increased spillover effects from emerging markets through the so-called portfolio channel, although in all likelihood they remain smaller than the corresponding spillover effects from advanced economies to

■ **Spillovers from EMs to an average advanced economy**

Percentage of variation explained

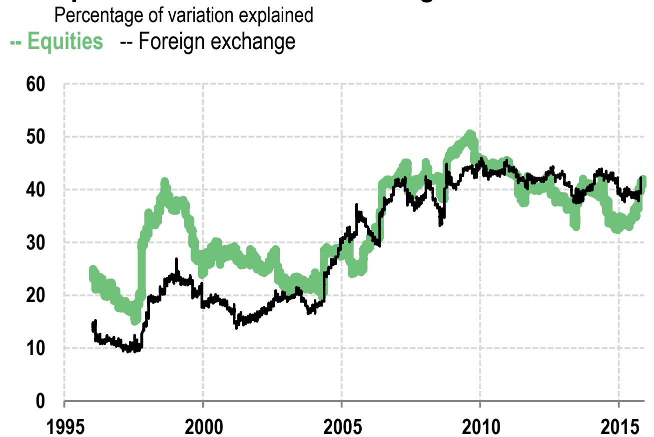


**Chart 3** Sources: IMF, GFSR April 2016

emerging markets. This is in a context where the resilience of liquidity, i.e., the speed at which market liquidity recovers after a bad shock, is likely to have decreased globally, as noted by the IMF in its October 2015 GFSR[3].

## News about Chinese macroeconomic fundamentals matter

News about Chinese macroeconomic fundamentals (as opposed to surprises in Chinese stock market returns discussed above) seems to have the potential of generating important spillover effects. Indeed, an interesting complementary set of results presented in the report looks at the impact of surprises in the macroeconomic fundamentals of emerging market economies on financial markets in other economies. In particular, the report finds that news about the Chinese economy, measured as realized changes in Chinese industrial production relative to market expectations, have had an increasing impact on equity markets in other countries.

Overall, the evidence presented in the IMF's latest GFSR suggests that the transmission of shocks from emerging market to advanced economies may have become significantly more powerful over the course of the last two decades. In particular, this is consistent with the idea that the sharp selloffs in global stockmarkets in the summer of 2015 and at the beginning of 2016 may at least in part have been due to disappointing macroeconomic newsflow from China.

These findings come at a time when corporate leverage in emerging markets has reached record levels and when commodity prices have fallen sharply, leaving a number of emerging market companies and countries in a vulnerable position. Recent comments suggesting that the Federal Reserve in the United States is paying close attention to global risks are especially relevant in light of these findings.

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[1] "Credit, commodities and currencies", J. Caruana, Bank for International Settlements, February 2016.
[2] See "Shifting risks to global financial stability", Yves Nosbusch, EcoFlash BNP Paribas, April 2015.
[3] See "Liquidity levels and liquidity risk", Yves Nosbusch, EcoFlash BNP Paribas, November 2015.

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