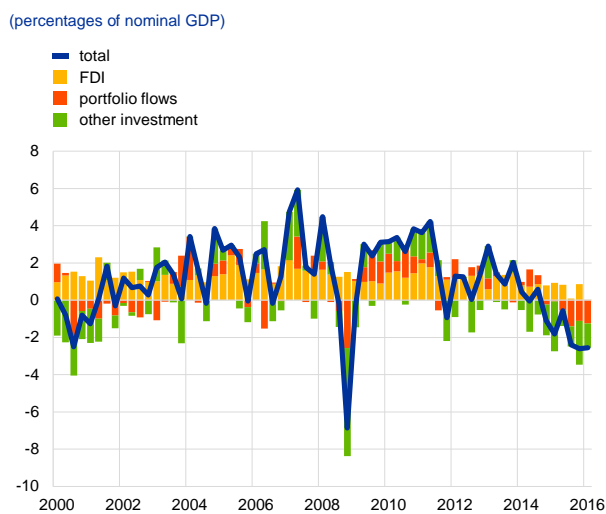


# Box 1

## Recent developments in capital flows to emerging market economies

**Chart A**  
Net capital inflows to EMEs



Sources: Haver Analytics, IMF and ECB calculations.  
Notes: Net capital inflows defined as the sum of net foreign direct investment (FDI), net portfolio flows and net other investment. Aggregated using GDP purchasing power parity (PPP) weights.

**Net capital inflows to major emerging market economies (EMEs) have been on a downward trend since 2011 and have remained negative since the fourth quarter of 2014.**<sup>1</sup> Net capital inflows to EMEs recovered quickly after the global financial crisis. However, this rebound reversed in 2011 and since then net capital inflows have followed a downward trend (see Chart A). Moreover, after a modest recovery in 2013, there was a renewed decline in net capital inflows to EMEs, which have remained negative for the last six quarters. This is the longest period of consecutive net capital outflows from EMEs since 2001. The reversal seems to be broad based across different types of investment class. In particular, foreign direct investment, which is the most stable component of the financial account, remained below its long-term average (2000-Q1 2016) over the last two years.

**The decline in net capital inflows to EMEs has also been partly mirrored in a gradual and broad-based weakening of the currencies of EMEs.** EME

currencies were on a downward trend between 2011 and 2015. The weakening was particularly pronounced in the period between mid-2014 and late 2015 when the US dollar started to strengthen amid gradually building market expectations of a tightening of US monetary policy. Since early 2016 EME currencies have started to recover part of their losses.

**Based on a standard “push/pull” framework<sup>2</sup>, a simple model is used to determine, at an aggregate level, potential drivers of the recent slowdown in net capital inflows to EMEs (see Chart B).** A single equation model relates

<sup>1</sup> This box focuses on private net capital inflows to a group of large EMEs comprising Argentina, Brazil, Chile, China, Colombia, India, Indonesia, Malaysia, Mexico, Russia, South Africa, South Korea, Taiwan, Thailand, Turkey and Venezuela. Hong Kong and Singapore are excluded from the analysis given their special nature as global financial centres. The flows are defined as the sum of foreign direct investment, portfolio flows and other investment and do not include changes in foreign reserves.

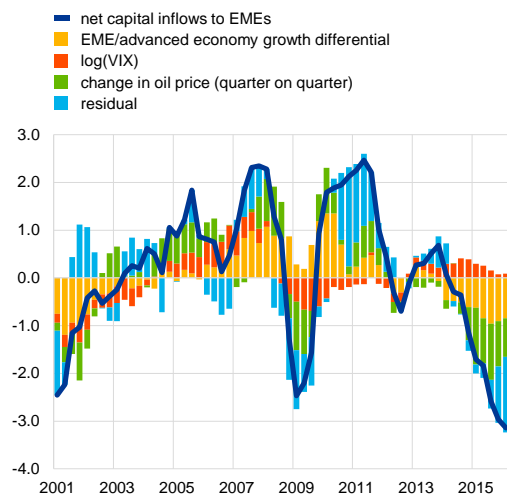
<sup>2</sup> A “push/pull” framework distinguishes between two types of driver of net capital inflows into an economy. Factors determining the attractiveness of the domestic economy for investors – so-called “pull factors” – include economic growth, the country’s risk or returns on investments. International “push factors” determine foreign investors’ decisions to invest abroad and include global risk aversion and foreign economies’ growth and interest rates. See Koepke, R., “What Drives Capital Flows to Emerging Markets? A Survey of the Empirical Literature”, *IIF Working Paper*, Institute of International Finance, 2015.

aggregate balance of payments net capital inflows to EMEs (measured in percentages of GDP) to the relative attractiveness of domestic economic conditions (measured as the real GDP growth differential between the respective EMEs and advanced economies and by interest rate differentials) and to changes in global conditions, including global risk aversion (measured by the VIX Index), changes in oil prices and a measure of expectations of US monetary policy.

**The model results suggest that a falling growth differential between EMEs and advanced economies has been a major driver of net capital outflows from EMEs over recent years.** Since 2010 growth in major EMEs has been on a downward trend, driven both by a deteriorating external environment and domestic structural factors (see Chart C).<sup>3</sup> At the same time, growth in advanced economies has stabilised since 2013. This has resulted in a diminishing growth differential between EMEs and advanced economies, making the former less attractive for foreign investment. Moreover, low growth or recessions in some EMEs might have bolstered gross capital outflows. The average quarterly growth differential decreased from 1.2 percentage points in the pre-crisis period (2001-07) to 0.9 percentage point in 2010-15 and to 0.7 percentage point over the last two years.

**Chart B**  
Model-based contributions to net capital inflows to EMEs

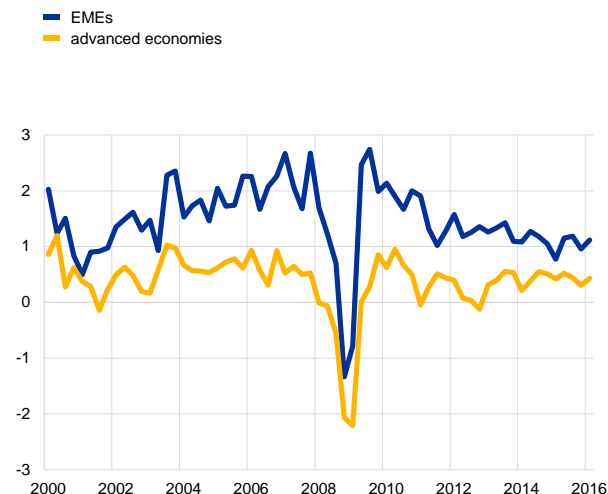
(demeaned; four-quarter moving averages; percentages of nominal GDP)



Sources: Datastream, Haver Analytics, IMF and ECB calculations.  
Notes: See footnote 1 of this box for the country sample. The sample period is from Q1 2000 to Q1 2016. All aggregates are computed using GDP PPP weights. Growth differential calculated against an aggregate of advanced economies (see notes to Chart C for the country sample). The interest rate differential and US monetary policy expectations are not statistically significant in the regression; therefore, the chart is based on the model excluding these variables (the contributions of the other factors remain practically unchanged). To address the endogeneity problem, lagged growth differentials are used.

**Chart C**  
Real GDP growth in EMEs and advanced economies

(quarter-on-quarter percentage changes)



Sources: Haver Analytics, IMF and ECB calculations.  
Notes: See footnote 1 of this box for the country sample. Aggregated using GDP PPP weights. Advanced economies include Australia, Canada, Denmark, the euro area, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States. The latest observation is for Q1 2016.

**In addition, capital flows to EMEs have been substantially affected by external factors such as global risk aversion and changes in oil prices.** The model

<sup>3</sup> See the article entitled "The slowdown in emerging market economies and its implications for the global economy", *Economic Bulletin*, Issue 3, ECB, 2016.

results show that net capital inflows respond to global risk aversion, which is consistent with the empirical evidence found in the literature.<sup>4</sup> Furthermore, the recent period of net capital outflows from EMEs also seems to have been strongly driven by the decline in oil prices which began in 2014. Oil price declines directly affect the economic and financing conditions of commodity exporters. However, changes in oil prices are also positively correlated with net capital inflows to commodity importers. This could be associated with the fact that oil prices partly reflect global demand conditions and therefore global income.<sup>5</sup> In particular, while the initial phase of the fall in oil prices as of mid-2014 was mainly supply-driven, the decline from autumn 2015 to January 2016 is believed to have been more demand-driven.<sup>6</sup>

**The process of US monetary policy normalisation has drawn attention to the role of expectations about the future path of US policy rates in determining capital inflows to EMEs.**

The orderly developments in financial markets in December 2015, when the US policy rate hike was fully priced in by the markets, compared with the “taper tantrum” episode in 2013, have highlighted the importance of expectations concerning US monetary policy for global financial market developments. Using several different proxies for US monetary policy expectations, a significant effect of such expectations on aggregate net capital flows to EMEs is not found.<sup>7</sup> However, these expectations seem to play a more significant role as a determinant of portfolio flows examined at higher frequencies.<sup>8</sup> The role of interest rate differentials between EMEs and advanced economies is also not clearly captured in the specific set-up of the model; however, their effects are found to be significant in other more detailed studies.<sup>9</sup>

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<sup>4</sup> Koepke (2015), op. cit.

<sup>5</sup> See Ahmed, S., Curcuru, S., Warnock, F. and Zlate, A., “The Two Components of International Portfolio Flows”, 2015. The authors show (for portfolio flows) that, next to flows stemming from active portfolio reallocation decisions, flows attributable to new savings (income effect) are an important part of total portfolio flows.

<sup>6</sup> See the box entitled “Global implications of low oil prices”, *Economic Bulletin*, Issue 4, ECB, 2016.

<sup>7</sup> Alternative specifications are tried, including US ten-year Treasury yields, the difference between US ten-year Treasury yields and three-month money market rates, and Eurodollar futures contracts.

<sup>8</sup> See, for example, Dahlhaus, T. and Vasishtha, G., “The Impact of U.S. Monetary Policy Normalization on Capital Flows to Emerging-Market Economies”, *Staff Working Papers*, No 14-53, Bank of Canada, 2014. The authors find a statistically significant, but small, economic effect of the US policy normalisation shock on monthly portfolio flows to EMEs. A recent analysis by the IMF (*World Economic Outlook*, April 2016, Chapter 2) finds a similar result at a weekly frequency and for a sample period as of 2013.

<sup>9</sup> A standard specification is tried using the policy rate differential against advanced economies and an alternative, using a two-year government bond yield differential to capture more accurately recent developments in advanced economies’ monetary policies. The model results do not show a statistically significant impact of EME/advanced economy interest rate differentials on net capital inflows to EMEs. This could be due to the level of aggregation of the dependent variable, which does not allow the heterogeneity of individual countries’ interest rates and risk profiles to be taken into consideration. Other studies often employ a panel methodology, which allows country-specific effects to be taken into account. See, for example, Ahmed, S. and Zlate, A., “Capital Flows to Emerging Market Economies: A Brave New World?”, *International Finance Discussion Papers*, No 1081, Board of Governors of the Federal Reserve System, 2013.

**Overall, economic growth differentials between EMEs and advanced economies remain a key driver of net capital inflows to EMEs.** This highlights the need for sound domestic economic policies in EMEs, aimed at addressing existing vulnerabilities and supporting economic growth, in particular in the context of slowing global economic growth prospects.