



EUROPEAN CENTRAL BANK

EUROSYSTEM

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*The views expressed belong only to the author and are not necessarily shared by the ECB.

Should emerging markets be concerned by policy normalization in advanced countries?

CEMLA-ECB-FRBNY-BCRP

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- I will assume a *demand-driven* increase in ADV interest rates. Surely this should be good for EME?
- Well, maybe not
 - Interest rate correlation (due to fear of floating)
 - Or directly through EME corporates issuing foreign currency debt
 - Tightening of financial conditions (over and above short term risk free rates), maybe through a global financial cycle
- There is no consensus on either channel, rather a lot of open questions

EMBI spreads and USD effective exchange rate

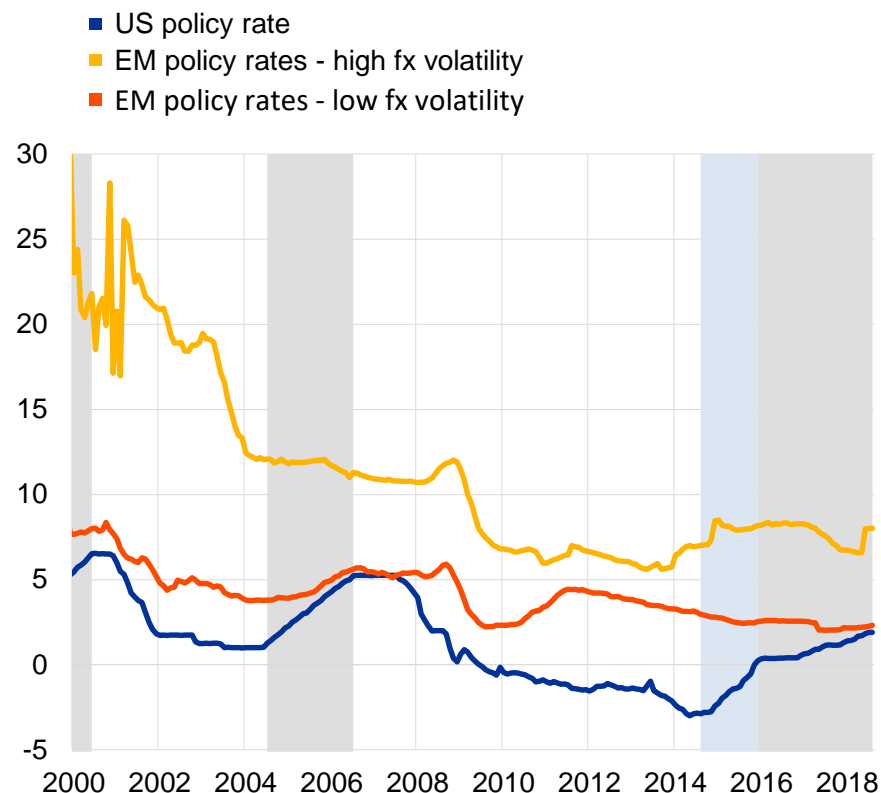
(lhs: in basis points, rhs: index – 2010=100)



Sources: Haver Analytics.
Latest observation: 03/12/2018.

The interest rate correlation: no smoking gun

- Few hard pegs among the major EME, but fear of floating likely important
 - FX pass-through (Hausmann et al. 2000)
 - Net foreign currency debt (Georgiadis and Zhu, 2018)
- Fierce debate on dilemma vs. trilemma: reduced form evidence inconclusive

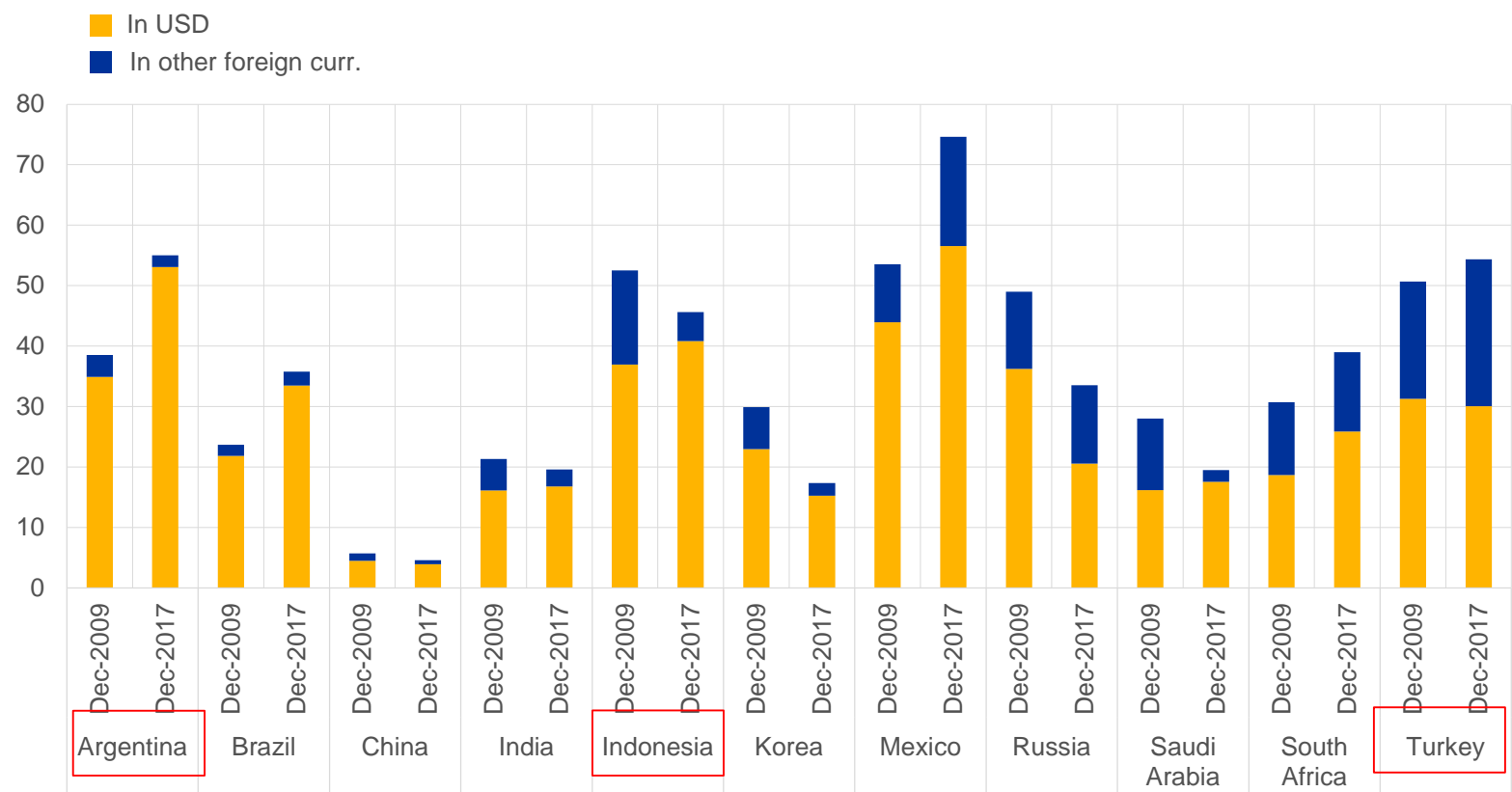


Note: US policy rate is shown as the Federal Funds rate extended using the Wu-Xia shadow rate in the period between 2009-2015. The emerging market economies policy rate is constructed as a simple weighted average. Policy rates above 100% were excluded from the average. Not all countries are available throughout the sample. Fixed composition exchange market volatility-based classification is constructed based on the LCU/USD exchange rate in the 2000-2018 period by splitting the country sample in two groups of the same size.

Country sample: Brazil, Chile, China, Colombia, Indonesia, Israel, South Korea, Mexico, Peru, Philippines, Russia, South Africa, Thailand and Turkey

EME have issued large amounts of USD corporate debt

Share of foreign currency debt in total non-financial corporate debt
(share in 2009 and share in 2017)



Sources: IIF.

Notes: highlighted in red are countries with current account deficits.

The financial channel

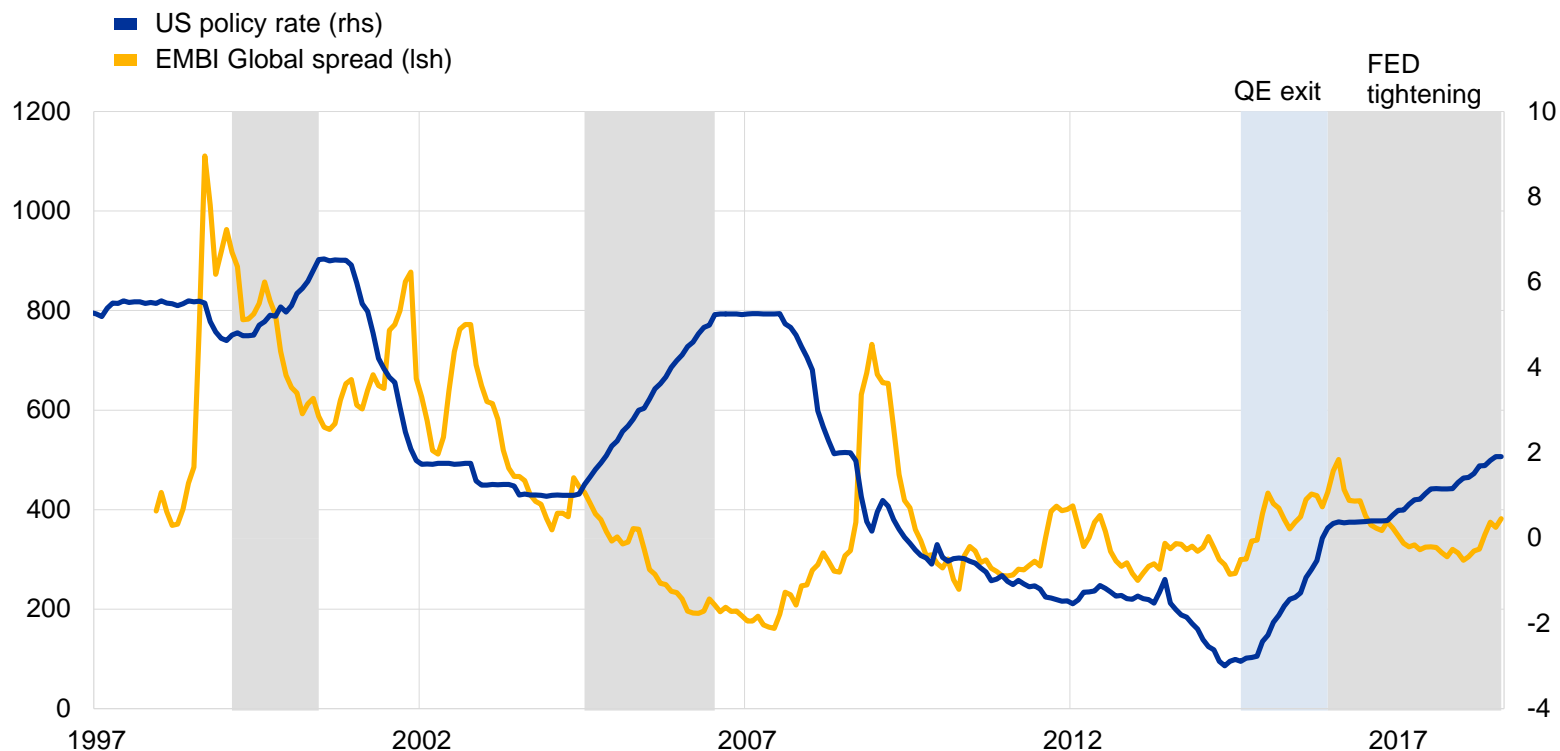
- Emphasis on capital flows to emerging markets – also in the policy debate (e.g., G20)
 - (But there are other potential channels, e.g. through asset prices)
- Two questions:
- **Are capital outflows really contractionary?**
 - Not in Mundell-Fleming – see Krugman (2014): a sudden stop should be expansionary!
 - Effect through the cost of financial intermediation?
 - Bond inflows are contractionary (FX appreciation), non-bond inflows are expansionary? (Blanchard et al. 2018)
 - Capital inflows good in the short term, detrimental in the medium term due to mis-allocation? (“Financial resource curse” literature)
- **Do ADV interest rates drive capital flows?**
 - Evidence mixed at best (Powell, 2018)
 - Possibly working through global banks (Brauning and Ivashina 2017)
 - Is it more about US interest rates or the USD?

Some useful quick regressions

- We did some internal work following Jay Powell's speech in Zurich in May 2018: Regress total capital flows to EME as % of EM GDP on US and global variables (USD, US interest rates, VIX, oil prices, global growth...)
- Some interesting findings:
 - Negative relationship with VIX (also excluding global financial crisis)
 - Negative relationship with USD driven by 2008-09 global financial crisis, not visible elsewhere
 - Oil price coefficient unstable, turns positive after the crisis (but one should distinguish between oil/commodity exporters and importers)
 - US interest rates insignificant (but significant for *portfolio* flows)

US monetary policy and EMBI spreads: no smoking gun

US policy rate and EMBI Global spread
(monthly data, in basis points (lhs), in percent (rhs))

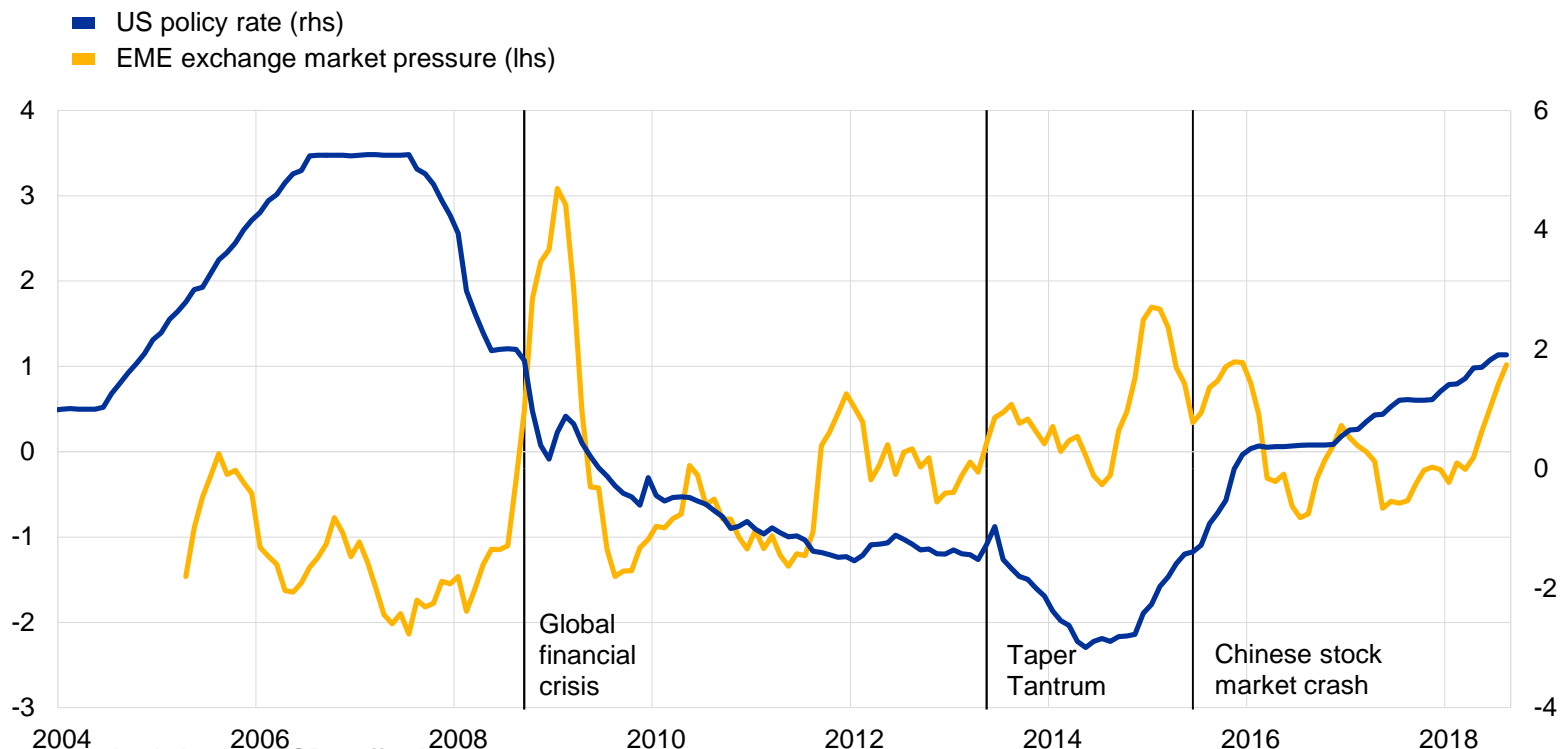


Sources: Haver Analytics and ECB staff calculations.

Note: US policy rate is shown as the Federal Funds rate extended using the Wu-Xia shadow rate in the period between 2009-2015.

EME Exchange Market Pressure: no smoking gun either

US policy rate and EMEs Exchange Market Pressure index
 (monthly data, index (lhs), in percent (rhs))



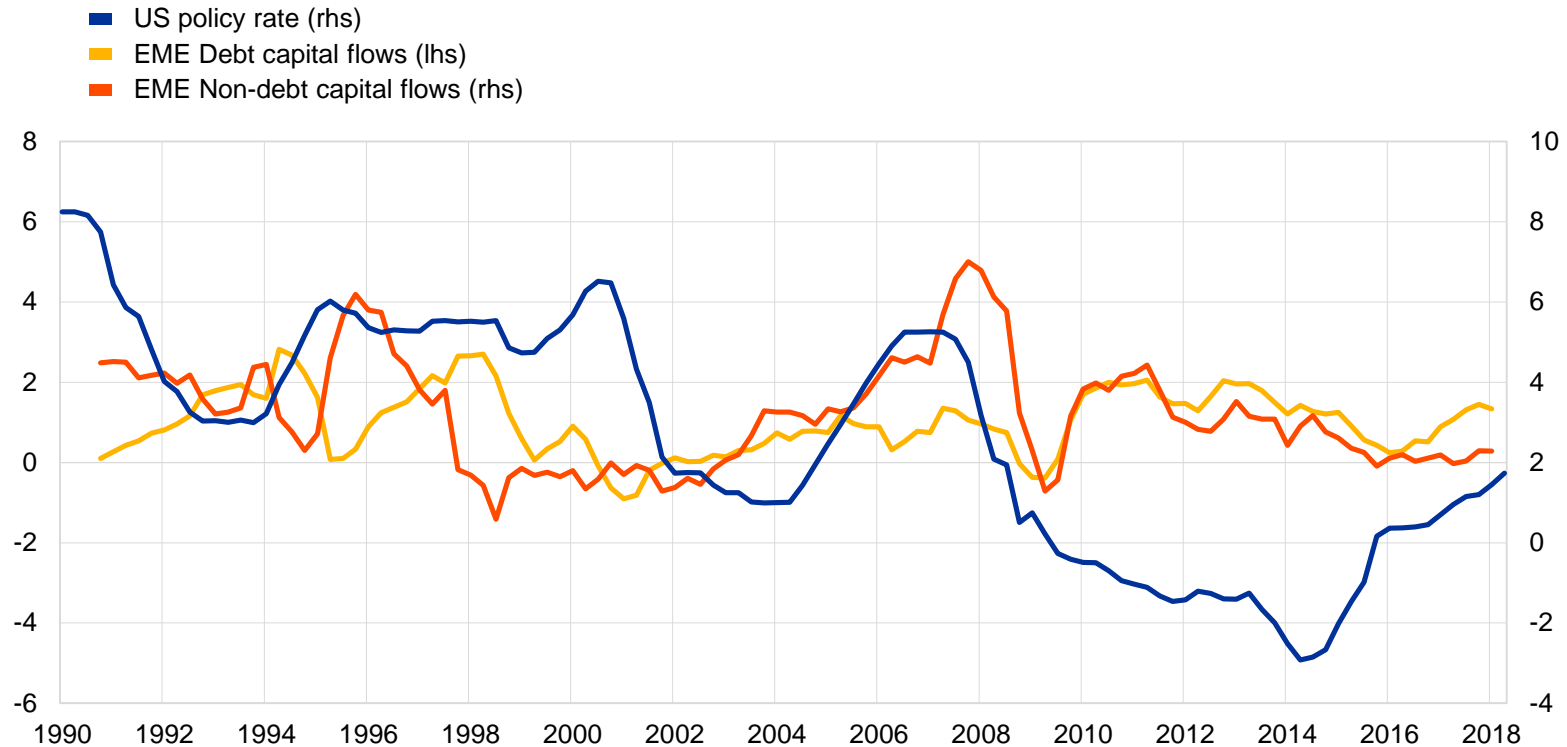
Sources: Haver Analytics and ECB staff calculations.

Notes: Changes in reserves (-), exchange rates (-) and policy rates (+) are standardized by the 2 year rolling average standard deviation. An increase in the index implies depreciation pressure on the currency. The index is constructed as a PPP GDP weighted average of EM countries. Not all countries are available throughout the sample. The series displayed is the 6-month moving average of the index. US policy rate is shown as the Federal Funds rate extended using the Wu-Xia shadow rate in the period between 2009-2015.

Country sample: Brazil, Chile, Czech Republic, Hungary, Indonesia, Malaysia, South Korea, Mexico, Philippines, Poland, Romania, Russia, South Africa, Thailand and Turkey.

Fed fund rate loosely correlated with capital flow to EMEs

Emerging markets capital inflows vs US policy rate
(quarterly data, in % of GDP (lhs), in percent (rhs))

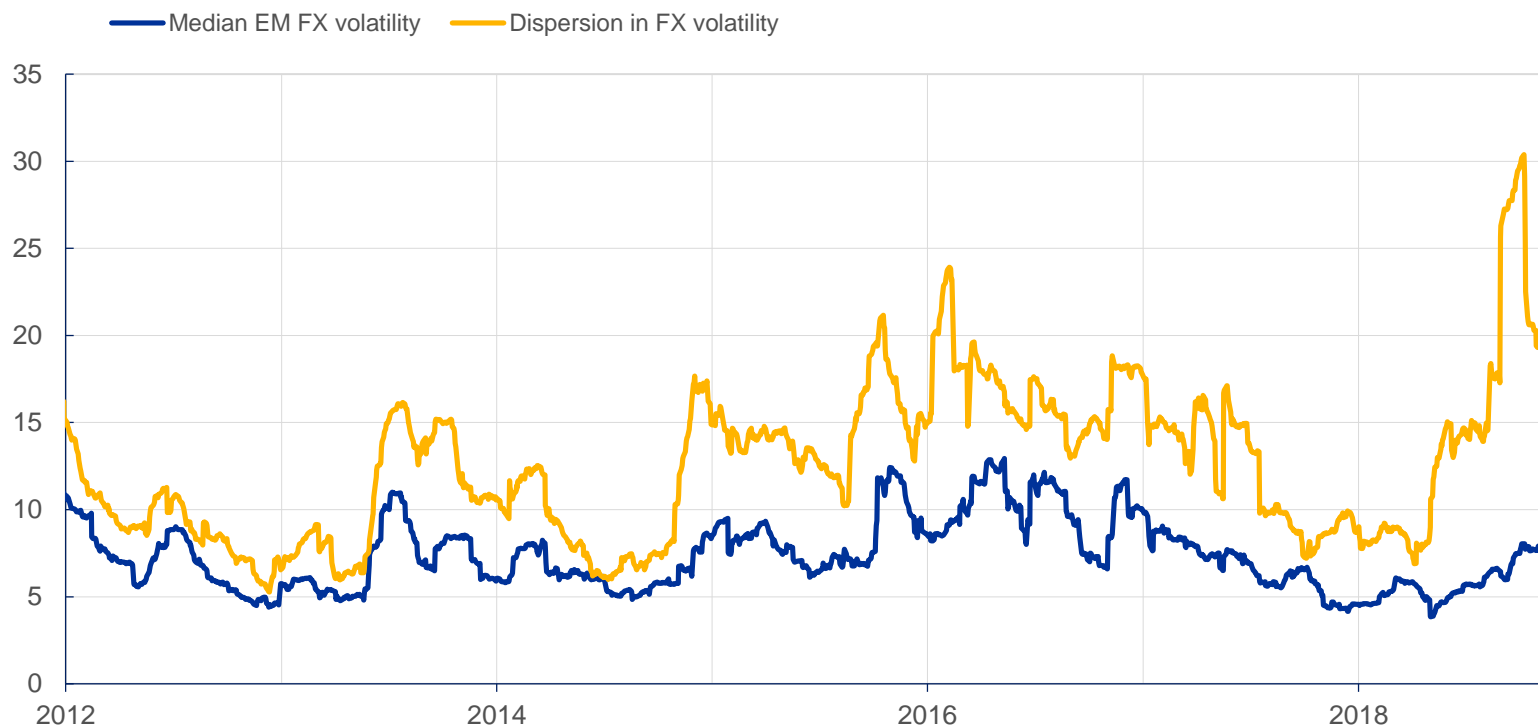


Sources: Haver Analytics, IMF Balance of Payments Statistic and ECB staff calculations.

Notes: Capital inflows refer to net purchases of domestic assets by foreign investors. Non-debt flows include equity portfolio investments and other investments. Capital flows in the chart are calculated as the 4-quarters moving average. US policy rate is shown as the Federal Funds rate extended using the Wu-Xia shadow rate in the period between 2009-2015.

Country sample: Brazil, Chile, Czech Republic, Colombia, Hungary, Indonesia, Malaysia, South Korea, Mexico, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand and Turkey.

EM Currency Volatility (median and dispersion, in percentage points)



Sources: Bloomberg and ECB staff calculations.

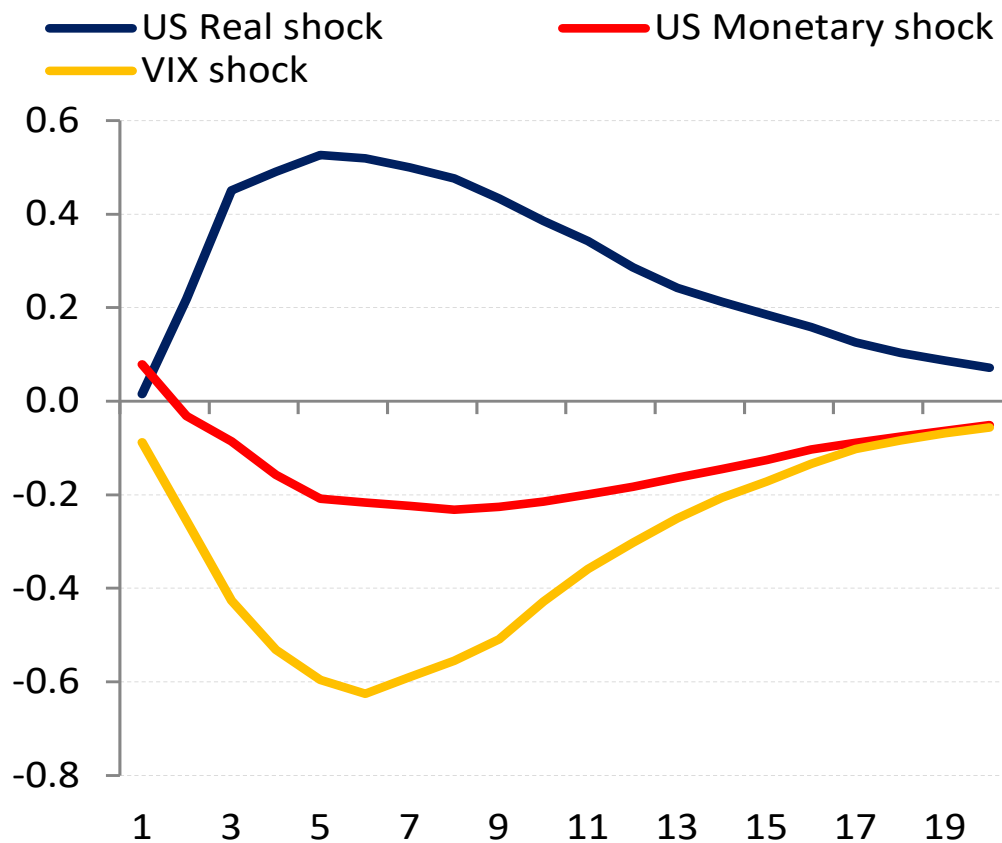
Notes: Two-month historical volatility with respect to USD. Dispersion is calculated as the difference between the 90th and 10th percentiles.

Country sample: TUR, ARG, BRA, CHL, COL, PER, MEX, ZAF, NIG, EGY, CHN, IND, IDN, MYS, PHL, THA, RUS.

Latest observation: 21/11/2018.

Higher demand in ADV positive for EME despite interest rates

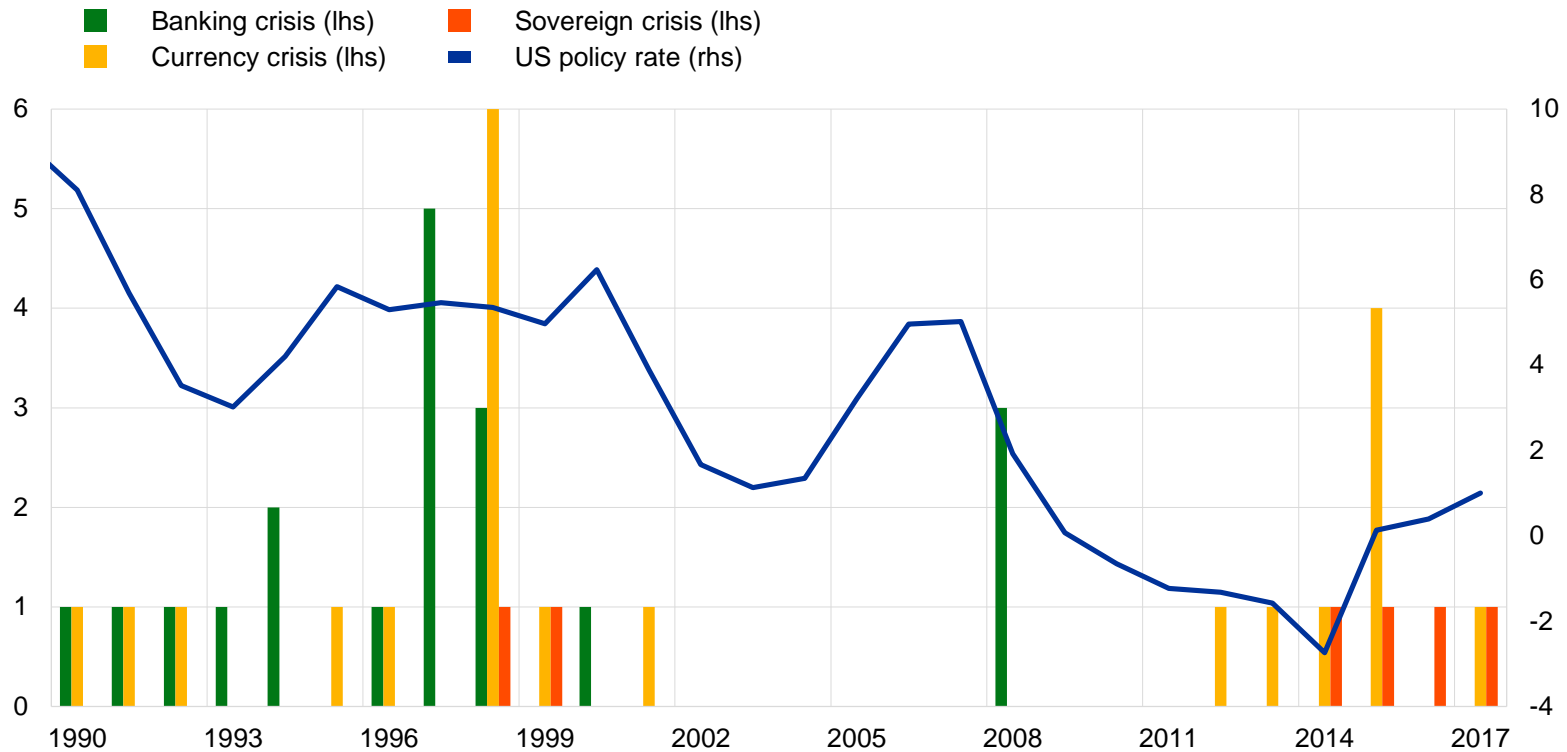
Impulse response of EME industrial production to US shocks from a BVAR
(median impulse responses of year-on-year growth in EME industrial production to US shocks)



US shocks identified using a SVAR with sign restrictions are incorporated as exogenous regressors in BVARs for 16 large emerging economies. The BVAR models are estimated separately for each EME with monthly data from 2000-2014 and include a measure of global uncertainty (the VIX) and EME country-specific variables – industrial production, the nominal effective exchange rate, stock prices and 10-year bond yields. Spillovers are evaluated by examining impulse responses to US real and monetary shocks.

Still, no reason to relax

Emerging markets crises vs US policy rate (number of crises (lhs), in percent (rhs))



Source: Haver Analytics, Laeven and Valencia (2013) and ECB staff calculations

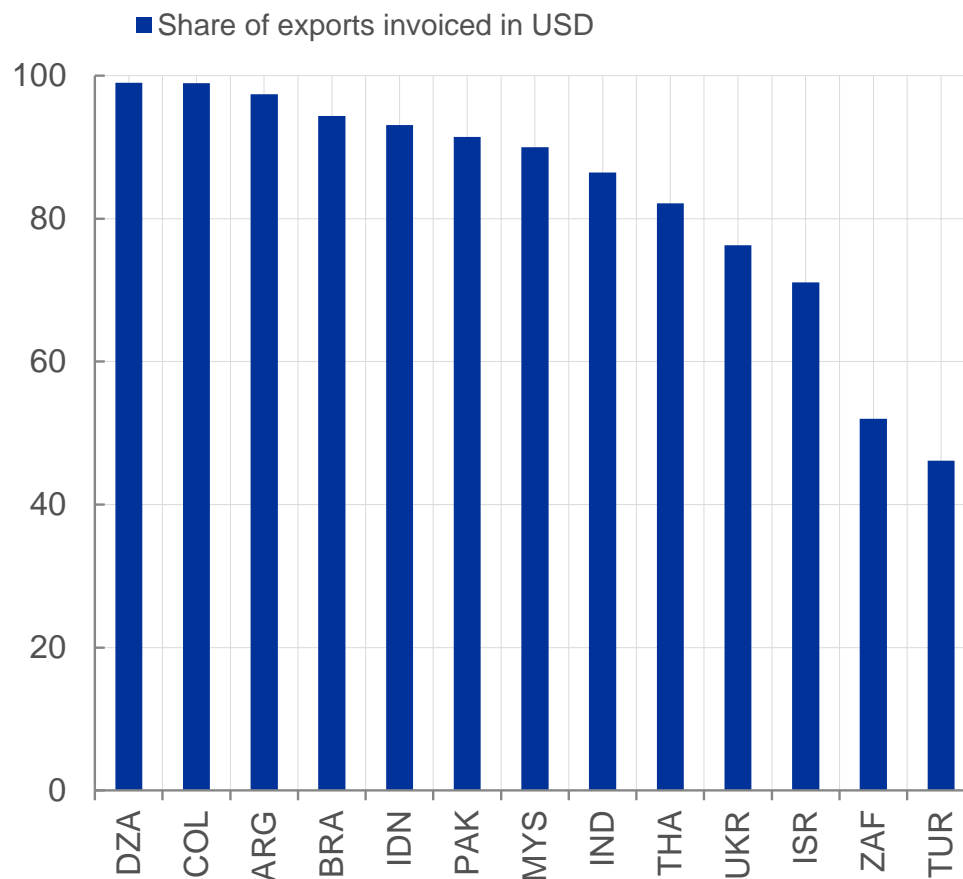
Notes: the chart shows the number of crises for 20 selected major EMEs based on the methodology of Laeven and Valencia(2013), data are available up to 2017. US policy rate is shown as the Federal Funds rate extended using the Wu-Xia shadow rate in the period between 2009-2015.

Country sample: Brazil, Chile, Czech Republic, Colombia, Hungary, Indonesia, Malaysia, South Korea, Mexico, Peru, Philippines, Poland, Romania, Russia, South Africa, Thailand and Turkey.

Are EMEs still vulnerable?

- Fundamentals have generally improved since the Asian crisis
 - More credible fiscal, monetary and macro-prudential policies
 - Lower inflation
 - Improved reserve adequacy in most EMEs
- However, vulnerabilities still exist
 - Rotation from external to domestic vulnerabilities (e.g. credit-to-GDP gap in China)
 - USD gross financial liabilities still high, in particular corporate debt
 - Invoicing of exports in USD (dominant currency)

Share of exports invoiced in USD (percent)

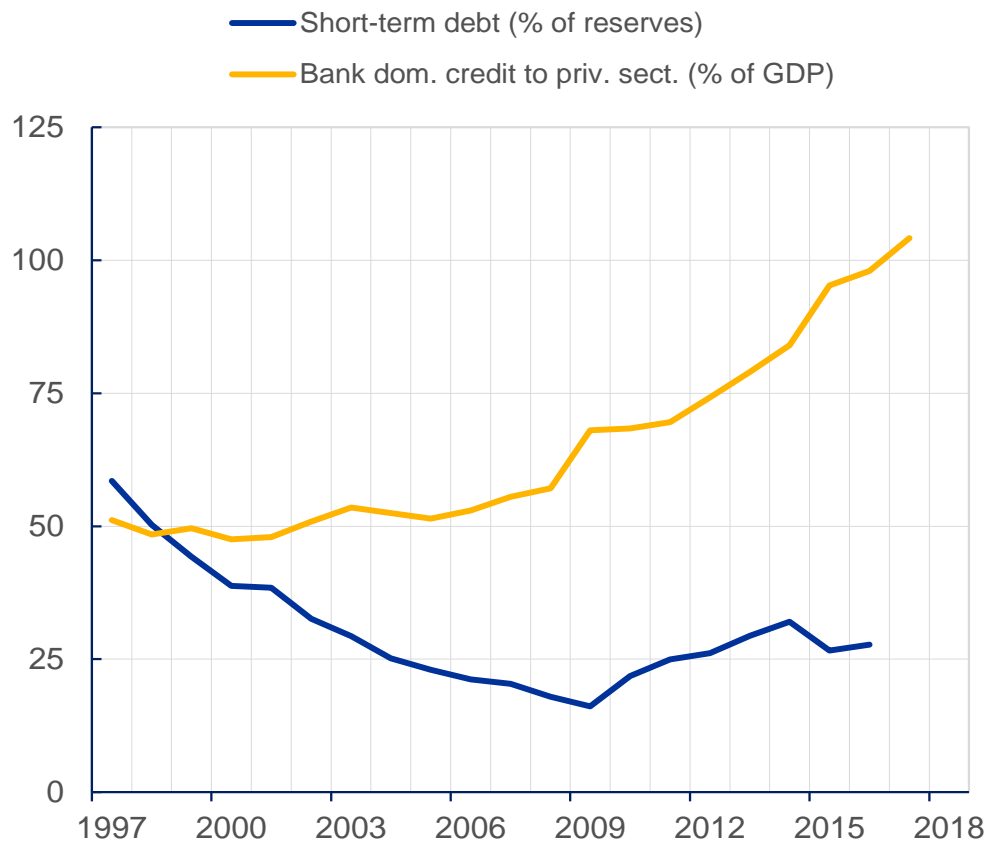


Sources: Gopinath (2015) - *The international price system*.

Notes: Average values since 1999 or earliest data available. The chart shows all emerging market economies with available data. DZA - Algeria, ISR - Israel, UKR - Ukraine, PAK - Pakistan.

Rotation from external to domestic vulnerabilities

Short-term external debt and credit to the private sector in EMEs (in percent of reserves and of GDP)



Source: World Bank World Development Indicators.

Notes: EME figures refer to the aggregate "Middle Income Countries" as defined by the World Bank.

Latest observation: 2017.

Differentiated EME policy responses

Country/Policy action	Monetary policy	Forex intervention	Fiscal Policy	Trade (tariff and non-tariff)	Macro-prudential policies
China	↓		✓	✓	
India	↑	✓	✓	✓	
Turkey	↑	✓			✓
Mexico	↑				
Argentina	↑	✓	✓		✓
Brazil		✓			

Source: ECB.

Notes: In the case of Turkey, the CBRT intervened via the derivatives market.

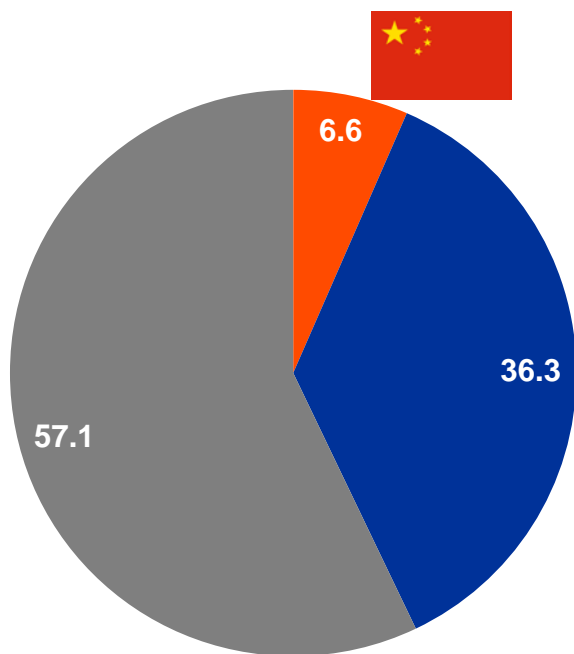
Latest observation: 2017.

EMEs are much larger now than in the Asian crisis

Shares of world PPP GDP
(in percent)

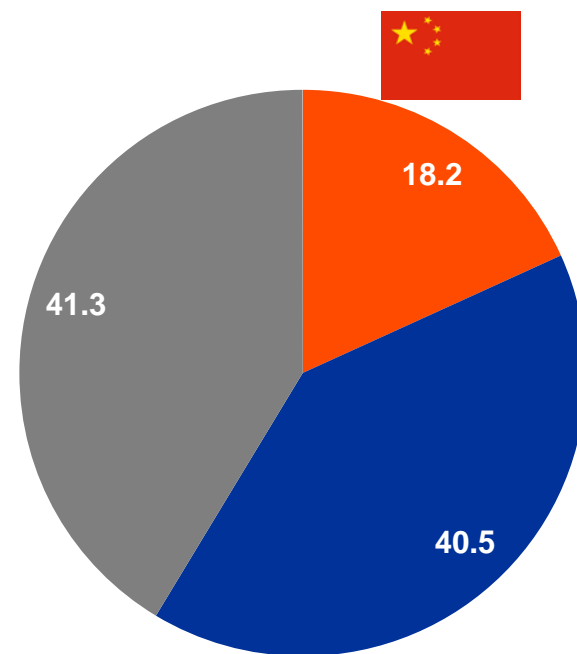
1997

- China
- Emerging and developing economies excl. China
- Rest of the world



2017

- China
- Emerging and developing economies excl. China
- Rest of the world



Sources: IMF World Economic Outlook, October 2018.

- Forthcoming ECB Discussion Paper (Ca' Zorzi et al, 2019): compares the international spill-overs of Fed and ECB monetary policy shocks (high frequency identification a-la Gertler-Karadi)
 - US shocks have more international spill-over
 - In particular through the financial channel
 - ECB spill-overs not negligible (also to EME) through trade links