Mikael Juselius

Dora Xia

mikael.juselius@bis.org

dora.xia@bis.org

Monetary responses to external shocks in emerging market economies: the role of financial vulnerabilities[1]

We examine how reliance on external funding and foreign exchange (FX) market depth shape monetary policy responses to external shocks in emerging market economies (EMEs) with floating exchange rate arrangements. Using a panel of EMEs, we document that central banks in economies with both high external foreign currency debt and shallow FX markets move their policy rates in step with US monetary policy surprises. Notably, these countries show smaller exchange rate moves compared with other countries, consistent with the policy actions dampening FX fluctuations. Other economies, including those with larger external local currency debt, do not display these patterns. We also find that EMEs with shallow FX markets tend to deploy FX intervention following US monetary policy surprises.

JEL classification: E58, F41, F42

Reliance on external financing can complicate monetary policy in emerging market economies (EMEs) via its effects on exchange rates. This is because the standard textbook prescription – that floating exchange rates can absorb the external spillovers, leaving monetary policy free to respond to output and inflation – does not necessarily hold when underlying financial market frictions amplify the destabilising macroeconomic effects of external shocks (Basu et al (2025)). In this case, the appropriate policy response can differ from the textbook one and may be complemented by other instruments that are tailored to address specific exposures and vulnerabilities (BIS (2019, 2023); IMF (2020)).[2]

Two key financial frictions can weaken or even reverse standard monetary transmission in EMEs: shallow foreign exchange (FX) markets and limits on external borrowing. For countries reliant on external financing, shallow FX markets make it difficult for EME borrowers and global lenders to effectively hedge currency exposures, resulting in currency mismatches that directly affect balance sheets. In turn, balance sheets constrain borrowing capacity. Together, these two frictions create a feedback loop that amplifies the impact of exchange rate movements on

---

[2] See also Brandão-Marques et al (2021) and Gelos and Sahay (2023).

Key takeaways

- *EME monetary policy responses to external shocks are shaped by reliance on external funding and FX hedging market depth.*

- *EMEs with higher foreign currency debt and less developed FX markets tend to move their interest rates in step with monetary surprises in the United States, whereas other countries do not.*

- *EMEs with higher foreign currency debt and shallower FX markets exhibit smaller FX moves in response to foreign monetary policy surprises, consistent with policy actions dampening FX fluctuations.*

financial conditions. A concrete example is when EME borrowers hold unhedged foreign currency liabilities. If the local currency depreciates, the domestic value of those liabilities rises, reducing borrowers' net worth and tightening credit limits. Similar channels operate on the supply of credit, via global banks (Bruno and Shin (2015)) and global portfolio investors (Carstens and Shin (2019)). When these channels are sufficiently strong, a reduction in the domestic policy rate can tighten financial conditions and even become contractionary, as it is accompanied by currency depreciation.

Although the mechanisms through which external shocks affect EMEs are well mapped out, far less is known about how EME policymakers respond in practice.[3] Such responses offer important clues about the constraints, priorities and trade-offs they face. Evidence to date suggests responses are varied and depend on the context. Mano and Sgherri (2024) examine how EME policy rates, FX interventions and exchange rates react to capital flow shocks. They find mixed policy responses across countries and present tentative results that choices reflect country-specific vulnerabilities. Mendoza-Fernández and Pelin (2025) study EME reactions to US monetary shocks and find that central banks move rates in the same direction as the shock.[4] They connect this reaction to import price pass-through to inflation.

In this article, we study how high exposure to foreign liabilities and shallow FX markets in EMEs shape the monetary policy response to external financing shocks. These aspects have not been explicitly incorporated in previous studies.[5] While we do not directly discuss trade channels, we take them into account in our estimations.

We document that both large external liabilities and shallow FX markets are crucial for understanding EME policy responses to external financial shocks. Economies exhibiting both vulnerabilities tend to move policy rates even more than one for one in the same direction as the US monetary policy surprise, whereas others do not. Moreover, economies with shallower FX markets additionally use FX interventions to provide liquidity to thin markets and to dampen excessive and

---

[3] By contrast, spillover effects on macro-financial outcomes are extensively documented; see Claessens et al (2016) and Kearns et al (2023), and references therein.

[4] This aligns with Calvo and Reinhart (2002) on "fear of floating", whereby interest rates are used to dampen exchange rate volatility. Related work estimates Taylor-type rules to test similar hypotheses, eg Montes and Ferreira (2020) and De Leo et al (2024).

[5] Our analysis is close to Mendoza-Fernández and Pelin (2025) in terms of methodological design, as we use US monetary shocks as a proxy for exogenous external financing shocks. In line with Mano and Sgherri (2024), we consider the mix between interest rates and FX interventions in the responses.

destabilising currency fluctuations, regardless of the level of their foreign debt exposures.

External liabilities and monetary policy transmission

In this section, we examine how the structure of foreign borrowing can complicate monetary policy in EMEs via the exchange rate. A key challenge is that when EME central banks adjust the policy rate in response to external shocks, the outcome can be the opposite of what standard textbook prescriptions would suggest, depending on which transmission channels dominate. For instance, lowering rates to support demand can instead lead to an exchange rate depreciation that tightens financial conditions and reduces demand, as discussed in detail below. In these circumstances, monetary policy may need to move rates in the same direction as the shock or rely on complementary tools, such as FX interventions and macroprudential policies, to support demand and stabilise financial conditions (BIS (2019)).

Two underlying market frictions are pivotal in reversing the traditional monetary policy transmission (Basu et al (2025)).[6] The first is shallow FX markets. External financing often creates currency mismatches, on either borrowers' balance sheets (eg an EME corporate borrowing in foreign currency) or lenders' balance sheets, such as foreign investment in local currency bonds. When FX markets are shallow, hedging instruments are limited and costly, making effective hedging impractical and leaving currency mismatches remaining on the balance sheets. The second friction is that EME borrowing is limited by the balance sheet strength of these borrowers and lenders. As their balance sheets deteriorate, their capacity to borrow or lend is curtailed. Together, these two frictions link financial conditions to the exchange rate. Specifically, depreciation weakens balance sheets, tightens financial conditions and reduces demand, while appreciation has the opposite effect. As EME monetary policy loosening commonly gives rise to EME currency depreciation, the subsequent tightening of financial conditions can counteract its usual expansionary effects.

The literature has identified several specific transmission channels depending on whose balance sheets are exposed to currency mismatches. While the two frictions above underpin all of them, they have different implications for our empirical setup. We discuss each in turn.

One channel arises when EME borrowers borrow in foreign currency – either because they cannot issue in local currency (the "original sin" of Eichengreen and Hausmann (1999)) or because they opt to borrow in foreign currency. This involves mismatches on their balance sheets, where foreign currency liabilities are paired with local currency assets.[7] If the currency mismatch cannot be effectively hedged, an exchange rate depreciation, say, would increase the domestic value of these debts, and consequently lower borrowers' net worth. This would lead to higher debt servicing burdens and tighter borrowing limits, both of which reduce demand. EMEs with large (unhedged) liabilities that are denominated in foreign currency should be more vulnerable to this channel.

---

[6]   Checo et al (2024) find that domestic monetary policy shocks in EMEs are transmitted in the same way as in advanced economies. For instance, monetary loosening is expansionary.

[7]   Céspedes et al (2004), Cook (2004), Gourinchas (2018) and Akıncı and Queralto (2024) study the theoretical underpinnings of this channel.

Deterioration of borrowers' balance sheets can also affect the supply of credit from global lenders. The reason is it increases exposures to credit risk for global banks which respond by reducing lending and raising spreads. This impact is known as the financial channel of the exchange rate (Bruno and Shin (2015)). Disentangling this channel requires data on foreign currency loans by global banks and associated credit spreads.

Yet another mechanism arises from unhedged positions of global portfolio investors who hold local currency assets while leaving currency risk unhedged. When EME currencies depreciate, there is an amplification of any losses on these assets in foreign currency terms. The investor loses both from the decline of asset values in local currency terms and the depreciation of the local currency. Such episodes are associated with portfolio outflows from EMEs and tightening of local financial conditions. This dynamic can create a self-reinforcing loop between deteriorating financial conditions and further EME currency depreciation. Carstens and Shin (2019) lay out the details of this channel, which they refer to as "original sin redux". EMEs with a large amount of local currency bonds held by foreigners should be more exposed to this channel. As before, hedging would in principle help mitigate it, but shallow FX markets and elevated hedging costs make this difficult in practice.

Some channels also reinforce the normal textbook monetary policy transmission via the exchange rate. For instance, some EMEs are increasingly investing in foreign currency-denominated assets. When these exposures are unhedged, exchange rate moves reinforce domestic monetary transmission: a policy rate cut that leads to a currency depreciation raises the local currency value of foreign assets, strengthening EME investors' balance sheets and expanding their domestic credit supply (Shin et al (2025); Juselius et al (2025)). This is original sin redux, but in reverse with EMEs and advanced economies switching net lender and borrower positions.[8]

In sum, the balance between different channels determines how changes in domestic policy rates are transmitted to the economy and therefore affects how central banks respond to external shocks. Generally, EMEs that are more exposed to unhedged foreign funding and where FX markets are less developed face greater challenges in countering the impact of external financing shocks on output and inflation. In contrast, transmission is more straightforward in EMEs with deeper FX markets and greater foreign assets. All these considerations have implications for our empirical setup, which we discuss next.

EME policy responses to foreign monetary shocks

We now turn to data to explore if actual EME monetary policy reactions depend on the channels described above. To this end, we have collected measures for: (i) the policy instruments; (ii) external financing shocks; (iii) exposures to currency mismatch from foreign funding and FX market depth; and (iv) controls and other outcome variables.

The policy instruments that we consider are the policy rate and FX interventions. The policy rate is available at a daily frequency. Because accurate FX intervention

---

[8] In addition, the exchange rate also affects trade and imported inflation, both of which matter for the inflation output trade-off facing EME central banks. The strength of transmission depends on whether exports and imports are priced in local currency or not (Gopinath et al (2020)).

measures are hard to obtain, we use the proxy developed by Adler et al (2021) based on changes in central bank reserves adjusted for valuation effects, income flows and changes in other foreign currency balance sheet positions. These data are only available at a monthly frequency.

For the external financing shocks, we use observations of US monetary policy surprises based on high-frequency asset price changes in narrow windows around Federal Open Market Committee (FOMC) announcements from Bauer and Swanson (2023). The surprises have been purged from variation in standard US macroeconomic and financial indicators. They are therefore unlikely to be influenced by common business cycles that would naturally lead to co-movement between US and EME policy rates.

To assess currency mismatch exposure, we rely on variables relating to external portfolio debt liability. Over time, EMEs have increased portfolio debt liabilities relative to GDP and as a share of overall debt financing (Graphs 1.A and 1.B). We use net (rather than gross) liabilities, as foreign assets provide a natural cushion.[9] We distinguish between US dollar-denominated portfolio debt (UPD), capturing the mismatch faced by EME borrowers and therefore the channel related to original sin, and local currency portfolio debt (LPD) held by foreign investors, capturing original sin redux, respectively. While foreign-currency debt still dominates, the local currency share has risen in several countries (Graph 1.C).[10]

EMEs have increased reliance on external funding, led by bond market financing Graph 1

A. Portfolio debt liabilities/GDP

B. Portfolio debt liabilities/total debt liabilities[1]

C. Share of foreign currency in portfolio debt liabilities[2]
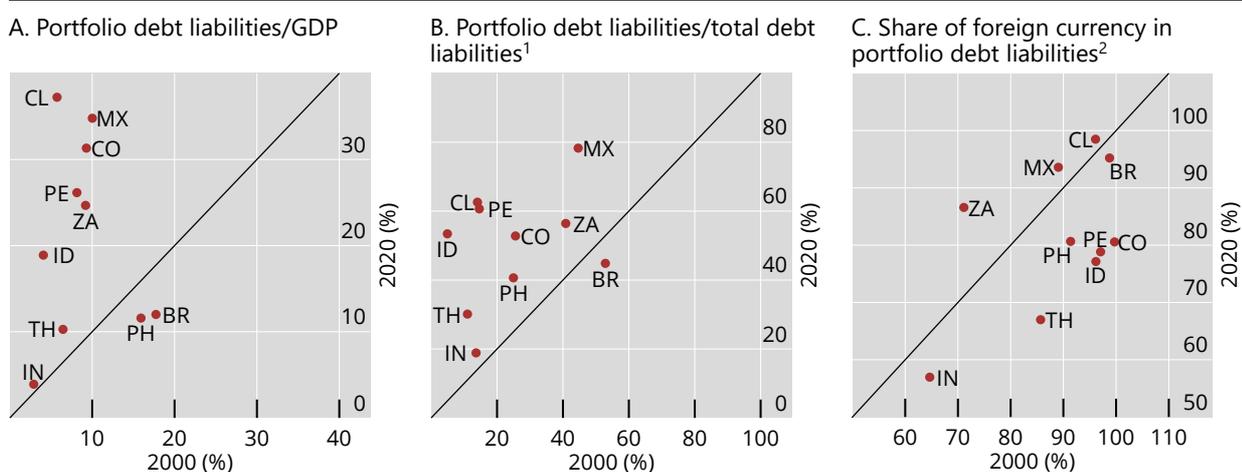
[1] Sum of portfolio debt liabilities and other investment liabilities (such as loans, deposits and trade credits). [2] Assumes the currency composition of portfolio debt liabilities is the same as that of total debt liabilities.

Sources: Allen et al (2023); Lane and Milesi-Ferretti (2018), updated in January 2026.

---

[9] The cushion, however, can be limited if the entities with the liabilities cannot freely transfer currency risk with the entities holding the assets.

[10] We set aside the credit supply channel given gaps in cross-border bank loan data for certain countries in the initial years of our sample.

We proxy FX market depth by the one-year rolling median bid-ask spread on the FX spot rate (FXS). A higher spread implies less liquid FX markets. Although cruder than order book-based metrics, spread data are easier to obtain for many EME currencies.[11]

Given the centrality of the exchange rate for the overall policy transmission, we also check how the different channels affect the exchange rate itself. For this, we use daily bilateral exchange rates between the United States and the EMEs in our sample. Finally, in our statical analysis we control for exports, imports, GDP growth and inflation.

Our sample comprises 10 EMEs – Brazil, Chile, Colombia, India, Indonesia, Mexico, Peru, the Philippines, Thailand and South Africa – and spans January 2000 to January 2020. These EMEs are classified with free-floating or floating exchange rate regimes.[12],[13] While exchange rates are largely market-determined in these countries, FX interventions can be undertaken in particular situations. The sample ends in January 2020 due to limited availability of currency composition data for external portfolio debt thereafter.

Statistical framework

We use local linear projections to assess the response of EME policy rates to advanced economy monetary policy surprises. The method provides a straightforward statistical way of tracing how a shock propagates to other variables over time. For a given horizon, h, we run a regression of the future change in the outcome – EME policy rates in our case – on the shock:

$$z_{i,t+h} - z_{i,t-1} = \beta_h \cdot mp_t^{AE} + \gamma \cdot x_t + \vartheta_{i,t,h},$$

where $z_{i,t}$ denotes the policy rate of EME i at day t, mp_t^{AE} is the US monetary policy surprise at day t, x_t collects our control variables, which we discuss below, and $\vartheta_{i,t,h}$ is the error term. For each horizon h, the estimate β_h traces how the change in the policy rate responds to a normal US monetary policy surprise. We set $h = 28$ days to allow time for EME policymakers to set the rates following the US announcement.[14]

We build on the baseline specification to test whether countries that have a large currency mismatch or shallow FX markets exhibit higher pass-through of US monetary policy surprises. Specifically, we construct a dummy variable $I_{i,t}^k$ that

---

[11]   As a robustness check, we proxy the ease of managing currency mismatches for each EME currency with FX derivatives turnover and obtain similar results.

[12]   Floating regimes are ones where the exchange rate is de facto largely market-determined (Habermeier et al (2009)). If there has been no intervention over the past six months, except for limited intervention to address disorderly market conditions, the regimes are further classified as free-floating.

[13]   We start with a broad list of 23 EMEs with reliable daily data on policy rate and exchange rate (Algeria, Argentina, Brazil, Chile, China, Colombia, Hungary, Indonesia, India, Kuwait, Morocco, Mexico, Malaysia, Peru, the Philippines, Poland, Romania, Saudi Arabia, South Africa, Thailand, Turkey, the United Arab Emirates and Vietnam). We then narrow the sample by excluding countries that are classified as floaters or free floaters less than 80% of the time. We also exclude central and eastern European EMEs, which are more closely tied to the euro area.

[14]   Mendoza-Fernández and Pelin (2025) document that 80% of non-US central banks already hold their first scheduled policy meeting within 14 days of an FOMC announcement.

indicates if EME i has above-median exposure to measure $k = $ UPD, LPD, FXS at time t, and interact it with the shock:

$$z_{i,t+h} - z_{i,t-1} = \beta_h^{k,L} \cdot (1 - I_{i,t}^k) \cdot mp_t^{AE} + \beta_h^{k,H} \cdot I_{i,t}^k \cdot mp_t^{AE} + \gamma \cdot x_t + \vartheta_{i,t,h}.$$

where $\beta_h^{k,L}$ is the reaction of the less exposed economies, and $\beta_h^{k,H}$ is the response of the highly exposed economies. We expect $\beta_h^{k,H}$ to be larger than $\beta_h^{k,L}$: when vulnerabilities are higher, central banks are more likely to raise policy rates in step with the US.

We also add controls, x_t. These consist of two additional interaction terms similar to the ones above but for countries with above-median export- or import-to-GDP ratios at time t. This ensures that our estimates are not confounded with trade channel effects. We also include lags of inflation and GDP growth to control for the macroeconomic environment in each EME.[15]

We further augment the specification to test if exposure to both external liabilities and FX spreads simultaneously determine central bank responses, as theory would suggest. In this case, we define indicators, $I_{i,t}^{j,c}$, for the four cases c: low debt, low FX spreads ($L^D L^S$); low debt, high FX spreads ($L^D H^S$); high debt, low FX spreads ($H^D L^S$); and high debt, high FX spreads ($H^D H^S$), and run the regressions:

$$z_{i,t+h} - z_{i,t-1} = \sum_c \beta_{j,c} \cdot I_{i,t}^{j,c} mp_t^{AE} + \gamma \cdot x_t + \vartheta_{i,t,h}.$$

where $j = $ UPD, LPD. In this case, $\beta_{j,c}$ gives the responses in each case.

Policy rate responses

On average, EMEs tend to adjust their policy rates in the same direction as US monetary policy surprises (Graph 2.A, red bar). The pass-through is about 60% (Graph 2.A), similar to that reported by Mendoza-Fernández and Pelin (2025). However, this average response is not statistically significant.

Economies with larger external US dollar-denominated bond portfolios show higher pass-through, roughly moving their policy rates one for one with the US policy rate shock (Graph 2.A). By contrast, countries with lower dependence on US dollar funding do not appear to adjust their policy rates at all to US rate shocks. These patterns are consistent with exchange rate fluctuations playing a greater role in shaping financial conditions in more dollar-dependent economies due to the channel related to original sin, prompting central banks to counter local currency depreciation more actively.

A country's FX market depth also shapes the central bank's response. Countries with less liquid FX markets tend to track the US policy rate more closely than their peers (Graph 2.B). In fact, when we interact external US dollar bond exposure with FX market liquidity, we find that it is countries with *both* high US dollar debt and illiquid FX markets that tend to follow the US policy rate more systematically, with an estimated pass-through approaching twice the US policy rate change (Graph 3.A).[16] By contrast, in countries with higher debt but more liquid FX markets, or with less

---

[15]   Our results are robust to additional controls, including the distance from the capital city to Washington DC, and bilateral trade with the United States (imports and exports) scaled by GDP.

[16]   Larger than one-for-one responses are consistent with regimes of imperfect monetary credibility or sudden-stop risk (Montes and Ferreira (2020); Mendoza (2010)), which may necessitate more forceful policy-rate adjustments to anchor inflation or prevent financial turmoil.

EMEs with higher external US dollar debt or less developed FX markets tend to track the US monetary policy rate more closely[1]

In percentage points Graph 2

A. By external US dollar portfolio debt

B. By FX bid-ask spread

C. By external local currency portfolio debt
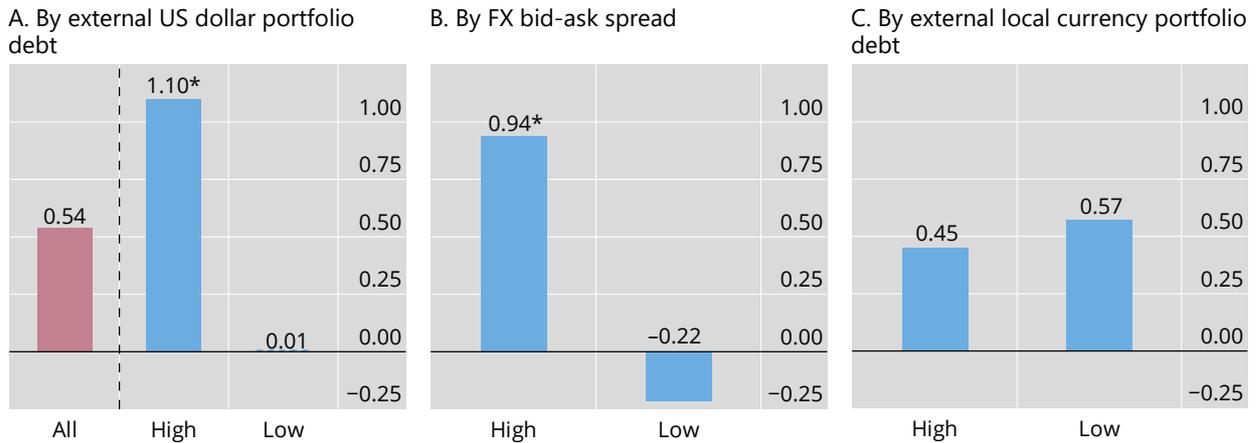
[1] The bars show the change of policy rate after four weeks in response to a US monetary policy surprise corresponding to a 100 basis point increase in the US policy rate. For instance, a 1 percentage point increase in foreign rates increases EME policy rates by approximately 0.5 percentage points on average, while a similar sized easing surprise reduces EME rates by the same amount. ***/**/* denotes statistical significance at the 1/5/10% level. Countries are classified as high/low if the value of the relevant variable is above/below median.

Sources: Allen et al (2023); Bauer and Swanson (2023); Lane and Milesi-Ferretti (2018), updated in January 2026; Bloomberg; authors' calculations.

liquid FX markets but lower debt, central banks do not move rates in tandem with the United States. This pattern suggests complementary roles for external financing and exchange rate market frictions in amplifying the influence of exchange rates on policy responses in EMEs.
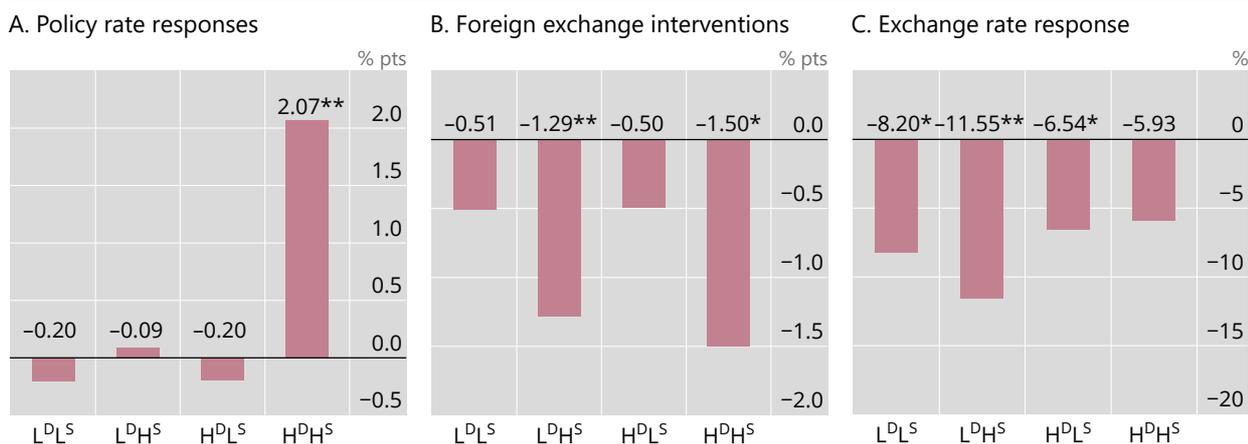
Interestingly, larger exposure to externally held local currency-denominated bond portfolios (original sin redux channel) does not go hand in hand with greater pass-through. Specifically, both high and low (LPD) countries have pass-throughs that are close to the panel average and statistically insignificant (Graph 2.C). The difference between them is also insignificant. One possible explanation is that global investors' appetite for a given EME is closely linked to their appetite for EME assets as a whole, which tends to wax and wane with the broad dollar index rather than any bilateral exchange rate. Because an individual EME can at most influence its own bilateral rate, the policy payoff from raising rates to retain global investor interest is probably limited. Accordingly, in these cases EME central banks may place less priority on curbing exchange rate fluctuations.

FX interventions

FX intervention offers an additional tool – alongside interest rate adjustments – for responding to foreign monetary policy surprises. By selling FX reserves to support the domestic currency, central banks can lean against excessive local currency depreciation, mitigating the financial tightening associated with weaker exchange rates. How desirable and effective interventions are, however, varies across circumstances. For example, countries with shallow FX markets may have a greater need to provide liquidity to limit excessive exchange rate volatility in times of adverse

Countries with high external US dollar debt combined with less developed FX markets see stronger policy responses and smaller currency fluctuations[1]

Graph 3

A. Policy rate responses

% pts

			2.07** — 2.0
			1.5
			1.0
			0.5
−0.20	−0.09	−0.20	0.0
			−0.5

$L^D L^S$ $L^D H^S$ $H^D L^S$ $H^D H^S$

B. Foreign exchange interventions

% pts

−0.51	−1.29**	−0.50	−1.50*	0.0
				−0.5
				−1.0
				−1.5
				−2.0

$L^D L^S$ $L^D H^S$ $H^D L^S$ $H^D H^S$

C. Exchange rate response

%

−8.20*	−11.55**	−6.54*	−5.93	0
				−5
				−10
				−15
				−20

$L^D L^S$ $L^D H^S$ $H^D L^S$ $H^D H^S$

L^D/H^D = low/high external US dollar debt; L^S/H^S = low/high FX market spreads.

[1] The bars show the response of the policy rate, foreign exchange intervention and exchange rate after four weeks to a US monetary policy surprise corresponding to a 100 basis point increase in the US policy rate. ***/**/* denotes statistical significance at the 1/5/10% level. Countries are classified as high/low if the value of the relevant variable is above/below median.

Sources: Adler et al (2023); Allen et al (2023); Bauer and Swanson (2023); Lane and Milesi-Ferretti (2018), updated in January 2026; Bloomberg; authors' calculations.

external shocks.[17] Moreover, in such markets intervention can be relatively effective at improving market liquidity and is likely to deliver a larger price impact for a given intervention size in the short run.

We apply our statistical framework to assess FX intervention responses to US monetary surprises, replacing the change in the policy rate with our measure of FX intervention. As the data are monthly, we focus on intervention in the month after each FOMC announcement.

We find that EMEs, on average, deploy FX intervention in response to US monetary policy surprises (Graph 4.A). They tend to sell FX after policy tightening (to counter local currency depreciation) and buy FX after easing (to counter appreciation).
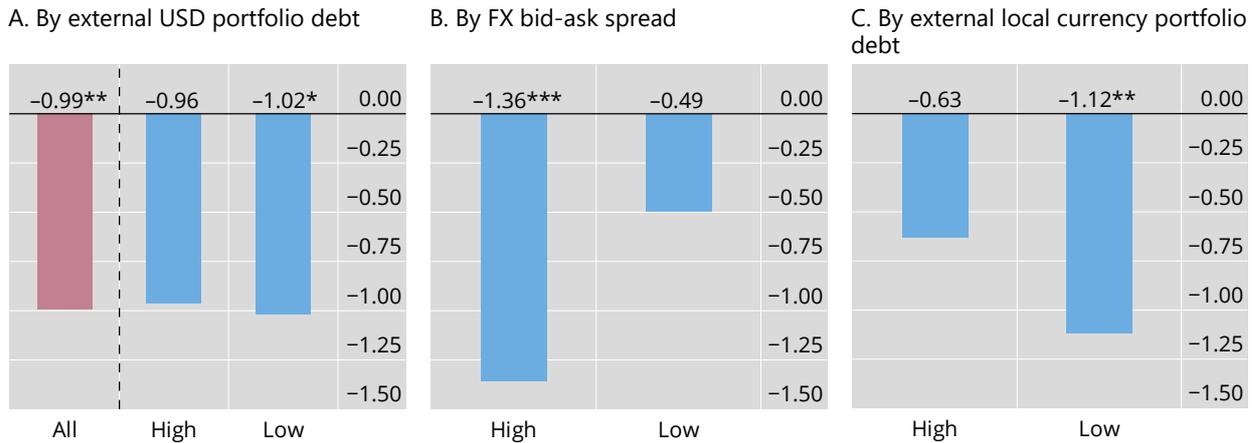
This systematic reaction is most prominent in countries with thin FX markets. Responses in such countries are more than twice as large relative to their peers – and statistically significant (Graph 4.B). In contrast to the policy rate response, whether a country has high or low external debt, including in US dollars, does not appear to materially affect central banks' decision to intervene (Graphs 4.A and 4.C; Graph 3.B). These results suggest that central banks consider not only the need but also the desirability and expected effectiveness of intervention when deploying it to ensure orderly market functioning and limit excessive exchange rate fluctuations.

[17] Using a recent survey of 21 EME central banks, Cavallino and Patel (2019) document that restricting exchange rate volatility and providing market liquidity are seen as important immediate objectives. The central banks find that FX interventions are mostly effective for up six months, but not beyond.

EMEs with less developed FX markets tend to deploy larger FX interventions following US monetary policy surprises[1]

In percentage points   Graph 4

A. By external USD portfolio debt

−0.99**	−0.96	−1.02*	0.00
			−0.25
			−0.50
			−0.75
			−1.00
			−1.25
			−1.50
All	High	Low	

B. By FX bid-ask spread

−1.36***	−0.49	0.00
		−0.25
		−0.50
		−0.75
		−1.00
		−1.25
		−1.50
High	Low	

C. By external local currency portfolio debt

−0.63	−1.12**	0.00
		−0.25
		−0.50
		−0.75
		−1.00
		−1.25
		−1.50
High	Low	

[1] The bars show the FX intervention proxied by the adjusted change in foreign reserves as a share of GDP after one month in response to a US monetary policy surprise corresponding to a 100 basis point increase in the US policy rate. For instance, a 1 percentage point increase in foreign rates decreases EME reserves by approximately 1 percentage point in terms of GDP on average, while a similar sized easing surprise increases EME reserves by the same magnitude. ***/**/* denotes statistical significance at the 1/5/10% level. Countries are classified as high/low if the value of the relevant variable is above/below median.

Sources: Adler et al (2023); Allen et al (2023); Bauer and Swanson (2023); Lane and Milesi-Ferretti (2018), updated in January 2026; authors' calculations.

Exchange rate responses

Exchange rate movements are central to the way EME central banks respond to foreign policy rate surprises through the external financing channel. Our previous results strongly support the notion that EME central banks mitigate the resulting contractionary or expansionary effects of FX moves by using policy rate adjustments and FX intervention. We now study the overall effects on exchange rates themselves, after the deployment of these tools. To do so, we use our empirical framework with the 28-day change in exchange rates on the left-hand side, ie the same horizon at which we assess the policy responses.

EMEs with larger external US dollar debt and thinner FX markets than their peers show equal or slightly smaller exchange rate pass-through after US monetary surprises. Although all EME currencies typically depreciate after a US tightening and appreciate after an easing, we do not observe economically and statistically significant differences between countries (Graphs 5.A and 5.B). Indeed, among countries with both higher external US dollar debt and less liquid FX markets, the average depreciation is the smallest and not statistically significant (Graph 3.C). In contrast, countries with higher external local currency debt tend, on average, to experience more than twice the depreciation (Graph 5.C). These economies are more exposed to the external financing shocks, and their central banks typically neither adjust policy rates nor deploy FX intervention in response to US monetary policy shocks. As a result, they show larger exchange rate adjustment than their peers.

One interpretation of these results is that central banks' response to US monetary policy surprises, either through rate adjustment or FX interventions, helps dampen

EMEs, especially the ones with higher external local currency debt, experience larger currency depreciation after US monetary policy surprises[1]

In per cent Graph 5

A. By external USD portfolio debt

B. By FX bid-ask spread

C. By external local currency portfolio debt
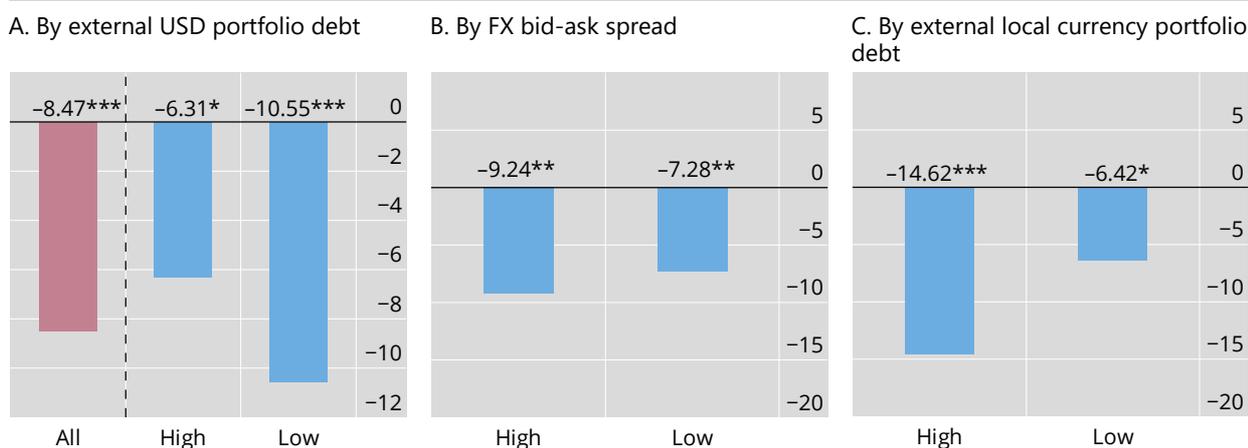
[1] The bars show the log change in exchange rate (quoted as local currency per dollar) after four weeks in response to a US monetary policy surprise corresponding to a 100 basis point increase in the US policy rate. For instance, a 1 percentage point increase in foreign rates approximately leads to a 10% depreciation of EME currencies on average, while a similar sized easing surprise leads to a 10% appreciation of EME currencies. ***/**/* denotes statistical significance at the 1/5/10% level. Countries are classified as high/low if the value of the relevant variable is above/below median.

Sources: Adler et al (2023); Allen et al (2023); Bauer and Swanson (2023); Lane and Milesi-Ferretti (2018), updated in January 2026; Bloomberg; authors' calculations.

exchange rate movements. Absent such responses, these economies would probably face sharper tightening of financial conditions in response to external financing shocks, amplifying local currency depreciation. The similarity in exchange rate outcomes across exposure groups suggests that countervailing policies have mitigated spillovers.

Conclusion

In this article, we investigate how EME central banks respond to US monetary policy shocks. We find that EMEs with large foreign currency liabilities and shallow FX markets tend to adjust policy rates in the same direction as the US shock. When market depth is limited, these economies supplement the rate reactions with FX intervention to provide liquidity and limit excessive and potentially destabilising exchange rate movements. Other economies do not respond strongly on average.

This policy mix appears to dampen excessive currency volatility in vulnerable economies. Exchange rates move more strongly in economies with lower external debt or deeper FX markets in response to US monetary policy shocks. The relative attenuation of exchange rate movements in vulnerable economies is consistent with the policy mix leaning against balance sheet amplification arising from unhedged foreign currency exposures.

Our results highlight that the transmission of monetary policy can change if financial and FX market frictions become too large. Mapping the turning points when this happens can help central banks to identify when to adjust the policy mix, and

where structural measures – such as deepening local FX markets and promoting hedging – yield the largest dividends. A better understanding of these mechanisms can also aid market participants in interpreting policy choices, improving expectations formation and price discovery.

References

Adler, G, K S Chang, R Mano and Y Shao (2021): "Foreign exchange Intervention: a dataset of public data and proxies", *IMF Working Paper*, no 21/47.

Akıncı, Ö and A Queralto (2024): "Exchange rate dynamics and monetary spillovers with imperfect financial markets", *The Review of Financial Studies*, vol 37, no 2.

Allen, M, D Gautam, and L Juvenal (2023): "Currencies of external balance sheets", *IMF Working Papers*, no 237.

Bank for International Settlements (BIS) (2019): *Annual Economic Report 2019*, Chapter II.

——— (2023): *Inflation, external financial conditions and macro-financial stability frameworks in Asia-Pacific*, October.

Basu, S, E Boz, G Gopinath, F Roch and D Unsal (2025): "Integrated monetary and financial policies for small open economies", *Econometrica*, vol 93, no (6).

Bauer, M and E Swanson (2023): "A reassessment of monetary policy surprises and high-frequency identification", *NBER Macroeconomic Annual* 23.

Brandão-Marques, L, G Gelos, M Narita and E Nier (2021): "Leaning against the wind: An empirical cost-benefit analysis", *CEPR Discussion Paper Series*, no 15693.

Bruno, V and H S Shin (2015): "Cross-border banking and global liquidity", *Review of Economic Studies*, vol 82, no 2.

Calvo, G and C Reinhart (2002): "Fear of floating", *The Quarterly Journal of Economics*, vol 117, no 2.

Carstens, A and H S Shin (2019): "Emerging markets aren't out of the woods yet", *Foreign Affairs*, 15 March.

Cavallino, P and N Patel (2009): "FX intervention: goals, strategies and tactics", *BIS Papers*, no 104.

Céspedes, L F, R Chang and A Velasco (2004): "Balance sheets and exchange rate policy", *American Economic Review*, vol 94, no 4.

Checo, A, F Grigoli and D Sandri (2024): "Monetary policy transmission in emerging markets: proverbial concerns, novel evidence", *BIS Working Papers*, no 1170.

Claessens, S, L Stracca and F Warnock (2016): "International dimensions of conventional and unconventional monetary policy", *Journal of International Money and Finance*, vol 67.

Cook, D (2004): "Monetary policy in emerging markets: Can liability dollarization explain contractionary devaluations?", *Journal of Monetary Economics*, vol 51.

De Leo, P, G Gopinath and S Kalemli-Özcan (2022): "Monetary policy and the short-rate disconnect in emerging economies", *NBER Working Papers*, no 30458.

Eichengreen, B and R Hausmann (1999): "Exchange rates and financial fragility", *NBER Working Papers*, no 7418.

Gelos, G and R Sahay, eds (2023): *Shocks and capital flows: policy responses in a volatile world*, International Monetary Fund.

Gopinath, G, E Boz, C Casas, F J Díez, P-O Gourinchas, and M Plagborg-Møller (2020): "Dominant currency paradigm", *American Economic Review*, vol 110, no 3.

Gourinchas, P-O (2018): "Monetary policy transmission in emerging markets: an application to Chile", Central Bank of Chile *Central Banking, Analysis, and Economic Policies Book Series*, vol 25.

Habermeier, K, A Kokenyne, R Veyrune and H Anderson (2009): "Revised system for the classification of exchange rate arrangements", *IMF Working Papers*, no 211.

International Monetary Fund (IMF) (2020): "Toward an integrated policy framework", *Policy Papers*, no 046.

Juselius, M, P Wooldridge and D Xia (2025): "Financial channel implications of a weaker dollar for emerging market economies", *BIS Bulletins*, no 114.

Kearns, J, A Schrimpf, and D Xia (2023): "Explaining monetary spillovers: The matrix reloaded", *Journal of Money, Credit and Banking*, vol 55.

Lane, P and G M Milesi-Ferretti (2018): "The external wealth of nations revisited: international financial integration in the aftermath of the global financial crisis", *IMF Economic Review*, vol 66.

Mano, R C and S Sgherri (2024): "One shock, many policy responses", *Open Economies Review*, vol 35, no 2.

Mendoza, E G (2010): "Sudden Stops, Financial Crises, and Leverage", *American Economic Review,* vol 100, no 5.

Mendoza-Fernández, A and S Pelin (2025): "Do central banks follow the Fed?", working paper.

Montes, G C and C F Ferreira (2020): "Does monetary policy credibility mitigate the fear of floating?", *Economic Modelling*, vol 84.

Shin, H S, P Wooldridge and D Xia (2025): "US dollar's slide in April 2025: the role of FX hedging", *BIS Bulletin*, no 105.