Capital flows, exchange rates and financial conditions in EMEs in an evolving international monetary system

Paolo Cavallino, Torsten Ehlers, Fredy Gamboa, Rafael Guerra, Berenice Martinez and Ilhyock Shim[1]

Introduction

The global financial system has experienced significant structural changes since the Great Financial Crisis (GFC). These changes include a shift in capital flows from bank loans to bonds and an increasing role for non-bank financial institutions (NBFIs). In addition, three key developments are particularly notable in emerging market economies (EMEs): (i) the growth of gross international investment positions and the emergence of EMEs as (net) creditors to the rest of the world; (ii) a shift towards greater reliance on local currency financing over foreign currency financing; and (iii) the expansion of intraregional EME portfolio investments.

This note documents these changes and key developments and analyses their implications for the dynamics of capital flows, exchange rates and financial conditions in EMEs. Some of these changes have probably contributed to the resilience of EMEs in recent years. Over the past decade, EMEs have weathered major shocks such as the outbreak of the Covid-19 pandemic in early 2020, globally synchronised monetary policy tightening in 2022 and heightened trade uncertainty in 2025.

At the same time, financial conditions remain highly synchronous across EMEs. This suggests that global factors, in particular changes in the value of the US dollar, remain important. Financial conditions indices used by many EME central banks and the BIS show that almost all EMEs benefited from accommodative global and domestic financial conditions in 2025, despite high levels of economic and trade uncertainty. This was primarily because of a weak US dollar and cuts in EME policy rates. The latitude to cut rates without experiencing capital outflows and a weakening currency is indicative of the strengthened policy frameworks in many EMEs. Indeed, the sensitivity of portfolio capital flows to and from EMEs as well as of EME local currency bond yields to a unit change in the US dollar's strength has declined over the past several years. This stands in contrast to the 2020 and 2022 episodes during which global financial conditions tightened and EMEs experienced capital outflows.

An effective policy mix tailored to country circumstances remains important to maintain external stability and to manage risks from non-resident inflows and resident outflows. Some structural changes, especially the increased symmetry in the magnitude of capital inflows and outflows, have reduced frictions and would allow exchange rates to play a greater role as a shock absorber in many EMEs. The substantial differences in the underlying composition and drivers of capital inflows

[1] The views expressed in this paper are those of the authors and not necessarily those of the BIS. We thank Kevin Cheng, Gaston Gelos, Benoit Mojon, Hyun Song Shin, Frank Smets, Christian Upper, Alexandre Tombini and Tao Zhang for comments, and Ulf Lewrick for providing analytical inputs.

and outflows, however, imply that they can react differently to the same shocks. To remain strong, EME policy frameworks need to adapt to these structural changes.

The remainder of this note is structured as follows. The first section documents the key structural changes in the global financial system from the perspective of EMEs. The second section conducts an empirical analysis of the dynamics of capital flows and exchange rates and studies which factors drive financial conditions. The last section discusses their implications for EME central banks' policy mix.

Key structural changes in the global financial system

This section documents the dynamics of capital flows in EMEs over the past two decades, highlighting three structural changes and evolving investor composition.

Capital flows

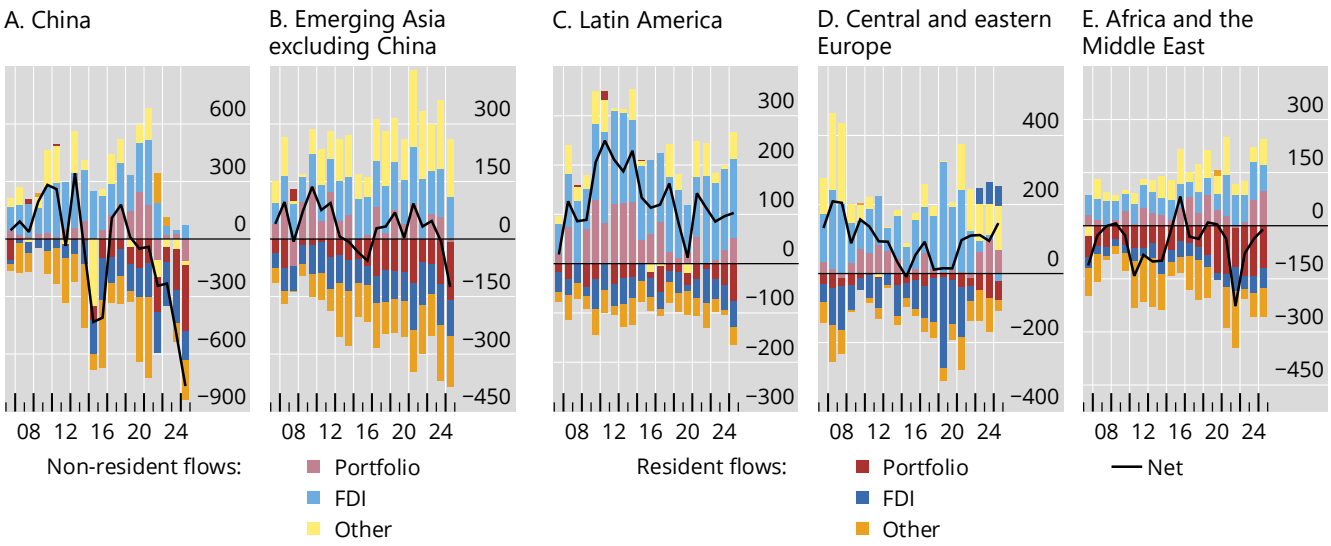
The composition and direction of capital flows to and from EMEs have exhibited significant changes over the past decades.

First, both gross capital inflows and gross capital outflows have grown substantially in all EME regions, with some emerging as net creditors to the rest of the world (Graph 1). Since the GFC, the external assets of emerging Asia and, to a lesser extent, those of Africa and the Middle East have increased at a faster pace than their external liabilities, turning these regions into net exporters of capital (black solid

Capital flows by EME regions[1]

In billions of US dollars, annual data

Graph 1



[1] For 2025, figures correspond to the sum of flows for the last four available quarters up to Q3 2025. For more details, see Graph A.1.

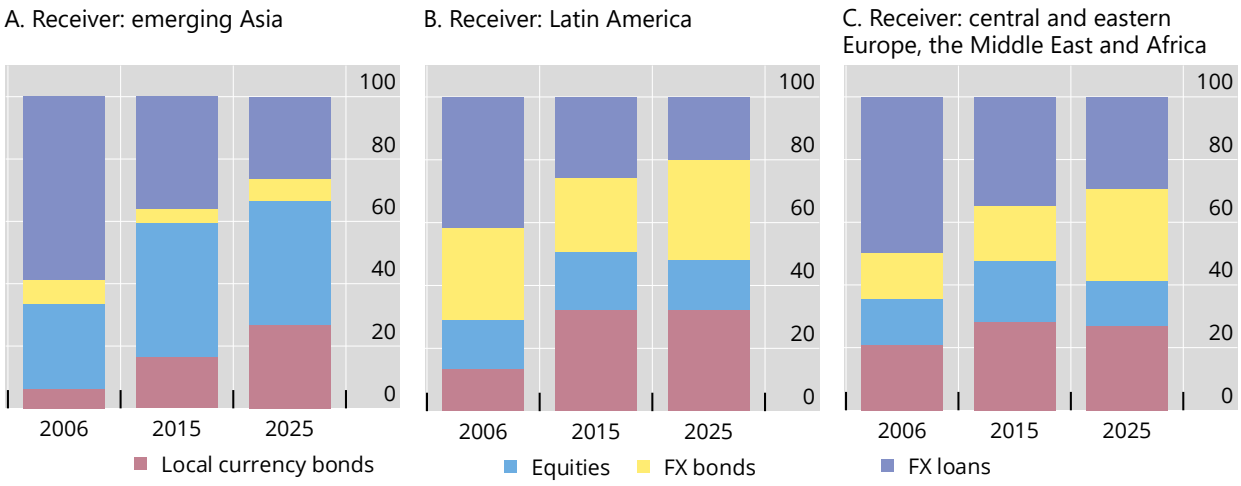
Sources: IMF; BIS.

line), with China playing a particularly prominent role (McGuire et al (2021)). This growth has been primarily driven by the rise in portfolio outflows. In contrast, Latin America and central and eastern Europe have continued to be net capital importers. However, while foreign direct investment (FDI) continues to dominate capital inflows in Latin America, central and eastern Europe has experienced a shift in recent years, with portfolio and other flows replacing FDI as the primary source of capital inflows.

Second, bond and equity flows have gained greater importance than banking flows, both for inflows and outflows (Graphs A.2 and A.4). The share of foreign exchange (FX) loans in EMEs' total outstanding amount of external financing has declined from approximately 50% before the GFC to less than 30% across all regions (Graph 2). At the same time, the share of bonds and equities has grown substantially, with local currency bonds now accounting for nearly a third of all external financing. Similarly, the share of equities in external assets held by EME residents has grown faster than that of loans and bonds across all regions, albeit starting from a very low base (Graphs 3 and A.3). Among EMEs' lending to banks abroad, banks located in an EME (Graph 3, yellow bars) made more loans and deposits to banks located outside the EME than non-bank entities located in the EME did (orange bars).[2]

Changing composition of external financing by EMEs[1]

In per cent; the amount outstanding of foreign liabilities — Graph 2



[1] External financing comprises foreign currency (FX) credit to EMEs via FX loans and bonds, and foreign investment in EME local currency assets via equities and local currency bonds. Data for each year correspond to Q1.

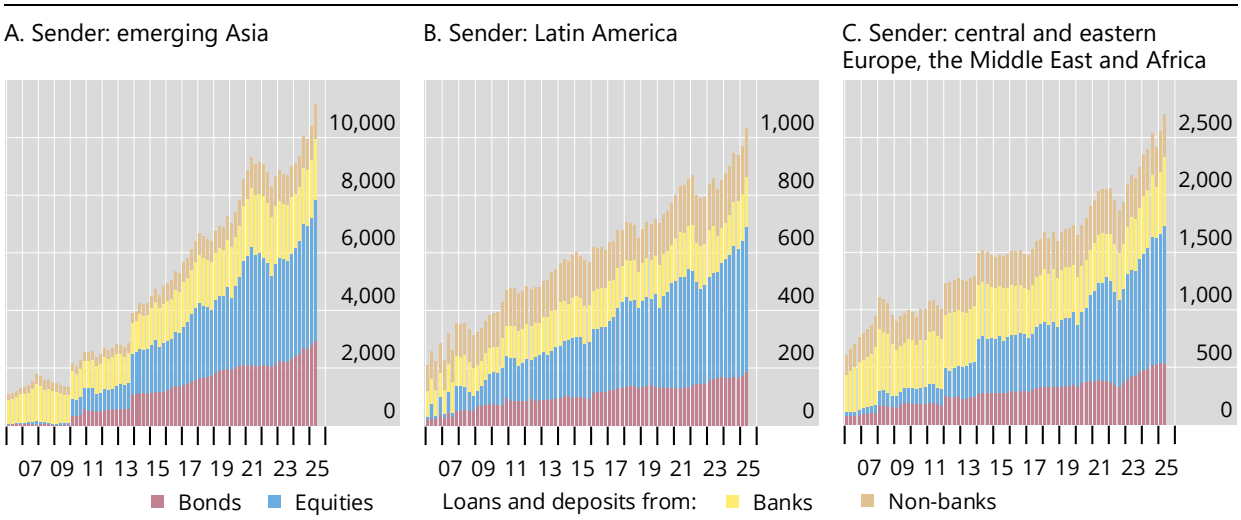
Sources: IMF; BIS global liquidity indicators; BIS locational banking statistics; BIS.

[2] In 2025, 87% of the outstanding amount of emerging Asia's loans to and deposits in foreign banks was from China, Hong Kong SAR and Singapore, and mainly to banks located in China, France, Germany, Hong Kong SAR, Singapore, the United Kingdom and the United States. Similarly, 54% of the outstanding amount of Latin America's loans to and deposits in foreign banks were from Mexico, and mainly to banks located in Canada, Switzerland, the UK and the US. Finally, 42% of the outstanding amount of central and eastern Europe's, the Middle East's and Africa's loans to and deposits in foreign banks were from the United Arab Emirates, and mainly to banks located in the United Kingdom and the United States.

Third, EMEs have become increasingly significant investors in other EME bonds, particularly within the same region. While advanced economies (AEs) in Europe and North America remain the largest investors in EME bonds across all regions (Graph 4), the share of portfolio bond investments held by EMEs within the same region has grown substantially (Ehlers et al (2025)). As of 2024, intraregional investors had a strong presence in emerging Asia's bond markets. A similar trend is observed in portfolio bond outflows from EMEs. Although US bonds, followed by those issued by AEs in Europe and offshore financial centres ("other AEs"), remain the primary investment destinations for EME residents, the share of EME bonds in their portfolios has risen significantly across all EME regions, with notable intraregional holdings (Graph 5). Similar patterns are evident in equity investments both to and from EMEs, where intraregional investors are playing an increasingly prominent role (Graphs A.5 and A.6).[3]

Portfolio capital and banking investments abroad by residents in EMEs[1]

In billions of US dollars; the amount outstanding of foreign assets — Graph 3



[1] Portfolio bond and equity outflows from residents in the region; loans and deposits correspond to the outstanding amount of the liabilities of banks located in reporting countries excluding an EME to all banks (yellow bars) and non-banks (orange bars) in the EME in each region.

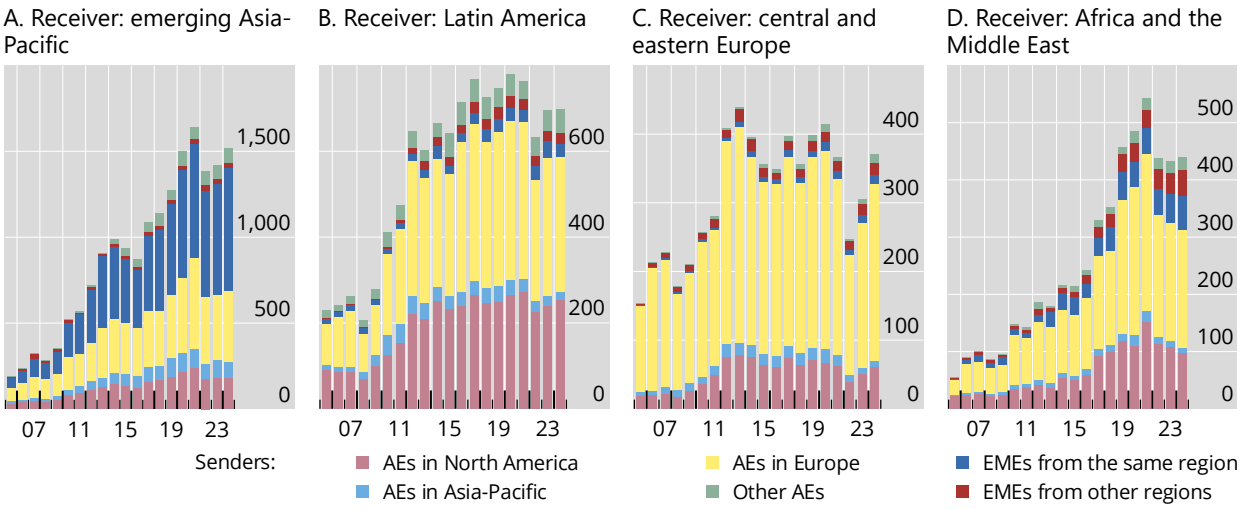
Sources: IMF; BIS locational banking statistics; BIS.

[3] Regarding intraregional bond and equity investments in emerging Asia, it is important to consider the strong link between China and Hong Kong SAR via the Stock and Bond Connects and other routes.

Portfolio bond investment in EME regions by non-resident investors[1]

In billions of US dollars; the amount outstanding of holdings

Graph 4



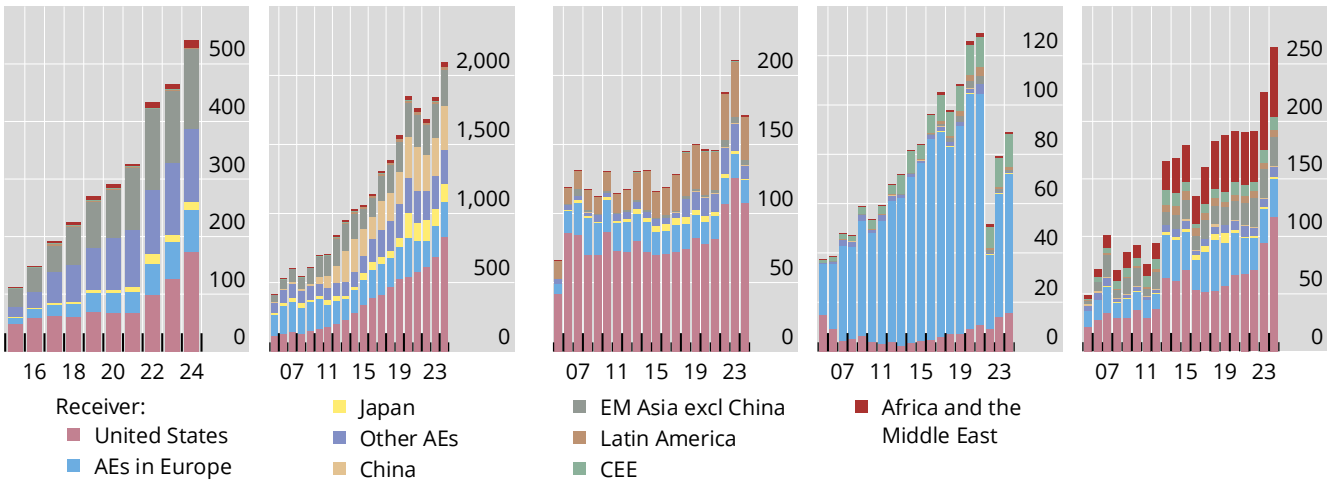
[1] SA started reporting to the IMF's Portfolio Investment Positions by Counterpart Economy (PIP) survey in 2013, and CN and PE in 2015; data for RU up to 2021. For details of countries in each region, see Graph A.5.

Sources: IMF; BIS.

Portfolio bond investment in foreign countries by residents in EME regions[1]

In billions of US dollars; the amount outstanding of holdings

Graph 5



[1] SA started reporting to the IMF's Portfolio Investment Positions by Counterpart Economy (PIP) survey in 2013, and CN and PE in 2015; data for RU up to 2021. For details of countries in each region, see Graph A.6.

Sources: IMF; BIS.

Investor composition of EME foreign assets and liabilities

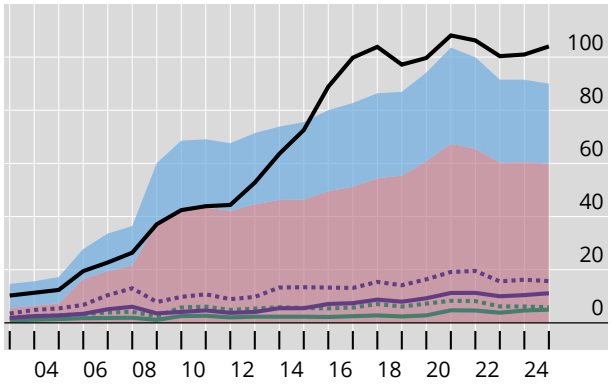
The surge in gross capital inflows and outflows in EMEs has been accompanied by an increasingly significant role played by both foreign and domestic NBFIs.[4]

Domestic NBFIs are becoming increasingly important in EMEs, although their foreign asset holdings remain relatively small in many cases. By end-2024, the total assets of NBFIs in EMEs excluding China amounted to around 90% of GDP (Graph 6.A). In comparison, total foreign assets held by EME residents accounted for just 11% of GDP, while foreign assets held specifically by domestic NBFIs were only 5% of GDP. However, there is significant variation across EMEs. In some, foreign asset holdings of domestic NBFIs are substantial, reaching 54% of GDP in South Africa, 37% in Chile and 21% in Korea (Graph 6.B). The low share of foreign assets held by NBFIs in other EMEs is broadly consistent with that in major AEs due to strong "home bias" or "home

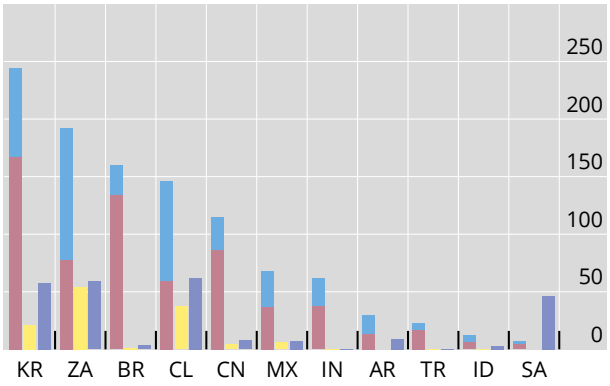
Domestic NBFIs are increasingly important in EMEs, while their foreign asset holdings remain limited in most cases[1]

As a percentage of GDP — Graph 6

A. Total assets of domestic NBFIs in EMEs over time



B. Total assets of NBFIs across selected EMEs in 2024[3]



[1] Data for total assets of domestic NBFIs and total foreign assets comprise the following countries: AR, BR, CL, CN, IN, ID, MX, SA, ZA, KR and TR. HK and SG are not included, as they are financial centers. [2] Investment funds and other NBFIs include money market funds, hedge funds, mutual funds, ETFs and some other NBFIs such as central counterparties, broker-dealers, finance companies, trust companies and structured finance vehicles. [3] Data for foreign NBFI assets in AR and SA not available for that year.

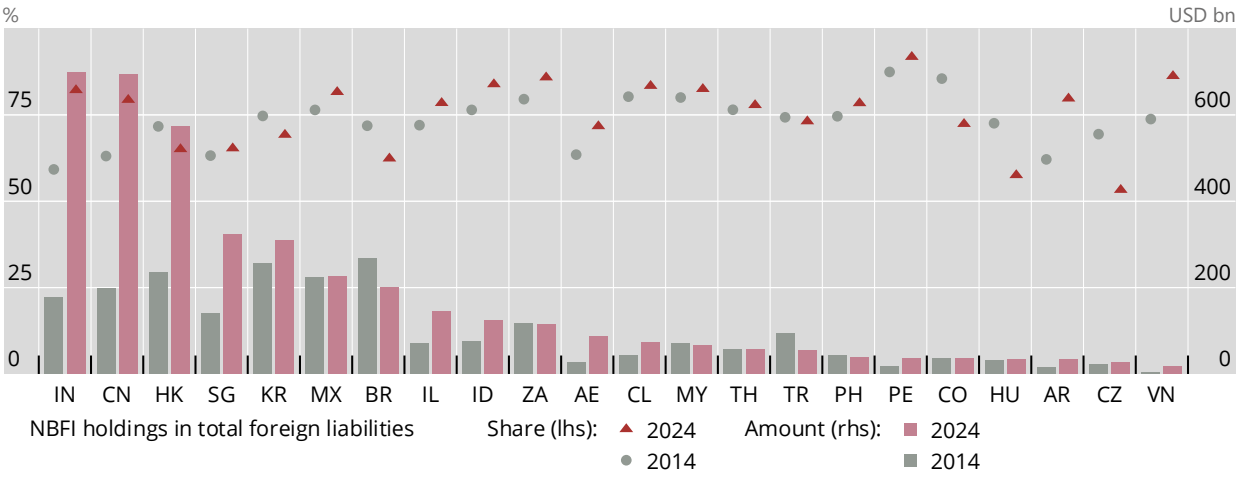
Sources: FSB (2025); IMF; BIS.

[4] NBFIs include investment funds (mostly mutual funds and exchange-traded funds (ETFs)) and long-term institutional investors (such as insurance companies and pension funds). Official investors such as sovereign wealth funds are excluded.

currency bias" in asset holdings (Hau and Rey (2008); Burger et al (2018); Maggiori et al (2020)) and to regulatory restrictions.[5]

While data on foreign asset holdings by different types of NBFIs remain limited for EMEs, countries where NBFIs hold a larger share of foreign assets often have a more developed insurance and pension fund sector. Demographic factors may play a relevant role, as an ageing society boosts both the size of NBFIs and the demand for foreign assets to diversify the relatively higher savings. Understanding which type of NBFIs hold these foreign assets is crucial for assessing international shock transmission (Banerjee et al (2025)). Investment funds, for example, tend to be procyclical, amplifying market movements (eg Ryan (2024); Timmer (2018)). In contrast, insurance companies and pension funds are typically countercyclical investors, providing a buffer against market volatility. Their foreign asset holdings could further strengthen this countercyclical behaviour. Since they often aim to match long-term liabilities in local currency, an FX shock, such as a depreciation of the local currency, would prompt them to sell foreign assets (usually denominated in US dollars[6]), assuming currency risk is not hedged ex ante. This dynamic, in turn, can help dampen the depreciation of the local currency. This is in line with a broader literature on the positive effects of a larger domestic investor base on the resilience of EMEs against external shocks.

Foreign NBFIs' investment in EME assets has increased in importance for most EMEs[1] Graph 7



[1] The amount of holdings by NBFIs of EME assets is estimated based on creditor countries positions. As not all creditor countries provide data on holdings of foreign assets by NBFIs, both the amount and share of NBFIs present a lower bound of the true number. The amount and share for China and other economies in emerging Asia is likely to be substantially underestimated, due to lack of data from Hong Kong SAR.

Sources: IMF; BIS.

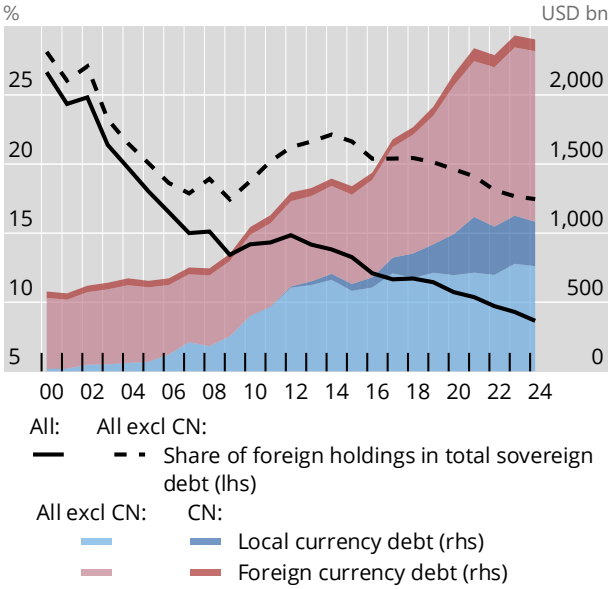
[5] The share of domestic asset holdings in AEs tends to be slightly smaller at about 85% for the United States and closer to 50% for euro area countries, which exhibit a large share of cross-border asset holdings within the common currency area.

[6] Foreign equity is naturally denominated in foreign currency. In some cases, foreign bonds have been issued in EME currencies such as the Chinese yuan (Panda bonds), Hong Kong dollar or Singapore dollar. These bonds are usually marketed to local investors in those countries. In overall volumes, they have remained very small compared with total investments in foreign assets in those countries.

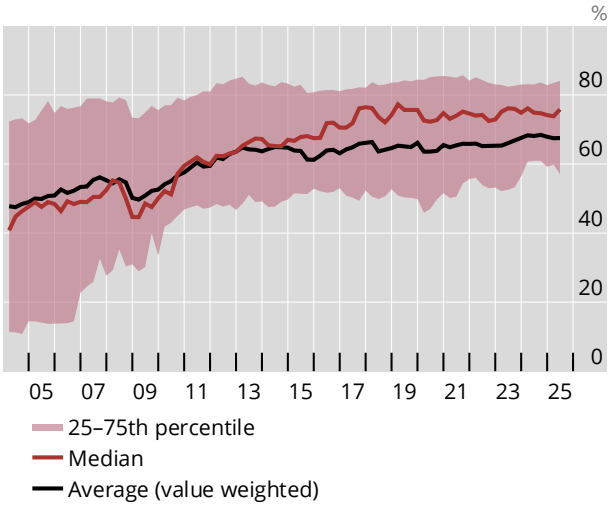
In addition to domestic NBFIs, foreign NBFIs have also grown in importance as investors in EME assets. While the data for these holdings are not complete for all EMEs, the available data do illustrate the significant role of foreign NBFIs for EME assets and their potential to drive capital flows. Overall, the share of NBFI holdings in total foreign holdings of EME financial assets (equities and bonds) is very high across most countries (Graph 7). In some countries (eg China, India), NBFI holdings have increased markedly in the last 10 years.

NBFIs have become key holders of EME sovereign debt[1] Graph 8

A. Foreign holdings of EME sovereign debt



B. Non-banks' share in foreign holdings of EME sovereign debt



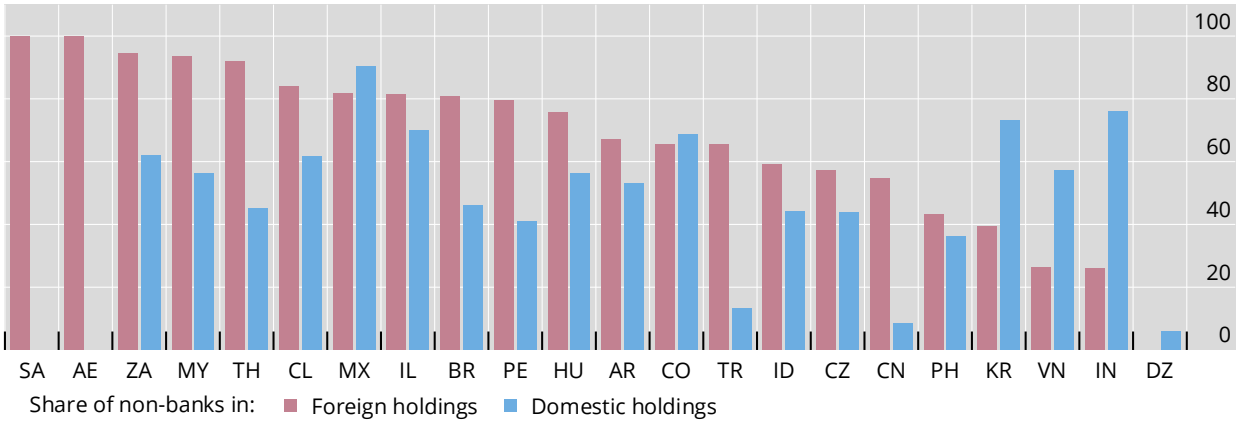
[1] Includes all jurisdictions participating in the BIS EM DGM meeting except HK and SG.

Sources: Arslanalp and Tsuda (2014); BIS.

Foreign NBFIs are the largest foreign investors in EME sovereign bonds. Over the past 20 years, foreign holdings of EME sovereign debt have grown rapidly, primarily driven by local currency bonds (Graph 8.A). Despite the rapid increase in the absolute amount of EME sovereign bond holdings by foreign NBFIs, the overall share of holdings by foreign investors (NBFIs and other) has decreased substantially because of the much faster expansion of EME local currency bond markets. Among foreign investors, NBFIs account for the largest share (Graph 8.B). However, in countries like China and India, the share of NBFIs in foreign holdings is lower than other EMEs, as foreign central banks play a more prominent role (Graph 9).

NBFIs hold high shares of the sovereign bonds of most EMEs[1]

Share of non-banks in foreign and domestic sovereign bond holdings, mid-2025, in per cent — Graph 9



[1] Data on sovereign debt holdings by domestic NBFIs are not available for AE and SA. The NBFI share in foreign holdings for DZ is zero. Data for AE, DZ, IL and SA as of end-2024 and for VN as of end-2023.

Sources: Arslanalp and Tsuda (2014); BIS.

Among foreign NBFIs, investment funds are the predominant holders of EME assets, as insurance companies and pension funds are often constrained by home country regulations that limit their exposure to riskier assets. The presence of these NBFIs can heighten the volatility of EME capital inflows, since investment funds tend to trade EME assets in a procyclical manner. This volatility is further amplified by the fact that a significant share of EME assets held by foreign NBFIs are denominated in local currency. Foreign investment funds typically measure their returns in foreign currency (most often the US dollar), and exchange rate fluctuations amplify their gains and losses. These funds generally do not fully hedge their EME currency exposures, exposing them to "original sin redux" since they aim to benefit from potential currency appreciations. This dynamic leads to procyclical buying and selling of EME bonds (Hofmann et al (2025)). For example, a depreciation of the local currency relative to the US dollar prompts investment funds to sell EME assets, exacerbating capital outflows and further depreciating the local currency. Bond funds are particularly vulnerable in this scenario, because their assets are generally less liquid than those of equity funds. This can make bond funds more susceptible to global shocks, as global investors are quick to pull out (Brandão-Marques et al (2022)). An additional amplifying factor arises from the issuance of long-duration EME local currency bonds (Bertaut et al (2025)). When EME currencies appreciate, yields fall, prompting global investors to buy EME bonds. However, when the cycle reverses, investors holding longer-duration EME bonds face a "double loss" as exchange rates depreciate and yields rise, causing bond prices to fall. Bruno et al (2022) find a similar procyclical pattern for EME equity funds.

Box A

Cryptoasset and stablecoin flows

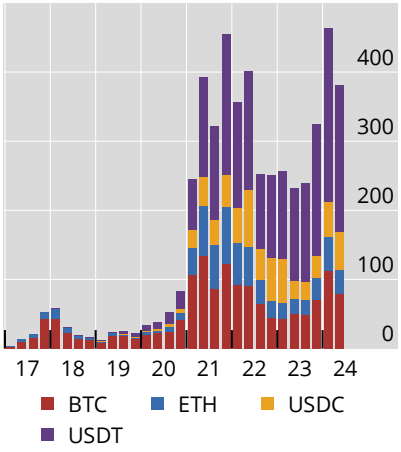
Cross-border cryptoasset (henceforth, crypto) flows to EMEs have seen remarkable growth over the past decade, now accounting for more than half of total global cross-border crypto flows. These flows surged from less than $4 billion in Q1 2017 to over $460 billion in Q1 2024 (Graph A1.A). Initially dominated by native cryptoassets – Bitcoin (BTC) and Ether (ETH) – transaction volumes shifted significantly towards asset-backed stablecoins from 2021 onwards, with Tether (USDT) and USD Coin (USDC) representing approximately 70% of flows by Q2 2024.

Geographically, emerging Asia has consistently led in cross-border transaction volumes, accounting for more than 50% of EME flows in both native cryptocurrencies and stablecoins throughout the period (Graphs A1.B and A1.C). Since 2019, cross-border activity in BTC, ETH and USDC has shifted from China to other major EMEs, particularly India and Indonesia, driven by tighter crypto regulations and bans imposed by the Chinese authorities. As of Q2 2024, Türkiye has emerged as the second largest sender and receiver of USDT. Together with Russia, these two countries account for 12% of USDT cross-border volumes.

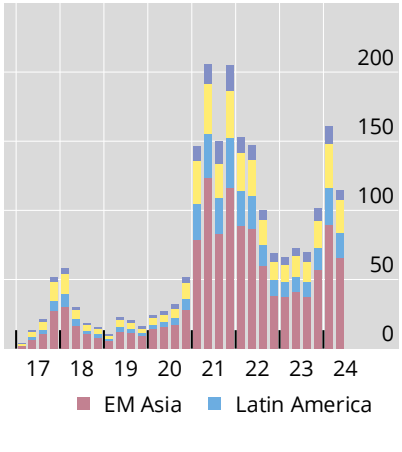
Crypto flows to EMEs[1]

In billions of US dollars — Graph A1

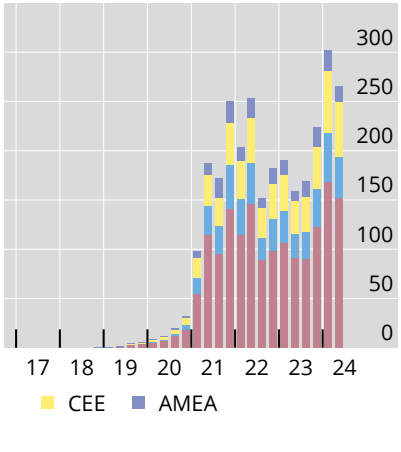
A. Cross-border crypto flows to EMEs



B. BTC and ETH flows to EMEs



C. USDC and USDT flows to EMEs



[1] Quarterly aggregates of cross-border transactions for four crypto assets from Q1 2017 to Q2 2024, where an EME is the recipient.

Source: Auer et al (2025).

Crypto can serve multiple purposes, which in turn affect the drivers of cross-border crypto flows. Unlike traditional finance and trade flows, geographical and proximity factors play a diminished role in crypto flows (Tables A.4 and A.5). This is consistent with the advantages of distributed ledger technologies in overcoming informational asymmetries and reducing transaction costs.

As financial assets, crypto flows are sensitive to global financial and monetary conditions. In particular, tighter global funding conditions, measured by the US dollar index or the credit spread on high-yield debt, reduce cross-border Bitcoin flows to EMEs (Table A.4). In addition, stablecoin flows are closely tied to US monetary policy due to their peg to the US dollar (Table A.5). For instance, a 25 basis point rise in the federal funds rate is associated with an increase in cross-border USDC and USDT flows to EMEs of approximately 14% and 15%, respectively. In contrast, high expected financial market volatility, as captured by the VIX, shows a strong positive relationship with both Bitcoin and stablecoin flows, reflecting their use for speculative motives (Tables A.4 and A.5).

As a medium of exchange, cryptoassets are shaped by conditions in the sending and receiving countries, particularly the stability of local fiat currencies. High inflation in both countries – serving as a proxy for the opportunity cost of using fiat currency – is linked to increased crypto transaction volumes (Table A.6). Similarly, periods of heightened volatility in the bilateral exchange rate between the sending and receiving countries are associated with a rise in stablecoin flows.

The use of crypto as a cross-border medium of exchange is particularly significant in the context of remittances. High remittance costs through traditional financial intermediaries are one factor for increased cross-border stablecoin flows and low-value Bitcoin transactions from AEs to EMEs (Table A.7). Specifically, a 1 percentage point rise in the cost of sending remittances – measured as a percentage of the transaction value – is associated with an increase in stablecoin flows of 1.3–1.6%, and a rise in low-value Bitcoin transactions of 9–10%.

Crypto has the potential to facilitate cheaper and faster cross-border payments while fostering financial inclusion, which could deliver significant benefits and support economic growth. However, they also pose notable risks that may threaten macroeconomic stability and policy effectiveness in EMEs. Three key risks stand out:

Exchange rate volatility. Crypto could significantly reshape capital flow dynamics and amplify exchange rate volatility by reducing frictions in cross-border payments. Transactions between EME currencies and USD stablecoins inherently involve FX transactions. Instability in stablecoin prices could, in turn, increase exchange rate volatility. A note prepared by the Hong Kong Monetary Authority highlights that increased stablecoin transactions vis-à-vis EME currencies are associated with higher exchange rate volatility. Larger and more volatile FX transaction flows driven by stablecoin activity could undermine the effectiveness of foreign exchange interventions, making it increasingly challenging for policymakers to stabilise unwarranted currency fluctuations.

Currency substitution. FX-denominated stablecoins could accelerate currency substitution, posing a threat to monetary sovereignty in EMEs. Although current holdings of FX stablecoins in EMEs remain small compared with overall FX deposits, and the share of FX deposits in total deposits has not increased since the adoption of stablecoins (Adrian et al (2025)), the potential risks are significant. Stablecoins could enable much faster and larger shifts out of local currencies if trust in an EME's domestic currency were to erode. Such currency substitution could weaken the influence of local currency conditions on households' and firms' saving and investment decisions, thereby undermining the effectiveness of monetary policy.

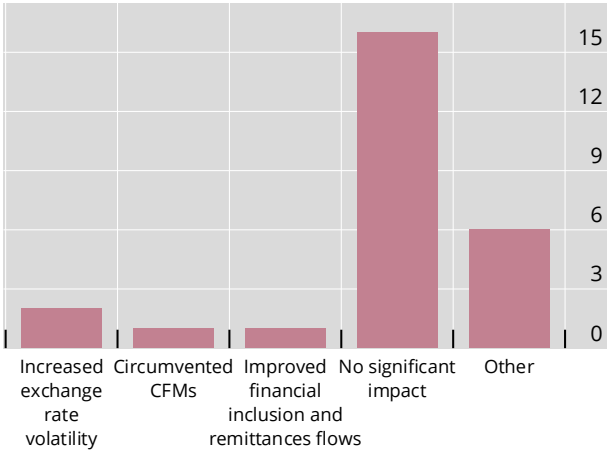
Circumvention of CFMs. Crypto could provide a means to circumvent capital flow management measures (CFMs). These measures typically rely on established financial intermediaries, but crypto allows capital flows to take place outside these traditional channels. Indeed, some evidence indicates that crypto is being used as a marketplace for capital flight (Graf von Luckner et al (2024); Auer et al (2025)). The decentralised, borderless and often pseudonymous nature of cryptocurrencies complicates the imposition and enforcement of CFMs, posing significant challenges for policymakers.

Due to their small volumes, crypto flows have had no significant macroeconomic impact on EMEs, and most central banks assess the risk posed by crypto as minimal (Graph A2). Only seven central banks consider the risks by crypto to be

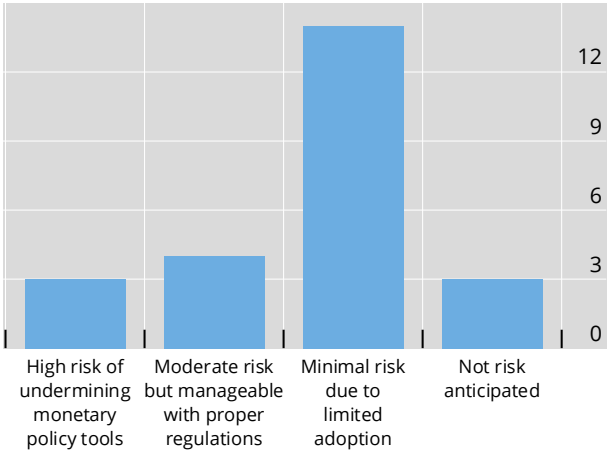
Impact of cryptoassets

Number of respondents — Graph A2

A. Impact of cross-border cryptoasset flows in the economy



B. Potential impact of US dollar-denominated stablecoins and other cryptoassets in monetary policy effectiveness



CFMs = capital flow management measures.

Source: 2026 EME Deputy Governors' meeting survey.

significant, with currency substitution identified as the primary threat. In contrast, other central banks assess these risks as minimal, citing weak incentives for holding FX-backed stablecoins in their economies, often due to the presence of a stable currency and a well developed digital payment system. Recent estimates suggest that stablecoin adoption in EMEs is unlikely to exceed 20% of M2 by 2030, a share that would not significantly affect banks' role in financial intermediation or the effectiveness of monetary policy. ①

Even if stablecoins do not become widespread enough to threaten currency substitution, their increased use would present challenges. Integration with domestic payment systems would be necessary. Structural shortcomings limit stablecoins' ability to function as money. Unlike banks, stablecoin issuers cannot elastically expand their supply in response to economic activity, and they fail to uphold the "singleness" of money, which could create vulnerabilities during market stress. The use of public blockchains introduces financial integrity and security risks, as stablecoins can bypass regulated entities through unhosted wallets.

To address these issues, central banks may want to focus on three areas. First, ensuring robust safeguards to prevent spillovers from stablecoins into the domestic financial system by regulating payment service providers and monitoring stablecoin exposures in regulated entities. Second, preventing the use of stablecoins for illicit activities by enforcing anti-money laundering and combating the financing of terrorism standards, such as the Financial Action Task Force's Travel Rule and the US GENIUS Act. Finally, aligning stablecoin services more closely with traditional financial systems, which may reduce their competitive advantages.

① See S&P Global (2026).

Global financial conditions and the dynamics of capital flows and exchange rates

This section examines how global financial conditions influence capital flows and financial conditions in EMEs, drawing on survey responses and empirical analyses. It also explores how EMEs utilise financial condition indices (FCIs).

Response of EME capital flows and bond yields to global factors

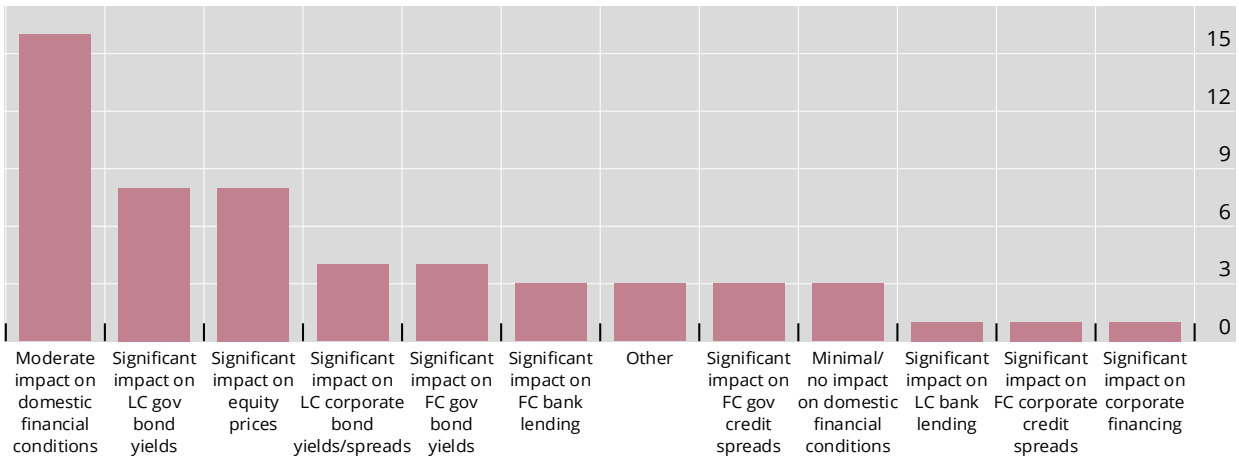
Global financial conditions play a pivotal role in shaping capital flow dynamics and exchange rate movements, particularly in EMEs. Understanding how the sensitivity of EME capital flows to global factors – such as US monetary policy and US dollar exchange rate fluctuations – has evolved over time is essential for assessing the implications for domestic financial conditions and stability.

In this context, central banks reported significant variation in the effects of capital flows and US dollar exchange rate movements on domestic financial conditions across EMEs. While two thirds (16) of EME central banks noted a moderate impact on domestic financial conditions, one third (eight) observed significant effects on local currency government bond yields and equity prices, and several mentioned significant impacts on FX bond yields and credit spreads. These responses illustrate the sensitivity of domestic asset prices to global financial conditions (Graph 10).

Impact of capital flows and US dollar on domestic financial conditions

Number of respondents

Graph 10



FC = foreign currency; LC = local currency; gov = government.

Source: 2026 EME Deputy Governors' meeting survey.

Countries with high external debt exposure highlighted that US dollar appreciation tightened financial conditions by increasing the cost of FX debt and amplifying exchange rate volatility. For instance, Brazil and Mexico mentioned that exchange rate depreciation significantly influenced sovereign bond yields and equity prices. Conversely, Asian EMEs such as Korea and Malaysia observed relatively moderate impacts owing to deeper financial markets and diversified investor base. In addition, Indonesia and South Africa noted that exchange rate volatility exacerbated the procyclical behaviour of NBFIs, further tightening financial conditions in stress periods. These findings support that while EMEs have become more resilient, price-sensitive investors and global financial shocks remain key sources of vulnerability.

Central banks report that a depreciation of the US dollar typically loosens financial conditions in EMEs, although the magnitude and transmission channels vary significantly (Table A.2). Malaysia and Mexico indicated that a weaker US dollar reduced sovereign credit spreads. These effects are attributed to capital inflows into local currency bond markets, which lower borrowing costs. A weaker US dollar was also associated with notable increases in equity prices, consistent with the findings of Bruno et al (2022). For example, the Philippines and Vietnam observed that improved risk sentiment and higher capital inflows into equity markets boosted valuations. Meanwhile, Chile and Peru highlighted that US dollar depreciation linked to improved global risk sentiment tends to loosen financial conditions, whereas depreciation driven by US monetary easing has a muted impact.

Survey participants generally agreed that US monetary policy and Treasury yields significantly influence EME financial conditions, primarily through capital flow and exchange rate channels (Table A.3). Interest rate spillovers were particularly evident in Colombia and Indonesia, where increases in US Treasury yields were associated with rises in local currency government bond yields. South Africa and Türkiye noted that higher US rates lead to capital outflows, local currency depreciation and tighter domestic liquidity conditions. In contrast, Korea and Malaysia reported that proactive

monetary policy, including interest rate hikes and FX intervention, were effective in mitigating the adverse effects of rising US rates.

The sensitivity of EME capital flows to changes in global financial conditions, particularly US interest rates and US dollar strength, varies significantly across countries, reflecting differences in market structures, external positions and policy tools. In Colombia, foreign investors' participation in the domestic sovereign bond market has played a key role in shaping financial conditions.[7] In Peru, financial conditions are influenced primarily by interest rate differentials and deviations from covered interest parity. In contrast, Singapore demonstrates the dominance of global "push" factors over domestic "pull" factors in driving capital flows.

Consistent with country experiences, an empirical analysis for 18 EMEs extending Gelos et al (2024) for 2006–26 shows that gross capital inflows increase when global financial conditions loosen or the US dollar weakens (Graph A.8). This sensitivity has also changed over time and has been relatively low since the end of the pandemic. In particular, the sensitivity to the broad US dollar index either stayed flat or declined steadily in 2025 (Graph 11). In addition, the sensitivity of bond fund flows to the broad US dollar index and the VIX (Graphs A.7.A and A.7.B) is greater than that of gross bond inflows to EMEs (Graphs 11.A and 11.B, respectively). These results imply that price-sensitive and redemption-prone investors such as mutual funds and ETFs tend to react more strongly to global factors which capture global investors' risk appetite.

An empirical analysis on bond and equity outflows from EMEs shows that when the VIX or MOVE index falls, equity or bond outflows, respectively, from EMEs tend to increase, and that EME equity outflows also increase when the US-EME equity return differential increases (Graph A.9). The sensitivity of bond and equity outflows to the bilateral exchange rate, VIX index, MOVE index, US-EME 10-year bond yield differential and US-EME equity return differential has generally declined or stayed around zero since 2022 (Graph 12). In particular, the US-EME equity return differential has been a significant driver of EME equity outflows since 2022 (Graph 12.F).

Given the major trends documented in the first section, we can look at the cross-country relationship between the sensitivity of various types of capital flows to the foreign and global factors considered in Graphs 11 and 12 and the structural characteristics of EMEs. In particular, we consider the local currency share in total external financing and the NBFI share in foreign investment in EMEs vis-à-vis non-resident portfolio inflows and net portfolio inflows and the depth of FX spot or derivatives markets vis-à-vis resident portfolio outflows.

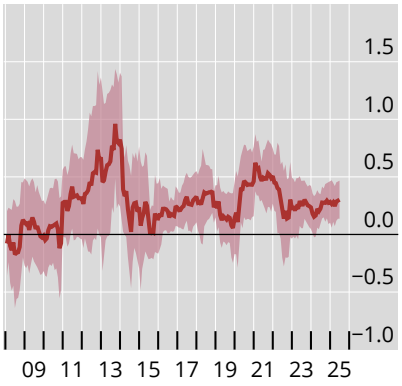
[7] During periods of elevated foreign participation (2014–22), Colombia's financial conditions became more sensitive to global shocks. However, since 2023 the sensitivity has declined due to reduced foreign participation. The central bank's inflation targeting regime has helped to mitigate risks.

Time-varying impact of global and foreign factors on EME portfolio inflows[1]

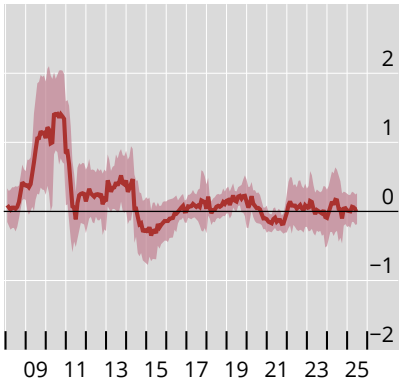
Coefficient on the 1% or 1 percentage point change in each factor, monthly data — Graph 11

Local currency bonds

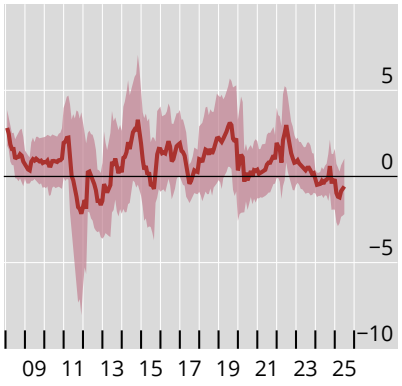
A. Nominal broad US dollar index[2]



B. VIX (inverted)[3]

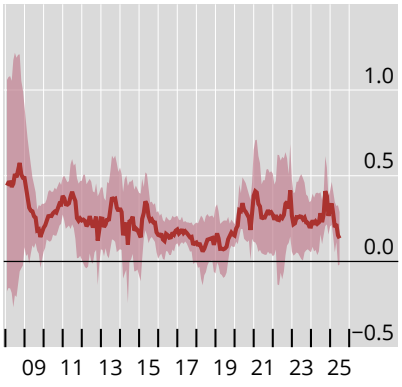


C. Policy rate differential[4]

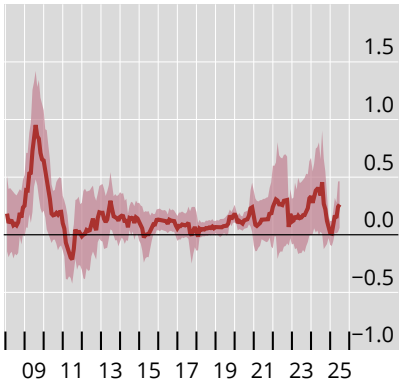


Equities

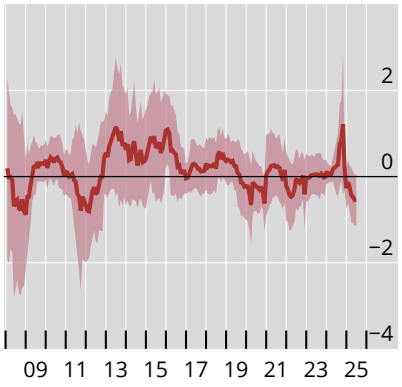
D. Nominal broad US dollar index[2]



E. VIX (inverted)[3]



F. Policy rate differential[4]



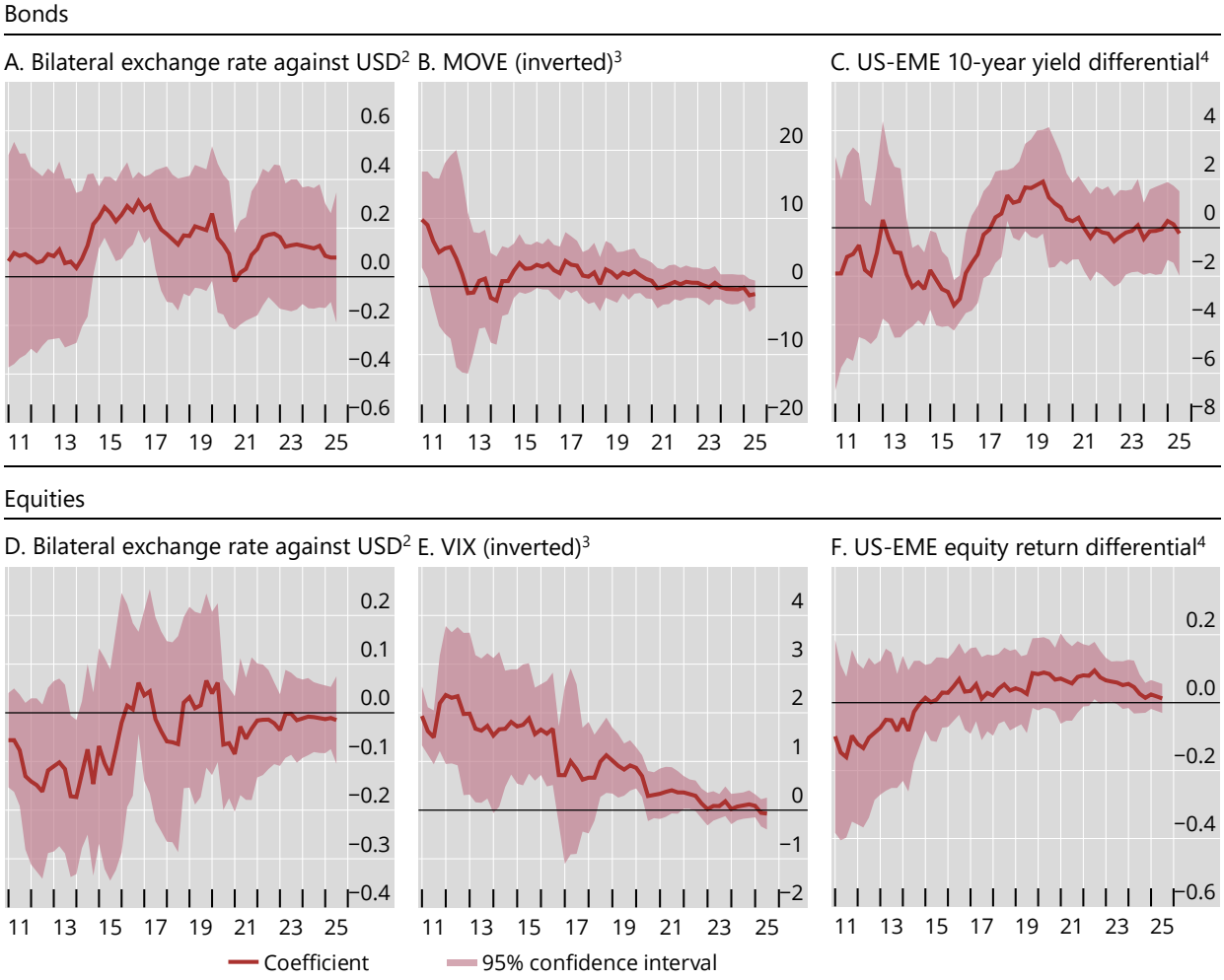
Coefficient — 95% confidence interval

[1] The red line shows the change in the ratio of capital flows to total foreign holdings in percentage points in response to a 1% depreciation of the nominal broad US dollar index; a one-unit decrease in the VIX; or a 1 percentage point increase in the policy rate differential between an EME and the US. The regressions use two-year moving windows with monthly data. The contemporaneous value of the first two variables and the one-period lagged value of the change in the policy rate differential are included jointly in regressions, together with the one-period lagged dependent variable and controls (US CPI, EME CPI, US industrial production (IP), EME IP and Brent oil price; for equities, EME and US equity market returns are also included). The shaded area shows the 95% confidence interval. [2] A positive coefficient means that a depreciation of the nominal broad US dollar index increases capital flows. [3] A positive coefficient means that a decrease in the VIX increases capital flows. [4] A positive coefficient means that an increase in the policy rate differential increases capital flows.

Sources: Federal Reserve Bank of St Louis; Institute of International Finance; IMF; Bloomberg; LSEG Datastream; national data; BIS.

Changing impact of global and foreign factors on portfolio outflows from EMEs[1]

Coefficient on the 1% or 1 percentage point change in each factor, quarterly data — Graph 12



[1] The red line shows the change in the ratio of capital flows to total foreign holdings in percentage points in response to a 1% appreciation of an EME's local currency against the US dollar; a one-unit decrease in the MOVE index or the VIX index, or a 1 percentage point increase in the US-EME 10-year yield differential or the US-EME equity return differential. The MOVE (Merrill Lynch Option Volatility Estimate) index is calculated from implied volatilities of 1-month US Treasury options. The regressions use five-year moving windows with quarterly data. The contemporaneous value of the MOVE and VIX indices and the one-period lagged value of the change in the bilateral exchange rate and the yield/return differentials are included jointly in regressions, together with the one-period lagged dependent variable and controls (US CPI, EME CPI, US real GDP, EME real GDP and the US-EME policy rate differential). The shaded area shows the 95% confidence interval. Fifteen EMEs are considered in the regressions. [2] A positive coefficient means that an appreciation of an EME's local currency against the US dollar increases capital outflows. [3] A positive coefficient means that a decrease in the MOVE/VIX index increases capital outflows. [4] A positive coefficient means that an increase in the US-EME 10-year bond yield differential / US-EME equity return differential increases capital outflows.

Sources: IMF; Bloomberg; LSEG Datastream; national data; BIS.

First, we find a positive relationship between the local currency share of an EME and the sensitivity of bond inflows to the policy rate differential between the EME and the United States for individual EMEs (Graph A.10.A). One explanation could be that a higher local currency share in external financing by an EME signals stronger economic fundamentals. This, in turn, may attract more yield-seeking, long-term investors such as insurance companies and pension funds to the EME. Similarly, a negative relationship between the NBFI share of foreign investment and the

sensitivity of equity inflows to the VIX may be because when a higher NBFI share is associated with more long-term investors in an EME's equity market, their investments are likely to be less sensitive to US equity market volatility (Graph A.10.B).

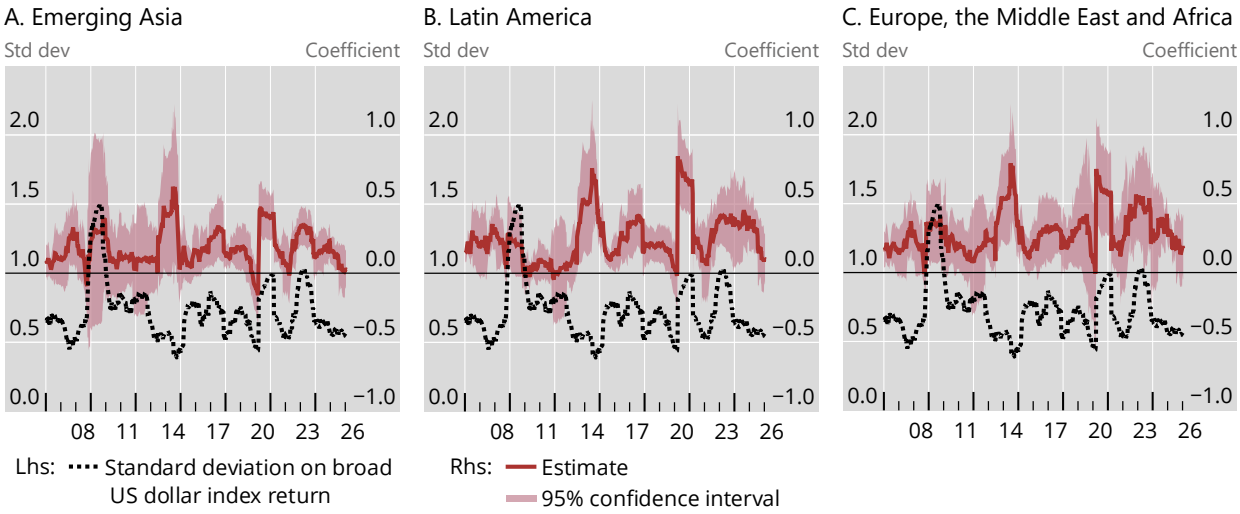
Regarding outflows, we find a negative relationship between net portfolio capital inflows to an EME and the sensitivity of bond outflows to the 10-year bond yield differential between the United States and the EME (Graph A.10.C). This is because capital-exporting countries (ie negative net capital inflows) are likely to react more strongly to higher bond yields in the United States than capital-importing countries. Finally, Graph A.10.D shows a negative relationship between FX derivatives market depth and the sensitivity of equity outflows to the VIX. This can be attributed to local investors being able to manage currency risks more effectively when they invest in US equities and hedge their currency exposures in response to US equity volatility.

Finally, we consider if EME local financial conditions have become more sensitive to global financial conditions and/or if the size of global financial shocks has become larger over the past two decades. To do so, we first look at the variation over time in the relationship between the dollar's general strength and EME local currency bond returns. The sensitivity of EME portfolio returns to a 1% increase in the broad US dollar index is larger during periods of financial stress, as shown in the downward spikes in returns (ie sharp increases in bond yields) during the GFC, the 2013 "taper tantrum", the China stock market stress in 2015, the start of the pandemic in 2020 and the globally synchronised monetary tightening in 2022 (Graph 13).[8] In contrast, the sensitivity was relatively low or close to zero during tranquil times. In particular, the sensitivity has declined from 2024 to early 2026 in all EME regions. In addition, we find that the size of fluctuations in the US dollar index measured by its standard deviation (black dotted line) has also fluctuated between tranquil and stress periods.

A joint consideration of the standard deviation and the sensitivity implies that the non-linearity in the response of an EME's domestic financial conditions measured by the EME's local currency bond yields during global stress periods is driven by both the shock size and the sensitivity. Also, the standard deviation of the US dollar index in 2020 and 2022 was of the similar magnitude, but the sensitivity of EME LC bond returns/yields was lower in 2022 than in 2020. Finally, since early 2025 the standard deviation of the broad US dollar index has barely declined but the sensitivity has declined to a historically low level in each EME region.

[8] The broad US dollar index includes EMEs. When many EMEs face difficulties because of domestic drivers, their currencies will depreciate and their risk premia rise. This can raise endogeneity concerns.

Sensitivity of EME local currency bond return on the broad US dollar index return[1] Graph 13



[1] The sensitivity is calculated using a moving window of one year in a weekly panel regression of the JPMorgan GBI-EM Broad local currency bond country return on the broad US dollar index return. One coefficient is estimated per week. The sample includes 16 EMEs and covers the period from January 2006 to 14 January 2026.

Sources: JPMorgan Chase; BIS.

Financial conditions indices in EMEs

The previous section established the general relationship between global investors' risk-taking, financial conditions in EMEs and the strength of the dollar. This section considers EME financial conditions indices (FCIs) and the role of dollar exchange rates.

Central banks use various variables and assign weights to them to construct FCIs. The survey responses highlight diverse practices among central banks in constructing and using FCIs to monitor and guide monetary policy. Many central banks, including those in Brazil, South Africa and Thailand, incorporate a range of variables such as bond yields, exchange rates, credit spreads and equity prices into their FCIs. Principal component analysis (PCA) and vector autoregression are commonly employed to calculate weights and assess the impact of financial conditions on GDP growth.

FCIs are widely used as supplementary tools for monetary policy decision-making. For instance, Brazil's FCI is used to assess the tightness of financial conditions relative to historical standards, while Malaysia's FCI captures the impact of global and domestic factors on capital flows and asset prices. Some respondents, such as the Philippines and Indonesia, noted challenges in integrating new data sources, such as crypto flows, into their FCIs. Others, including Vietnam, reported that their central banks do not yet produce FCIs but are exploring their development. These findings highlight the role of macro-financial stability frameworks, particularly the need for robust analytical tools like FCIs to monitor vulnerabilities and guide policy responses.

Central banks emphasise that the increasing reliance on local currency financing and domestic financial market development have enhanced EME resilience to external shocks. However, NBFIs' procyclical behaviour and the dominance of US dollar funding remain significant risks. The use of FCIs and other macro-financial stability

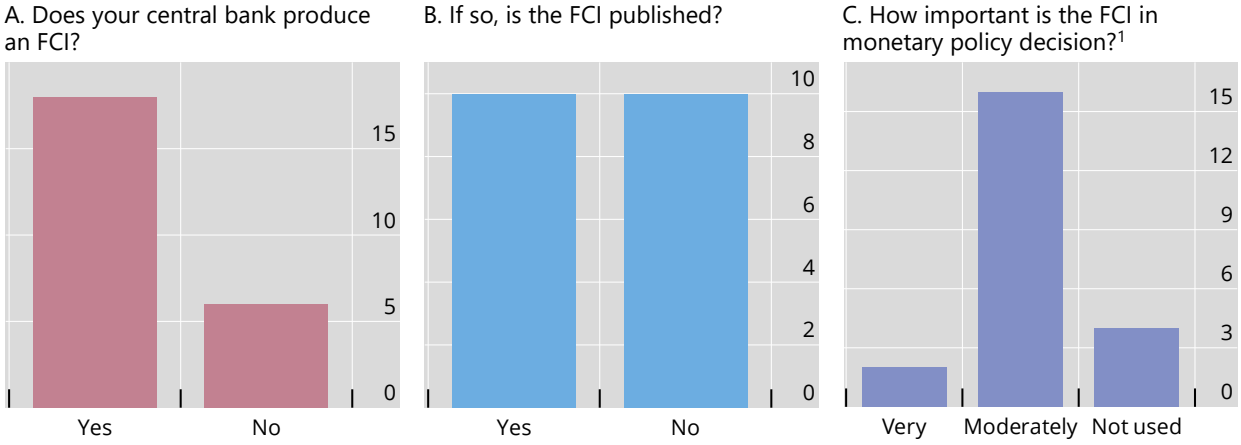
tools is critical in mitigating vulnerabilities and ensuring effective monetary policy transmission. Central banks refine these tools to address emerging risks such as geopolitical tensions. Finally, the ongoing evolution of global financial conditions, including changes in US monetary policy and the role of the US dollar, necessitates proactive and flexible policy responses of EMEs to maintain macro-financial stability.

Among the 23 EME central banks which responded to the survey, 17 said that they used an FCI (Graph 14.A). Of the 17 central banks, 10 publish their FCIs, six explicitly mentioned that they followed the GDP growth target method, and 11 said they employ some statistical methods (eg PCA). For example, the Philippines explicitly mentioned using both methods. Türkiye reported that it was transitioning from a GDP growth impact method to a PCA method for constructing an FCI.

Given that EME central banks use widely different methods to construct FCIs, we calculate the FCIs for 20 EMEs, for which data are available, using the AGST FCI described in Box B. Graph B3 in the box shows that AGST EME FCIs exhibit different behaviours from the widely used Goldman Sachs EME FCIs, especially in 2020. Also, financial conditions at end-2025 measured by the Goldman Sachs FCI are looser than those by the AGST FCI. The difference largely stems from the way exchange rate appreciation and the weakness of the US dollar are accounted for in the two FCIs.

Financial condition indices (FCIs) in EME central banks

Number of respondents — Graph 14



[1] "Very" = very important in guiding policy decisions; "moderately" = moderate importance as a supplementary tool; "minimal" (not shown, as the value equals zero) = minimal importance due to limited data coverage.

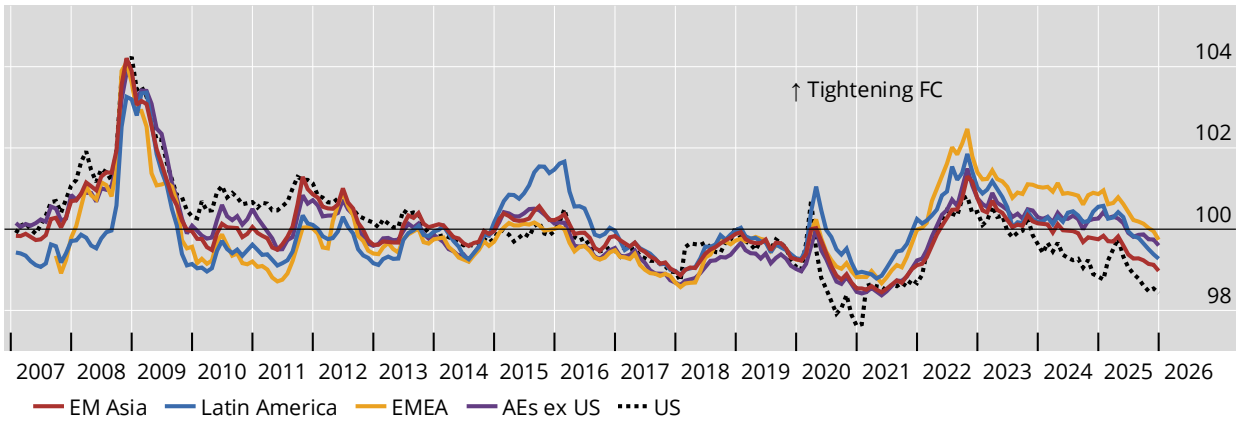
Source: 2026 EME Deputy Governors' meeting survey.

Across all AEs and EMEs, financial conditions generally moved together as a group over the past two decades (Graph 15). This is in line with the presence of the global financial cycle (see eg Miranda-Agrippino and Rey (2022) and the papers mentioned therein). In particular, financial conditions tightened the most during the GFC in both AEs and EMEs. The second tightest financial conditions were observed in all EME regions in 2022 during the unprecedented global rate hikes. Among the three EME regions, Europe, the Middle East and Africa (EMEA) experienced stronger tightening in financial conditions in 2022 than the other AE and EME regions, while in

2015 when the commodity supercycle ended, Latin America witnessed the strongest tightening of financial conditions among all AE and EME regions. Finally, during the peak of the 2010–11 eurozone debt crisis, financial conditions in AEs tightened more than those in EMEs.[9]

Financial conditions indices by regions[1]

Standardised units — Graph 15



[1] The FCI for each economy except the United States is calculated from risk-free rates (the overnight policy rate, the two-year and 10-year local currency government bond yields), risk premia (the JPMorgan CEMBI country spread for EMEs and the JPMorgan GABI country spread for AEs, the five-year sovereign CDS spread), and foreign/global factors (the bilateral exchange rate against the US dollar, the nominal broad US dollar index, US 10-year Treasury yield, the Merrill Option Volatility Estimate (MOVE) index). The FCI for the United States is calculated from risk-free rates, risk premia and the MOVE index. When calculating the impact of each FCI component on one-year ahead GDP growth, we control for each country's nominal effective exchange rate to consider the trade channel. The FCI values for each region are the simple average of country-specific FCIs. AEs excluding the United States are Australia, Canada, France, Germany, Japan, Switzerland and the United Kingdom. Source: BIS.

Türkiye's sensitivity to global financial conditions captured by the FCI is pronounced through its impact on GDP via firm-level investment. Panel regressions linking firm-level expectations and capacity utilisation to global financial tightening reveal that tighter global financial conditions depress firm-level expectations and capacity utilisation, particularly for leveraged and export-intensive firms.[10]

Graph 16 shows the cumulative impact of different components of FCIs since January 2025. Foreign and global factors have played a dominant role in easing FCIs in all EME regions since January 2025.[11] Graph A.15 shows that this was also true for seven major AEs excluding the United States. In order to see if the dominant role of foreign and global factors in loosening financial conditions in almost all EMEs in 2025

[9] Financial conditions eased in 2025 and Q1 2026 in almost all AEs and EMEs (Graphs A.11 and A.12).

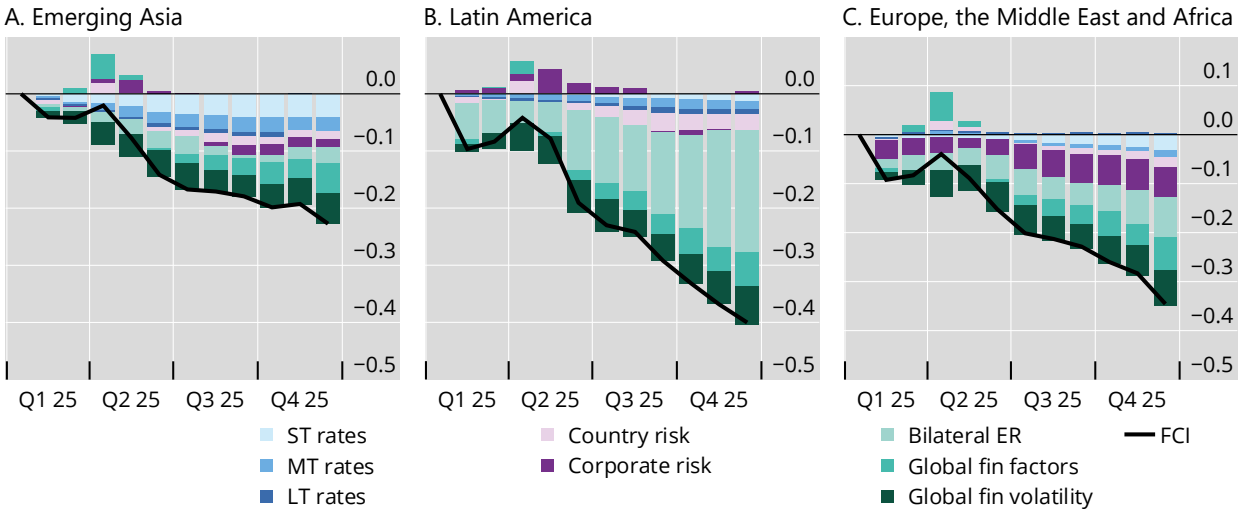
[10] This is consistent with Bruno and Shin (2023), who highlight that dollar appreciation tightens global credit conditions, increases borrowing costs and reduces investment. Turkish firms with larger FX debt are significantly affected by these dynamics, as exchange rate fluctuations amplify financial vulnerabilities. Kalemli-Özcan et al (2021) further support this and show that a depreciation of local currency increases the debt burden of firms with FX liabilities, leading to deleveraging pressures and reduced investment. This manifests in heightened corporate sector vulnerabilities, where increased borrowing costs and reduced global demand exacerbate the decline in GDP growth.

[11] When we look at the breakdown country by country, in Indonesia, India, Malaysia, Poland and Thailand external and global factors did not play a dominant role in loosening FCIs in 2025, but domestic factors played a bigger role in loosening financial conditions (Graph A.13).

was an exception, we compare the contribution of different FCI components with the one-year-ahead GDP growth in 2024. Graph A.14 shows that in 2024, FCI tightened in roughly half of the 20 EMEs, while it loosened in the other half. It also shows that foreign and global factors did not play a dominant role in many EMEs in 2024.

Decomposition of FCIs since January 2025[1]

Index, January 2025 = 0 — Graph 16



ER = exchange rate; LT = long-term; MT = medium-term; ST = short-term.

[1] Global financial factors include the nominal broad US dollar index and long-term US Treasury yields, while global financial volatility is measured by the Merrill Option Volatility Estimate (MOVE) Index. Regions aggregated using a simple average.

Source: BIS.

Finally, given the growing importance of capital outflows from EMEs, it would be important to also consider the potential impact of large capital outflows by residents on their overall financial conditions, for example via exchange rates.

Box B

Measuring FCIs for EMEs

Financial conditions influence macroeconomic outcomes. A financial conditions index (FCI) aggregates financial variables into a single metric to reflect the cost and availability of financing for households, firms and governments. While FCIs are valuable for monitoring financial markets and assessing monetary policy transmission, their construction varies across institutions, leading to differing diagnoses. This box presents the methodology of AGST FCI1 and its differences with that of widely used FCIs.

To estimate the impact of financial variables on GDP growth, we use local projections as below:

$$Y_{t+h} = \alpha_0 + \sum_{j=1}^{4} \gamma_j^h y_{t-j} + \beta^h financial\ component_t + \delta^h NEER_t + \varepsilon_{t+h} \quad (1)$$

where Y is the cumulative response of the GDP growth rate between quarter t–1 and quarter $t+h$ with h = 0, 1, 2 and 3, y the lagged dependent variable from t–1 to t–4, the *financial component* the financial variable being tested for its relationship with GDP growth and *NEER* the nominal effective exchange rate, which is used to control for the trade channel of exchange rates on GDP growth. This methodology is implemented for 20 EMEs: BR, CL, CN, CO, CZ, HK, HU, ID, IN, KR, MX, MY, PE, PH, PL, SG, TH, TR, VN and ZA. The trade and financial channels of exchange rates work similarly, albeit weaker, for AEs excluding the United States, so we use the same methodology for calculating FCIs of AEs excluding the United States in Graph 15.

We use the following three blocks of financial variables to capture the financing channel of the transmission:

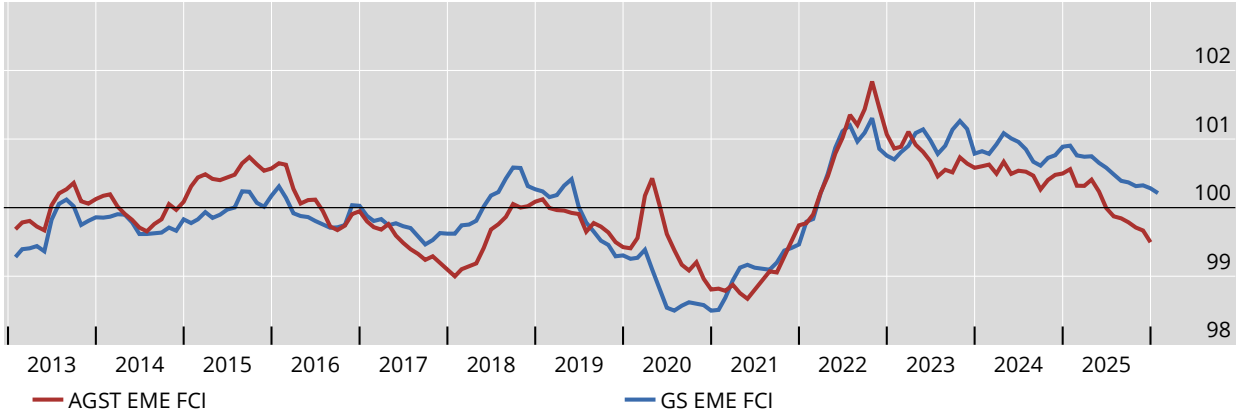
1) Domestic factors: risk-free interest rates
- Short-term rate: the overnight monetary policy rate
- Medium- and long-term rates: two-year and 10-year local currency government bond yields, respectively

2) Domestic factors: risk premium
- Credit market: JPMorgan CEMBI Broad index spread used as a proxy for corporate default risk
- Five-year sovereign CDS spread as a proxy of sovereign default risk

3) Foreign and global factors
- Exchange rate: bilateral exchange rate against the US dollar
- Global financial factors: nominal broad US dollar index and US long-term Treasury yield
- Global financial market volatility: MOVE index

FCIs can diverge for EMEs across methodologies[1]

January 2018 = 100 — Graph B1



A higher value of an FCI means tightening financial conditions.

Sources: Goldman Sachs; BIS.

Important caveats arise when we compare the AGST methodology with others, emphasising the need to understand component selection and weighting. Goldman Sachs (GS) FCIs for EMEs prioritise domestic risk-free rates and assume that an exchange rate depreciation against the US dollar eases financial conditions by giving greater weights on the trade channel (NEER) than on the financial channel (debt-weighted exchange rate).2 While suitable for some AEs, these assumptions may not be suitable for EMEs.3 A comparison shows stark differences: AGST FCIs indicate tightening during exchange rate depreciation and heightened volatility in 2020, whereas GS FCIs suggest loosening (Graph B1). Such divergence could have significant policy implications, potentially confusing the private sector. Finally, Lombardi et al (2025) propose a two-factor approach, offering insights into the macroeconomic implications of safe interest rates and domestic financial risks, but this is not directly comparable with that of GS or AGST FCI.

The role of and implications for EME central banks' policy mix

This section reviews the policy responses of EME central banks to recent global financial shocks and stress episodes. It further explores how the structural changes outlined in this note might influence the effective use of various policy instruments and their coordination.

Recent experiences

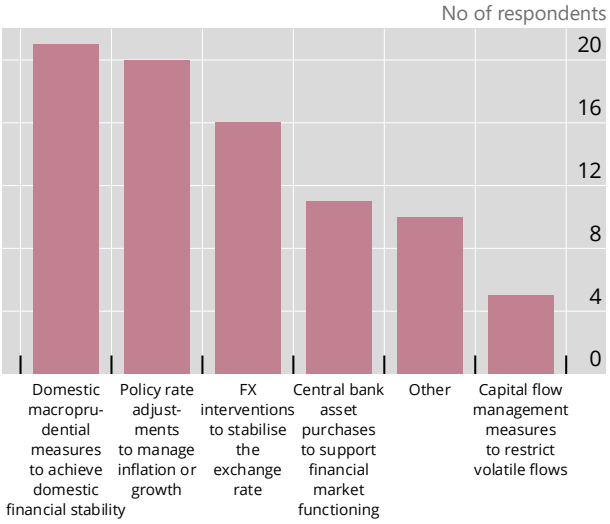
Over the past five years, EMEs have shown remarkable resilience in navigating three major global shocks: the start of the Covid-19 pandemic in early 2020, the globally synchronised monetary policy tightening in 2022 and the trade and geopolitical uncertainty shocks in 2025. The 2020 and 2022 episodes were characterised by tighter global financial conditions and capital outflows from EMEs, which posed significant challenges but did not cause a financial crisis. The backdrop in 2025, however, was different. EMEs benefited from loose global financial conditions driven by a weak US dollar, which provided a favourable backdrop for managing the uncertainty around trade and geopolitical developments.

In response to the Covid-19 shock and the tightening of international financial conditions in 2022, EME central banks adopted flexible and varied policy mixes tailored to their specific circumstances (BIS (2022a, 2025); Borio et al (2022)). Policy rate adjustments, macroprudential measures and FX intervention (FXI) emerged as the most commonly utilised tools both across countries – with nearly two thirds of respondents reporting the use of all three tools – and across stress episodes (Graph 17.A).

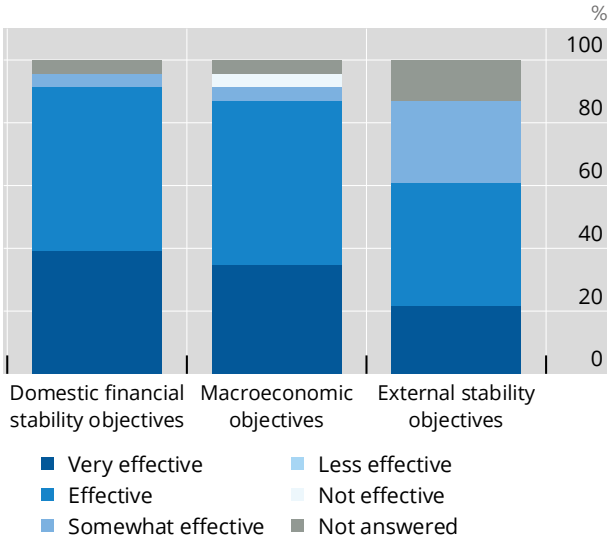
Policies used in market stress periods and their effectiveness

Graph 17

A. Policies deployed during recent market stress periods[1]



B. How effective have policy measures been in achieving specific objectives?



[1] Answer to "What policy mix has your country deployed during recent market stress periods (eg the pandemic, global rate hikes, geopolitical tensions)?".

Source: 2026 EME Deputy Governors' meeting survey.

Central banks generally assess that their policies have been effective in achieving macro-financial stability objectives, although they have been somewhat less effective in addressing external stability challenges (Graph 17.B). Over 90% of respondents report that the measures implemented during recent market stress periods have been effective or very effective in stabilising inflation and supporting economic growth. Similarly, nearly 90% of central banks found these policies effective in achieving domestic financial stability objectives, such as maintaining credit provision and ensuring market functioning. However, for external stability objectives, only 60% of respondents rated their measures as effective or very effective, highlighting ongoing challenges in managing external pressures like currency volatility and capital outflows.

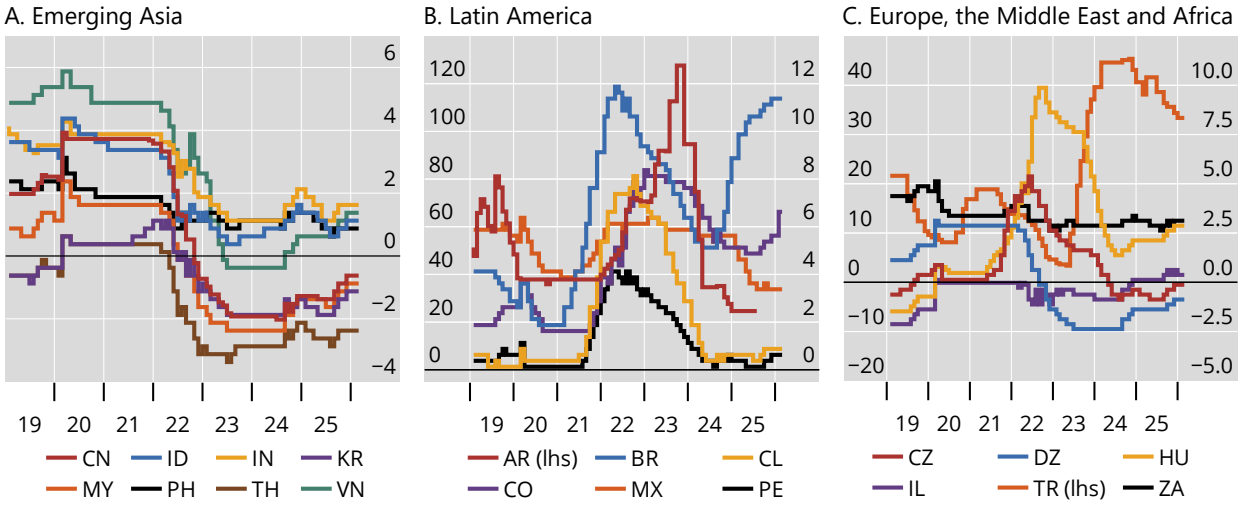
Policy rate adjustments have been the primary line of defence for EMEs, although their use has varied across stress episodes. In early 2020, almost all EME central banks cut rates to support their domestic economy despite sharp currency depreciations and significant capital outflows (Graph 18). This was facilitated by well anchored inflation expectations, swift monetary easing in AEs and the provision or reinstatement of Fed swap lines to major central banks, which quickly stabilised global markets. Conversely, in 2022, amid synchronised monetary tightening in AEs and a strengthening US dollar, EME central banks raised policy rates to stabilise inflation and support their currencies, albeit at different speeds across regions. Asian EMEs tightened modestly due to weaker inflationary pressures and lower sensitivity of domestic financial conditions to the dollar, while Latin American central banks acted earlier and tightened more aggressively, raising long-term yields and stabilising their currencies. Finally, in 2025, as disinflation progressed, most major EME central banks cut rates gradually or held rates steady, supported by appreciating currencies and favourable financial conditions. If the US dollar were to appreciate sharply in 2026,

EME central banks might face constraints on deploying monetary policy focusing on domestic macroeconomic developments.

Policy rate differential between EMEs and the United States[1]

In percentage points

Graph 18



[1] Differential between end-month figures.

Sources: Macrobond; national data; BIS.

Central banks have often complemented interest rate policy with FXI to stabilise exchange rates and ensure orderly market functioning. The choice of policy mix depends on various factors, including country-specific characteristics of financial markets and policy space. For example, EMEs with a history of higher inflation and greater sensitivity of local currency bond returns to fluctuations in the US dollar (see previous section) tended to rely more on policy rate adjustments to combat inflation. This dynamic was evident in 2022–23, as Latin American economies raised policy rates by relatively more and relied more on exchange rate flexibility, while Asian EMEs did not raise policy rates as much but leaned more on FXI (Graph 19). One exception was Peru, which effectively used FXI to reduce the impact of external shocks. EMEs in the other regions increased policy rates aggressively and also actively engaged in FXI.

EME central banks have also used macroprudential measures to maintain financial and external stability during stress episodes. For instance, the Hong Kong Monetary Authority (HKMA) reduced the Countercyclical Capital Buffer in March 2020 and eased macroprudential measures for property mortgage loans in July 2023. Similarly, at the onset of the pandemic some EMEs relaxed FX-related prudential regulations. In March 2020, the Korean authorities raised forex futures trading limits for banks, temporarily lifted the macroprudential levy on financial institutions' non-deposit FX liabilities and lowered FX liquidity coverage ratio (LCR) from 80% to 70%.

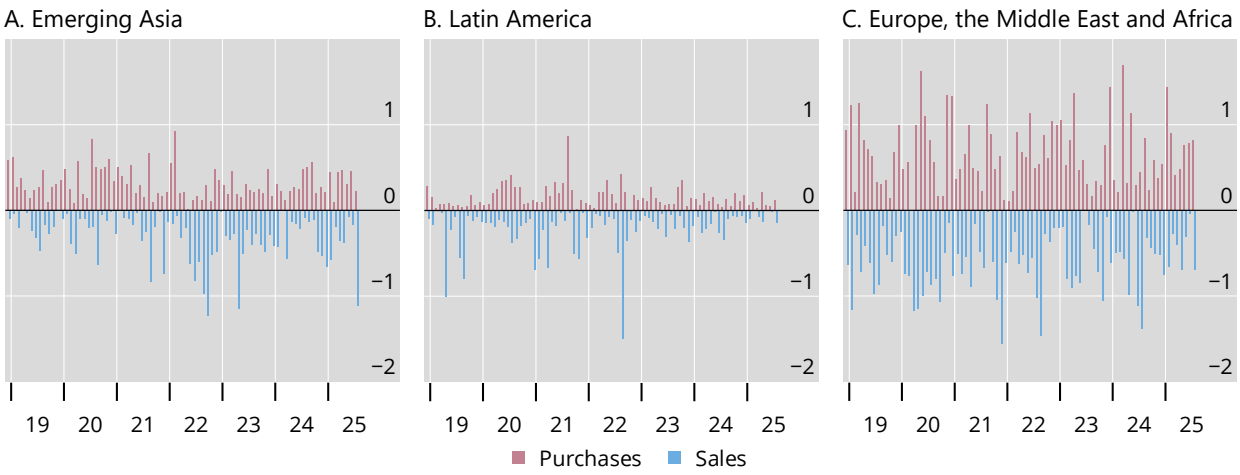
Local currency asset purchases were employed by some central banks exclusively during the pandemic, with usage varying by region. In emerging Asia, central and eastern Europe and Africa, central banks actively purchased government bonds to support pandemic-related measures and promote economic recovery. In contrast, EME central banks in Latin America were more cautious about public debt purchase programmes, largely avoiding direct purchases and instead conducting twist-type

operations, where they bought long-term securities while selling short-term ones to absorb duration risks and curtail long-term rates.[12]

Foreign exchange interventions[1]

As a percentage of GDP

Graph 19



Emerging Asia = CN, HK, ID, IN, KR, MY, PH, SG, TH and VN; Latin America = AR, BR, CL, CO, MX and PE; Europe, the Middle East and Africa = AE, CZ, DZ, HU, IL, PL, SA, TR and ZA.

[1] Median of countries in the region of proxied foreign exchange intervention as a percentage of three-year moving average GDP.

Source: Adler et al (2025).

Capital flow management measures (CFMs) targeting non-residents' capital inflows have been applied sporadically by EMEs, whereas CFMs related to residents' capital outflows were used frequently in recent years – often to promote repatriation of foreign investments. In 2025, the Central Bank of Malaysia increased FX policy flexibility to encourage resident corporates to repatriate foreign currency investment income, aiming to maintain continued two-way flows in the domestic FX market. Similarly, in December 2025 Korea introduced tax exemptions to encourage retail investors to sell foreign equities and reinvest those funds in the domestic equity market, thereby alleviating downward pressure on the local currency. In contrast, the Thai authorities simplified outbound investment procedures, allowing residents easier access to foreign securities to mitigate upward pressure on the Thai baht.

Implications of the structural changes for EMEs' policy frameworks

What might be the impact of the structural changes documented in this note on the appropriate policy mix going forward?

More symmetrical international investment positions of EMEs may contribute to greater macroeconomic stability under certain circumstances. However, gross capital inflows to EMEs by non-residents and gross capital outflows from EMEs by residents do not necessarily cancel each other out – and can even amplify each other. For example, when the US dollar suddenly becomes strong, foreign investors in an EME

[12] See Cantú et al (2021).

may sell the EME's local currency assets and repatriate the proceeds to their home country. At the same time, domestic investors in the EME may want to purchase more US dollar-denominated assets. When both types of outflows go through the EME's relatively illiquid and shallow FX markets at the same time, the EME may suffer from negative spirals between currency depreciation, capital outflows and local asset price declines. This means that a robust macro-financial stability framework grounded in a macroprudential perspective remains essential.

In addition, the composition of international assets and liabilities, as well as the characteristics of their investor bases, can vary significantly and may exhibit asymmetric responses to shocks. Moreover, a more symmetrical international investment position can involve more complex asset and liability structures, requiring sophisticated risk management tools. To address these complexities, authorities would need to strengthen regulatory frameworks, improve transparency and enhance the monitoring of cross-border financial activities.

As the growing role of domestic NBFIs and retail investors investing abroad may heighten the volatility of dollar demand, EME financial authorities may need to take steps to strengthen the resilience of these investors in the face of disruptions in dollar funding markets. These include: (i) enhancing the monitoring of systemic risks posed by NBFIs; (ii) improving oversight of FX funding liquidity risks stemming from asset managers and institutional investors; (iii) calibrating regulations on FX hedging to incentivise longer-term hedging; and (iv) assessing the need for facilities to provide FX liquidity to NBFIs during severe market stress. For example, the disruptions in Korea during March 2020 highlight how the dollar funding liquidity needs of institutional investors and asset managers can intensify the broader scramble for dollar funding during financial turmoil. These non-bank investors have traditionally been subject to less stringent FX liquidity regulations and risk management requirements than banks, which pose challenges to financial authorities in monitoring and addressing their funding needs.

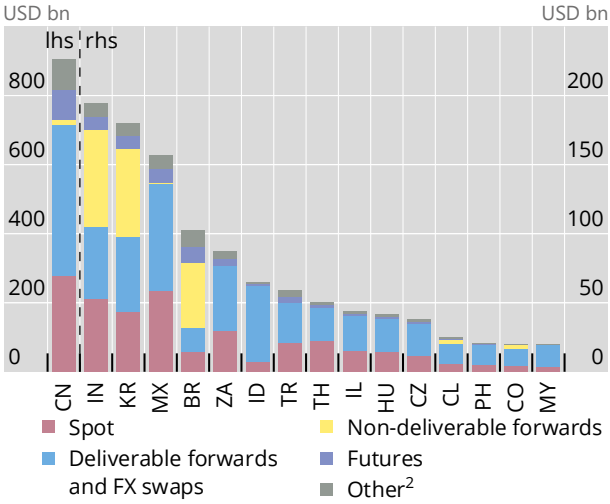
A key aspect for EMEs' resilience amid the fast growth of EME international assets and liabilities is the depth of FX spot and derivatives markets (BIS (2022b)). The latest BIS Triennial Survey of FX and OTC derivatives markets shows that FX markets in EME currencies have grown in size and reached a new high of 29% of global trading (Wooldridge (2025)). For some EME currencies, the average daily turnover in FX spot and derivatives markets reached levels which, on the surface, suggest that markets can handle a significant volume of trades (Graph 20.A).

Relative to the stock of EMEs' foreign assets, however, FX market depth is still low. In some instances, such as Malaysia, Chile and Korea, the value of foreign assets held by residents is more than 20 times the normal daily turnover in FX spot markets of their currencies (Graph 20.B). The depth of FX markets may therefore not be sufficient to handle the sale of a relatively small share of foreign assets. In countries where foreign asset holdings are 20 times the turnover in FX markets, a sale of just 5% of foreign assets in a given day would exceed the normal daily trading volume of the FX spot market. FX hedging markets for EME currencies appear somewhat deeper, but the size of foreign assets is still a large multiple of the daily turnover in FX derivatives markets for many EMEs.

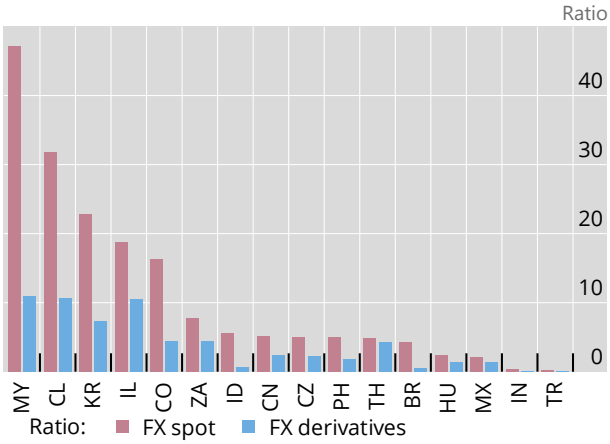
Foreign exchange market depth remains low

Graph 20

A. Average daily FX market turnover as of April 2025[1]



B. Ratio of foreign assets over average daily FX market turnover as of end-2024[1, 3]



[1] FX market turnover covers both over-the-counter (OTC) and exchange-traded (XTD) markets. [2] "Other" includes OTC and XTD options, cross-currency swaps and other exotic OTC derivatives. [3] The ratios are calculated as total international assets of a given jurisdiction at end-2024 divided by the average daily FX turnover (spot or derivatives) in April 2025, the date of the latest BIS Triennial Survey.

Sources: IMF; BIS exchange-traded derivatives statistics; BIS Triennial Survey; BIS.

Finally, as EME financial markets become increasingly interconnected across regional currencies, policymakers should closely monitor regional developments, since stress in one regional currency's markets can trigger contagion effects on those of other regional currencies. For example, in April 2025, when life insurance companies in Chinese Taipei rushed to cover their uncovered dollar exposures in the non-deliverable forwards market (Setser (2025); Shin et al (2025)), the Korean won also appreciated, as investors used the won as a proxy to hedge their Taiwanese dollar exposures (Wigglesworth (2025)). This suggests that FX hedge ratios and investors' currency exposure management require careful monitoring. Similarly, in some EMEs (eg Brazil), local NBFIs hold significant derivatives positions with other EMEs' assets, which means that shocks originating from major EMEs could spill over to others.

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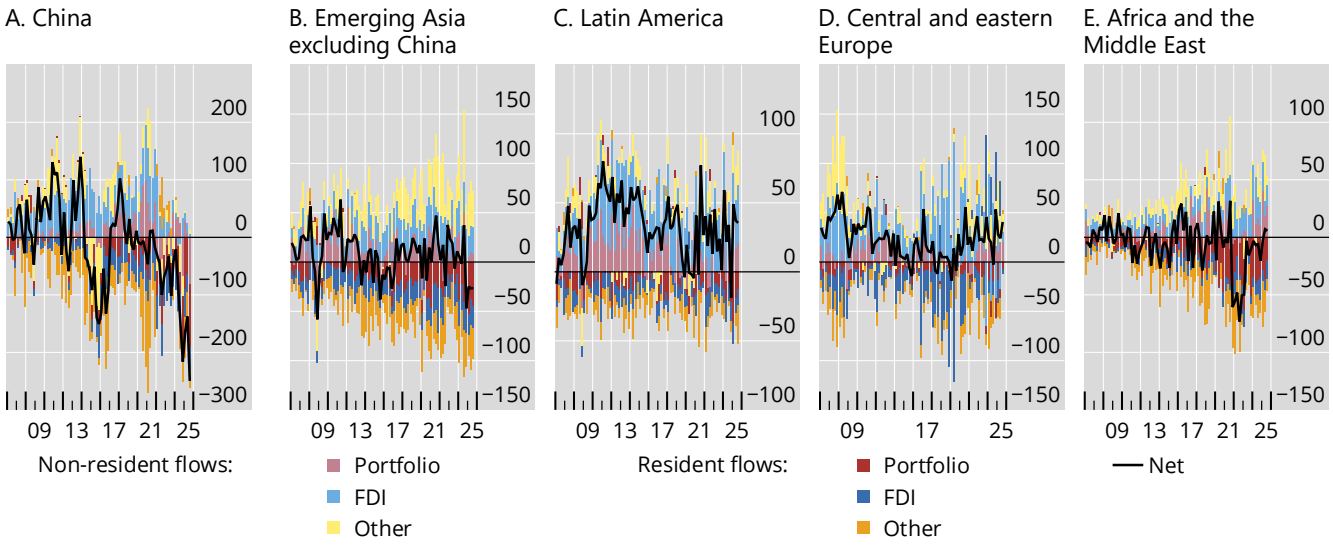
Annex graphs and tables

Capital flows by EME regions (quarterly data)[1]

In billions of US dollars (up to Q3 2025) Graph A.1



EMEs in Asia-Pacific excluding China = ID, IN, KR, MY, PH, TH and VN; Latin America = AR, BR, CL, CO, MX and PE; Central and eastern Europe = AL, BA, BG, BY, CY, CZ, EE, HR, HU, LT, LV, MD, MK, MT, PL, RO, SI, SK, TR and UA. Africa and the Middle East = AO, BI, BW, CD, CM, CV, DJ, DZ, EG, ER, ET, GA, GH, GM, GN, IL, IQ, JO, KW, LR, LS, MA, MG, MR, MZ, NA, NG, QA, RW, SA, SC, SD, ST, SZ, TN, TZ, UG, YE, ZA, ZM and ZW.

[1] Data for MY and VN up to Q4 2024.

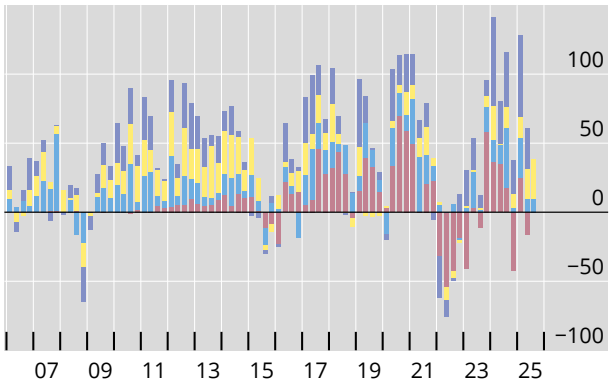
Sources: IMF; BIS.

Portfolio capital and banking inflows from non-residents to EMEs

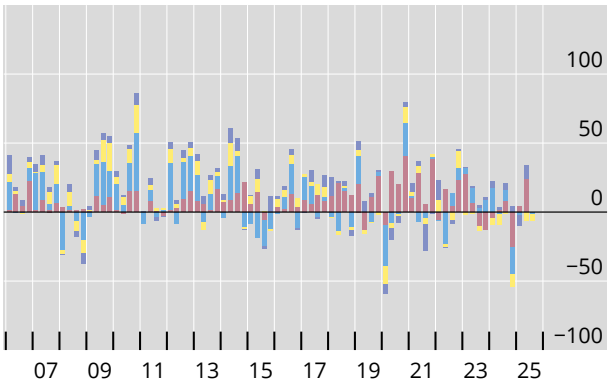
In billions of US dollars

Graph A.2

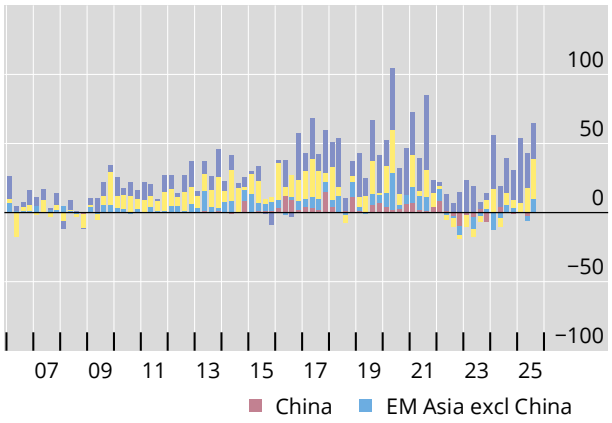
A. Local currency-denominated bonds



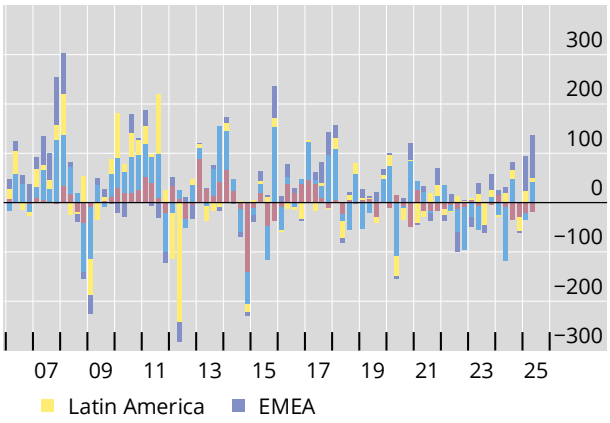
B. Equities



C. Foreign currency-denominated bonds[1]



D. Foreign-currency denominated loans

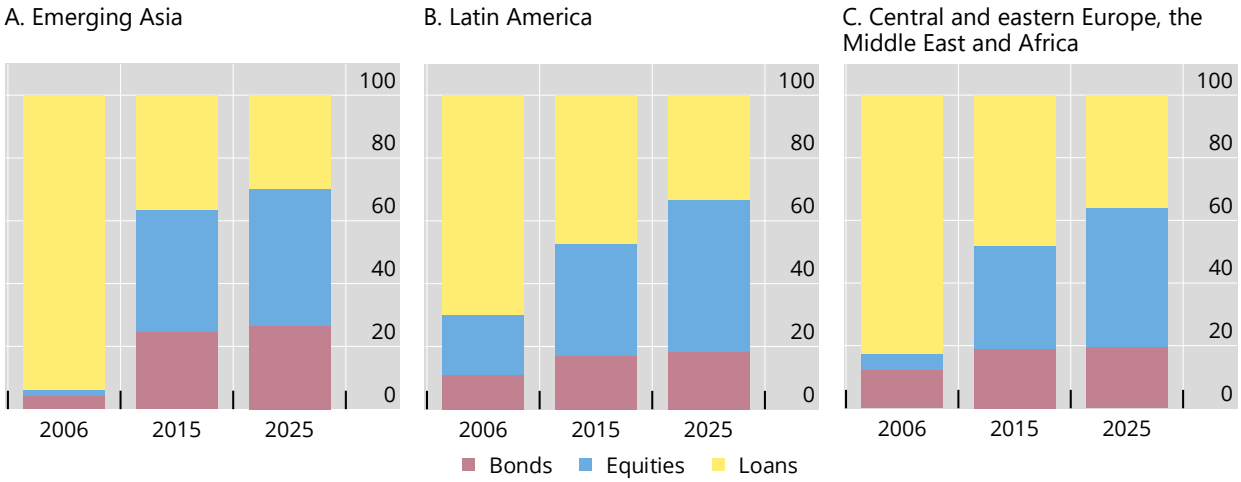


[1] Quarterly changes in foreign currency (US dollar, yen and euro) credit, converted into the dollar across major economies in each region. China is included from Q1 2010.

Sources: IMF; BIS global liquidity indicators; BIS locational banking statistics; BIS.

Changing composition of portfolio capital and banking investments abroad by EME residents[1]

In per cent; the amount outstanding of foreign assets — Graph A.3

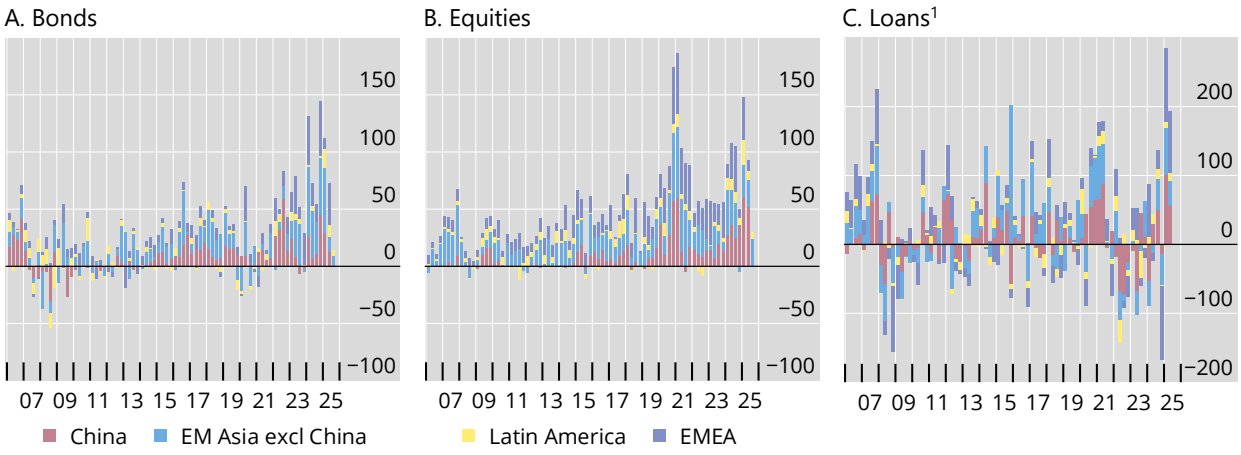


[1] Portfolio bond and equity outflows from residents in the region; loans and deposits correspond to the outstanding amount of the liabilities of banks located in reporting countries excluding an EME to all banks and non-banks in the EME in each region.

Sources: IMF; BIS locational banking statistics; BIS.

Portfolio capital and banking outflows from EME residents to other countries

In billions of US dollars — Graph A.4



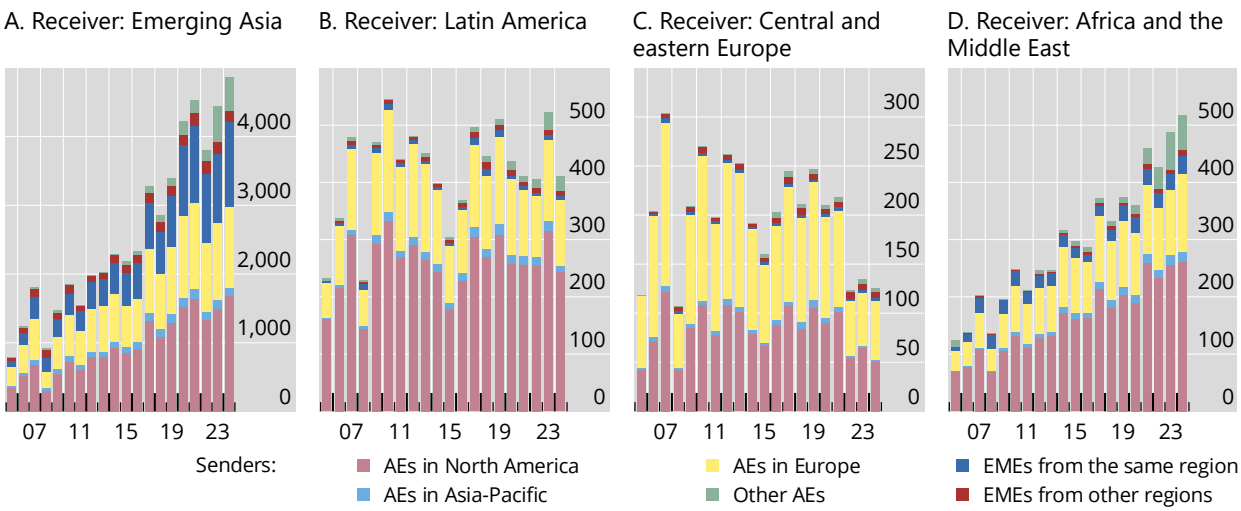
[1] loans and deposits correspond to the change in the outstanding amount of the liabilities of banks located in reporting countries excluding an EME to all banks and non-banks in the EME in each region.

Sources: IMF; BIS locational banking statistics.

Portfolio equity investment in EME regions by non-resident investors[1]

In billions of US dollars

Graph A.5



AEs in Asia-Pacific = AU, JP and NZ; AEs in North America = CA and US; AEs in Europe = AD, EU, FO, GI, GL, GG, IS, IM, JE, LI, NO, SM, CH, GB and VA; Other AEs = AI, AW, BM, BQ, KY, CW, FK, PF, TF, MS, AN, NC, SX, SH, TC, PU, VG, and WF; EMEs in Asia-Pacific = BD, CN, HK, ID, IN, KR, KZ, MN, MO, MY, PH, PK, SG, TH and VU; Latin America = AR, BB, BO, BR, BS, CL, CO, CR, HN, MX, PA, PE, SV, UY and VE; central and eastern Europe = AL, BG, BY, CZ, HU, MK, PL, RO, RU, TR, UA and XK; Africa and the Middle East = BH, EG, IL, KW, LB, LR, MU, NA, PS, SA and ZA.

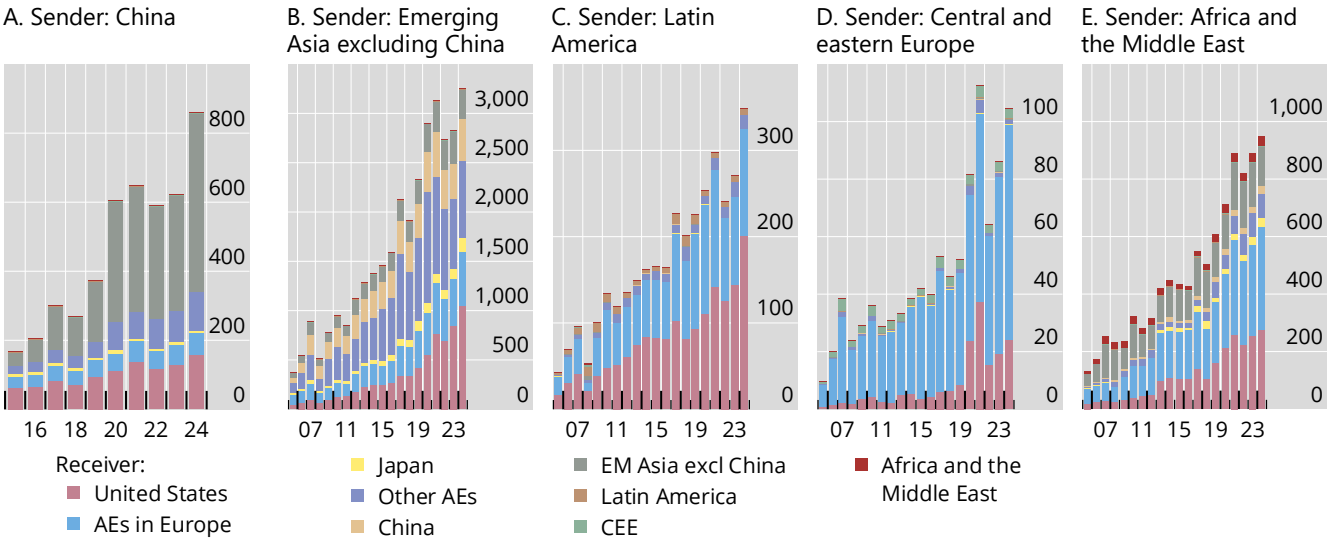
[1] SA started reporting to IMF *PIP* in 2013; while CN and PE in 2015; data RU up to 2021.

Sources: IMF; BIS.

Portfolio equity investment in foreign countries by residents in EME regions[1]

In billions of US dollars

Graph A.6



AEs in Europe: AD, EU, FO, GI, GL, GG, IS, IM, JE, LI, NO, SM, CH, GB and VA; Other AEs = AI, AW, BM, BQ, KY, CW, FK, PF, TF, MS, AN, NC, SX, SH, TC, PU, VG, and WF; EMEs in Asia-Pacific excluding China = BD, HK, ID, IN, KR, KZ, MN, MO, MY, PH, PK, SG, TH and VU; Latin America = AR, BB, BO, BR, BS, CL, CO, CR, HN, MX, PA, PE, SV, UY and VE; Central and eastern Europe = AL, BG, BY, CZ, HU, MK, PL, RO, RU, TR, UA and XK. Africa and the Middle East = BH, EG, IL, KW, LB, LR, MU, NA, PS, SA and ZA.

[1] SA started reporting to IMF *PIP* in 2013; while CN and PE in 2015; data on RU up to 2021.

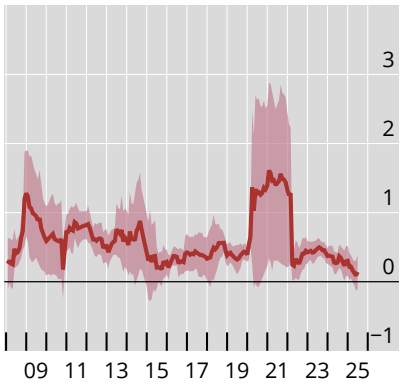
Sources: IMF; BIS.

Changing impact of global and foreign factors on portfolio fund inflows to EMEs[1]

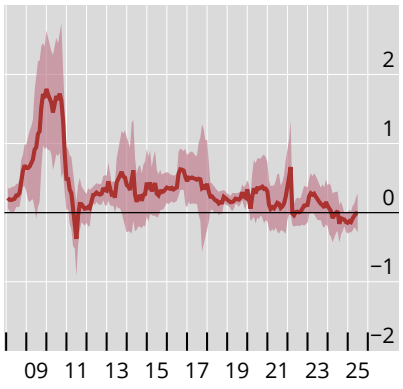
Coefficient on the one percentage change in each factor — Graph A.7

EPFR monthly bond fund flows

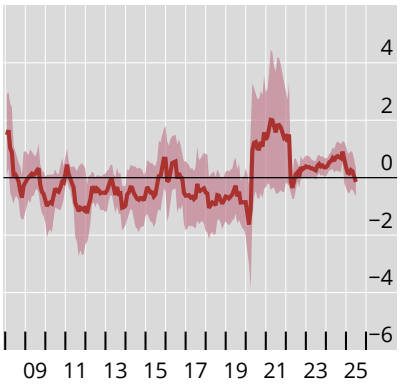
A. Nominal broad US dollar index[2]



B. VIX (inverted)[3]

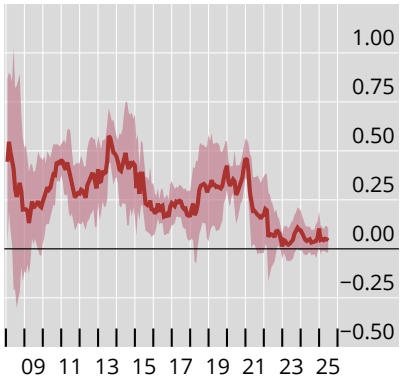


C. Policy rate differential[4]

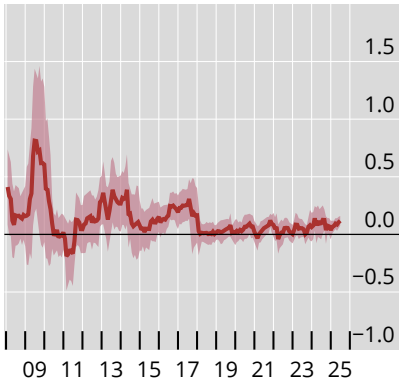


EPFR monthly equity fund flows

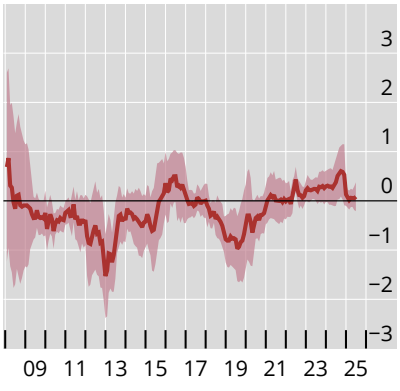
D. Nominal broad US dollar index[2]



E. VIX (inverted)[3]



F. Policy rate differential[4]



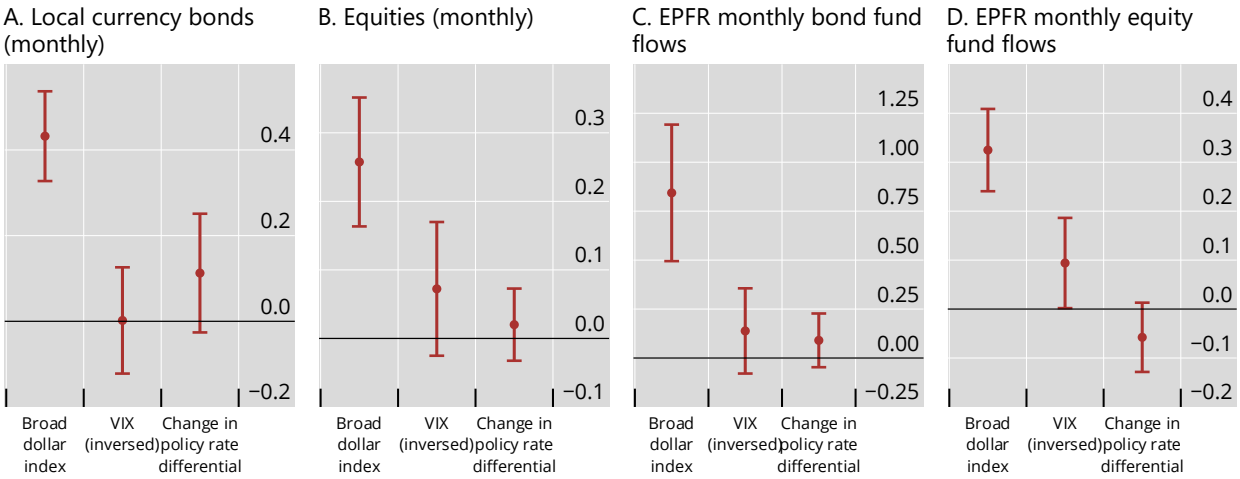
Coefficient — 95% confidence interval

[1] The red line shows the change in the ratio of fund flows to total fund holdings in response to a 1% depreciation of the nominal broad US dollar index; a one-unit decrease in the VIX; or a 1 percentage point in the policy rate differential. The regressions use two-year moving windows with monthly data. The contemporaneous value of these two variables and the one-period lagged value of the change in the policy rate differential are included jointly in regressions, together with the one-period lagged dependent variable and one-period lagged controls (US CPI, EME CPI, US industrial production (IP), EME IP, Brent oil price; for equities, EME and US equity market returns are also included). The shaded area shows the 95% confidence interval. [2] A positive coefficient means that a 1% depreciation of the nominal broad US dollar index increases fund flows. [3] A positive coefficient means that a one-unit decrease in the VIX index increases fund flows. [4] A positive coefficient means that a 1 percentage point increase in the policy rate differential increases fund flows.

Sources: Federal Reserve Bank of St Louis; Bloomberg; LSEG Datastream; national data; BIS.

Standardised impact of global factors and policy rate differentials on capital inflows[1]

Coefficient on the standardised explanatory variables — Graph A.8

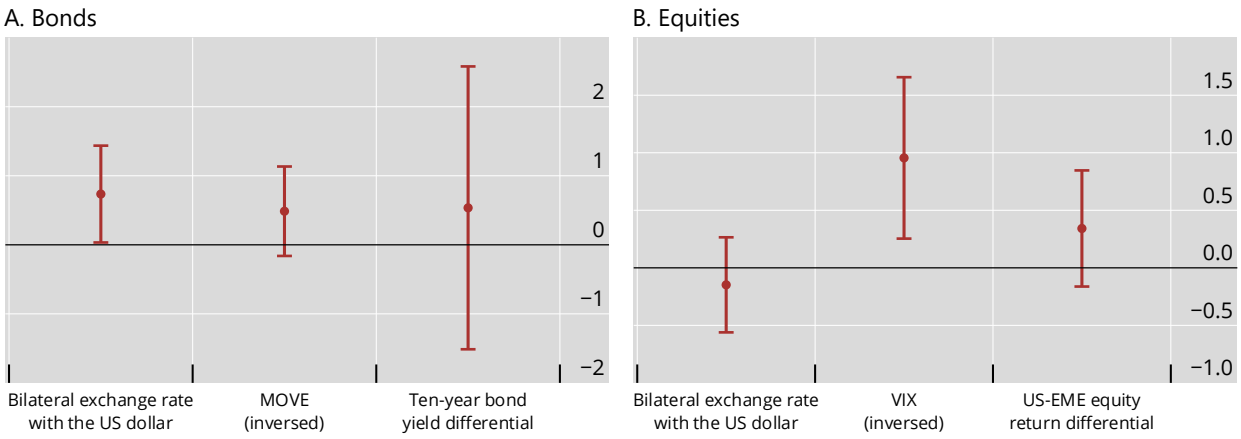


[1] Each dot shows the change in the ratio of capital flows to total foreign holdings in percentage points in response to a one standard deviation depreciation of the nominal broad US dollar index, a one standard deviation decrease in the VIX or a one standard deviation increase in the change in the policy rate differential. The contemporaneous value of the first two variables and the one-period lagged value of the third variable are included jointly in monthly regressions of portfolio flows, together with one-period lagged dependent variable and controls (US CPI, EME CPI, US industrial production (IP), EME IP, Brent oil price; for equities, EME and US equity market returns are also included). 95% confidence interval is shown around the point estimate.

Sources: Federal Reserve Bank of St Louis; Institute of International Finance; IMF; Bloomberg; LSEG Datastream; Global EPFR; BIS.

Standardised impact of global and foreign factors on capital outflows[1]

Coefficient on the standardised explanatory variables — Graph A.9



[1] Each dot shows the change in the ratio of capital flows to total foreign holdings in percentage points in response to a one standard deviation appreciation of an EME local currency against the US dollar, a one standard deviation decrease in the MOVE index or the VIX index, or a one standard deviation increase in the level of ten-year bond yield differential between the US and an EME, or the change in the US-EME equity return differential. The one-period lagged value of the first and the third variables and the contemporaneous value of the second variable are included jointly in quarterly regressions of portfolio outflows, together with the one-period lagged dependent variable and lagged controls (US CPI, EME CPI, US real GDP, EME real GDP and the US-EME policy rate differential). 95% confidence interval is shown around the point estimate. 15 EMEs are considered in the regressions.

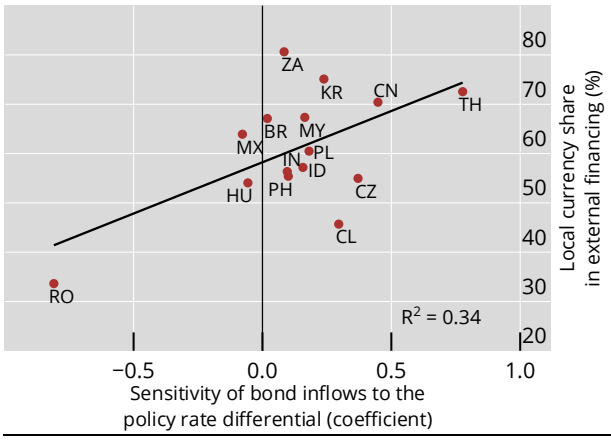
Sources: IMF; Bloomberg; LSEG Datastream; national data; BIS.

Cross-sectional relationship between structural factors and an EME's capital flow sensitivity to foreign/global factors[1]

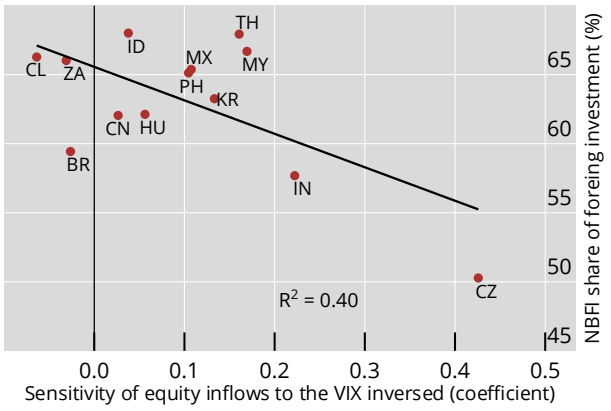
Graph A.10

Inflows

A. Bond

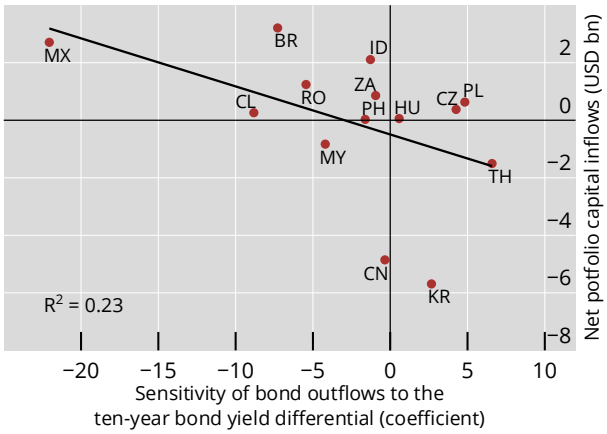


B. Equity

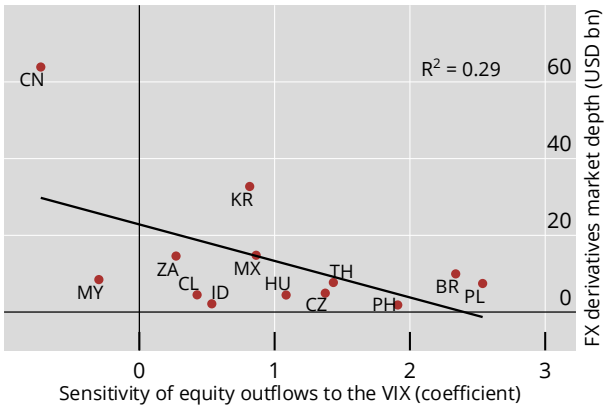


Outflows

C. Bond



D. Equity



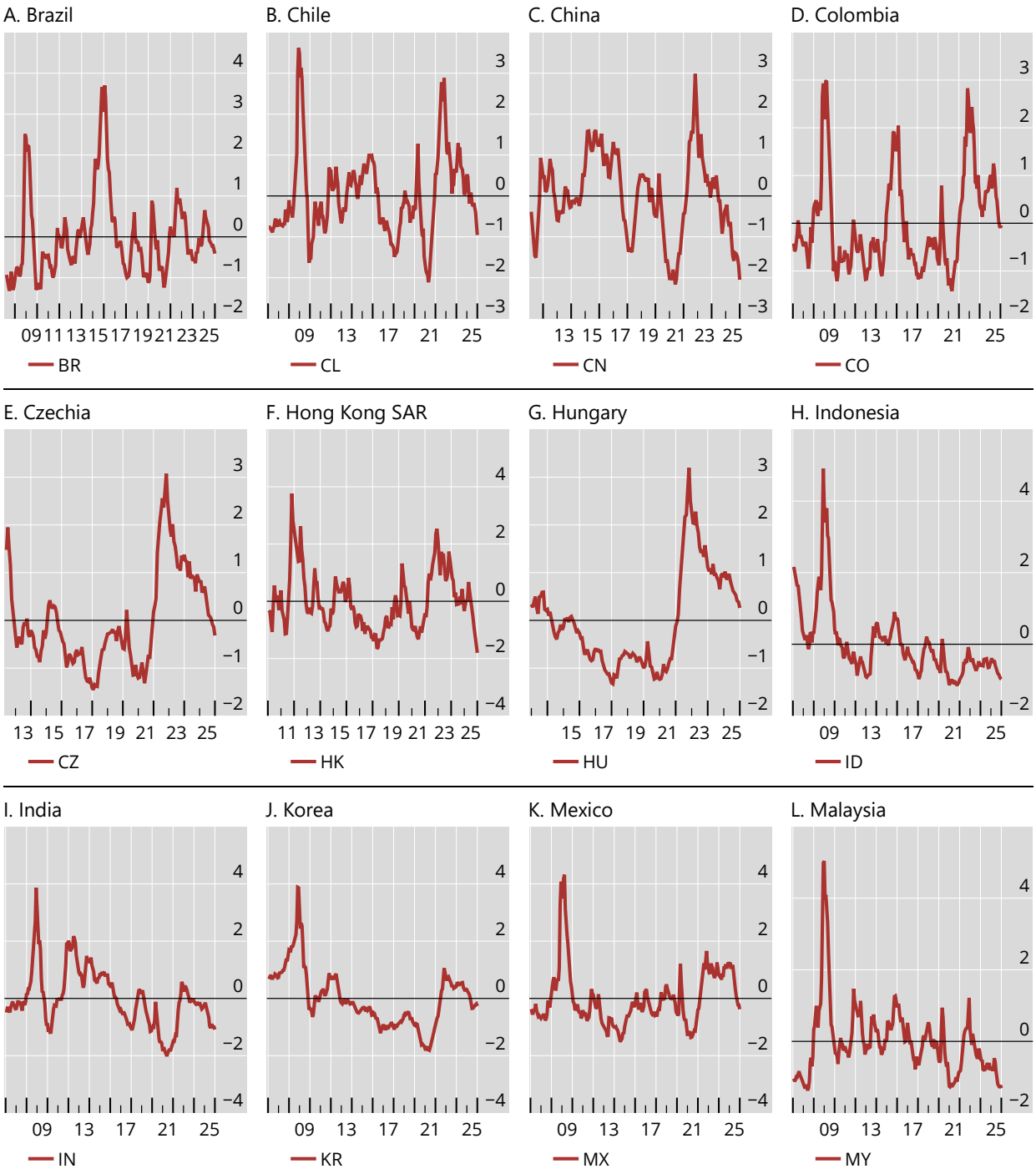
[1] On the horizontal axis, the values for sensitivity correspond to the coefficients estimated as described in Graph A.8 for inflows and in Graph A.9 for outflows, respectively, for each EME. The values on the vertical axis correspond to the average of each variable for each EME over the last 20 years upon data availability.

Sources: Federal Reserve Bank of St Louis; IIF; IMF; Bloomberg; EPFR; LSEG Datastream; national data; BIS Triennial Survey; BIS.

Financial conditions indices in individual EMEs[1]

Standardised units

Graph A.11



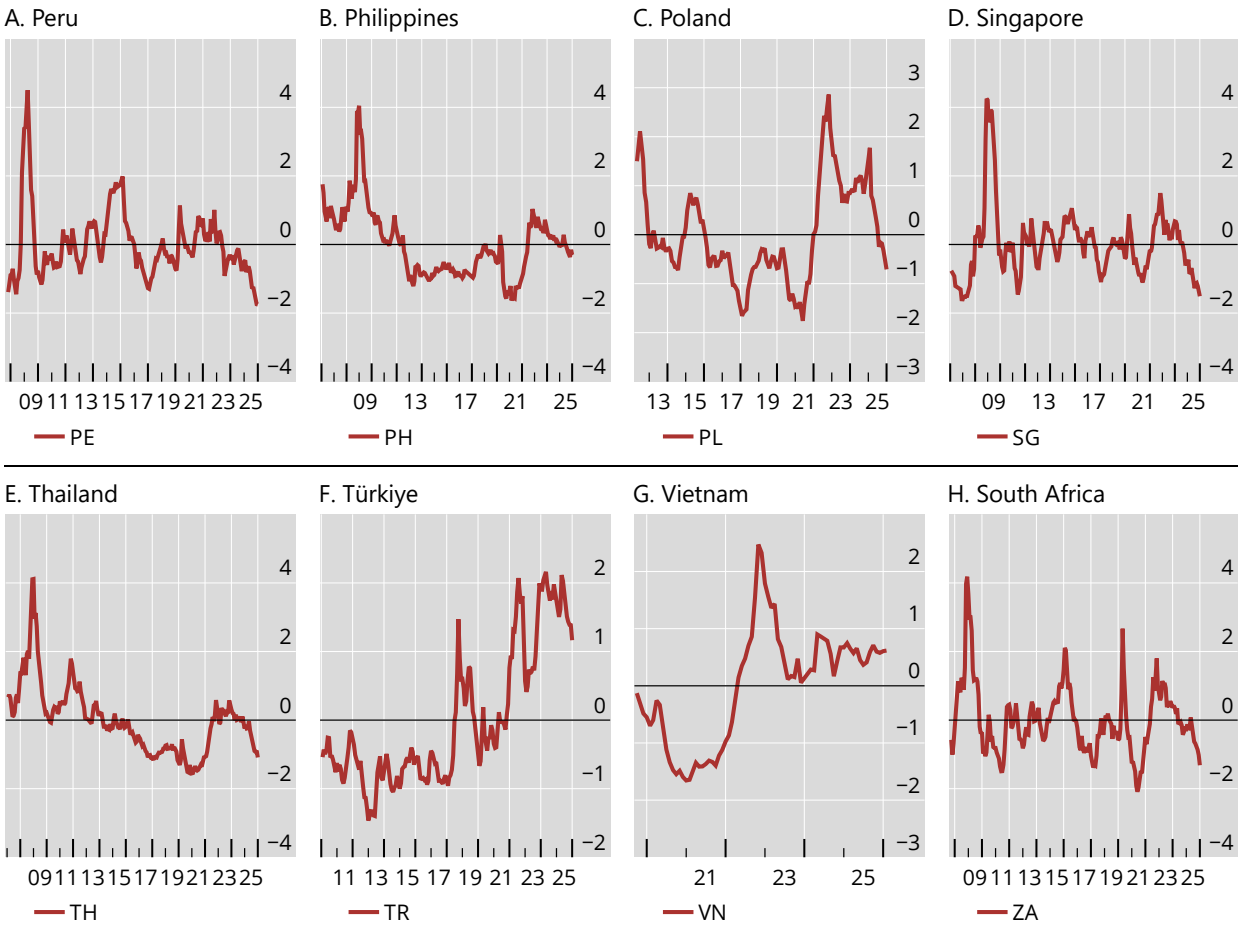
[1] FCIs are normalised with positive values indicating tighter financial conditions relative to history. For more details, see the footnote to Graph 15.

Source: BIS.

Financial conditions indices in individual EMEs (continued)[1]

Standardised units

Graph A.11



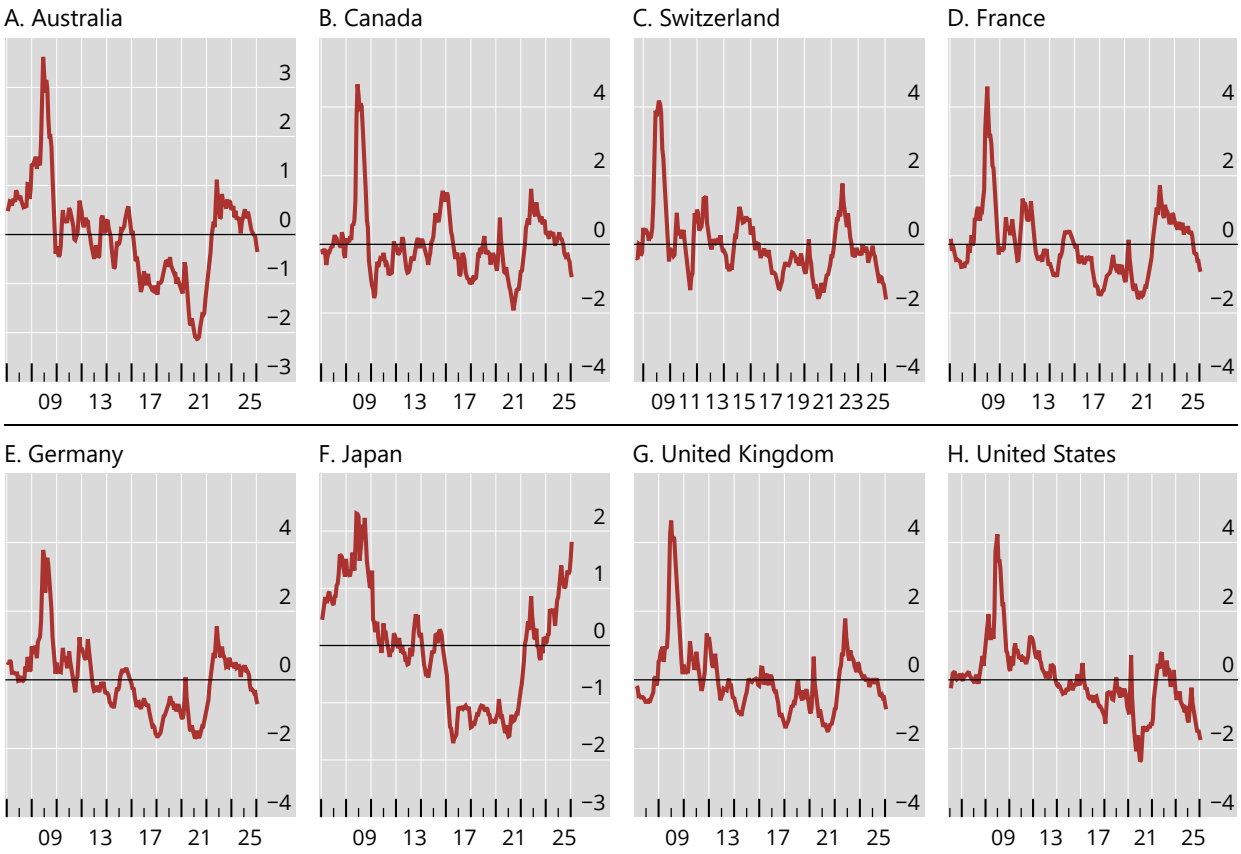
[1] FCIs are normalised with positive values indicating tighter financial conditions relative to history. For more details, see the footnote to Graph 15.

Source: BIS.

Financial conditions indices in individual AEs[1]

Standardised units

Graph A.12



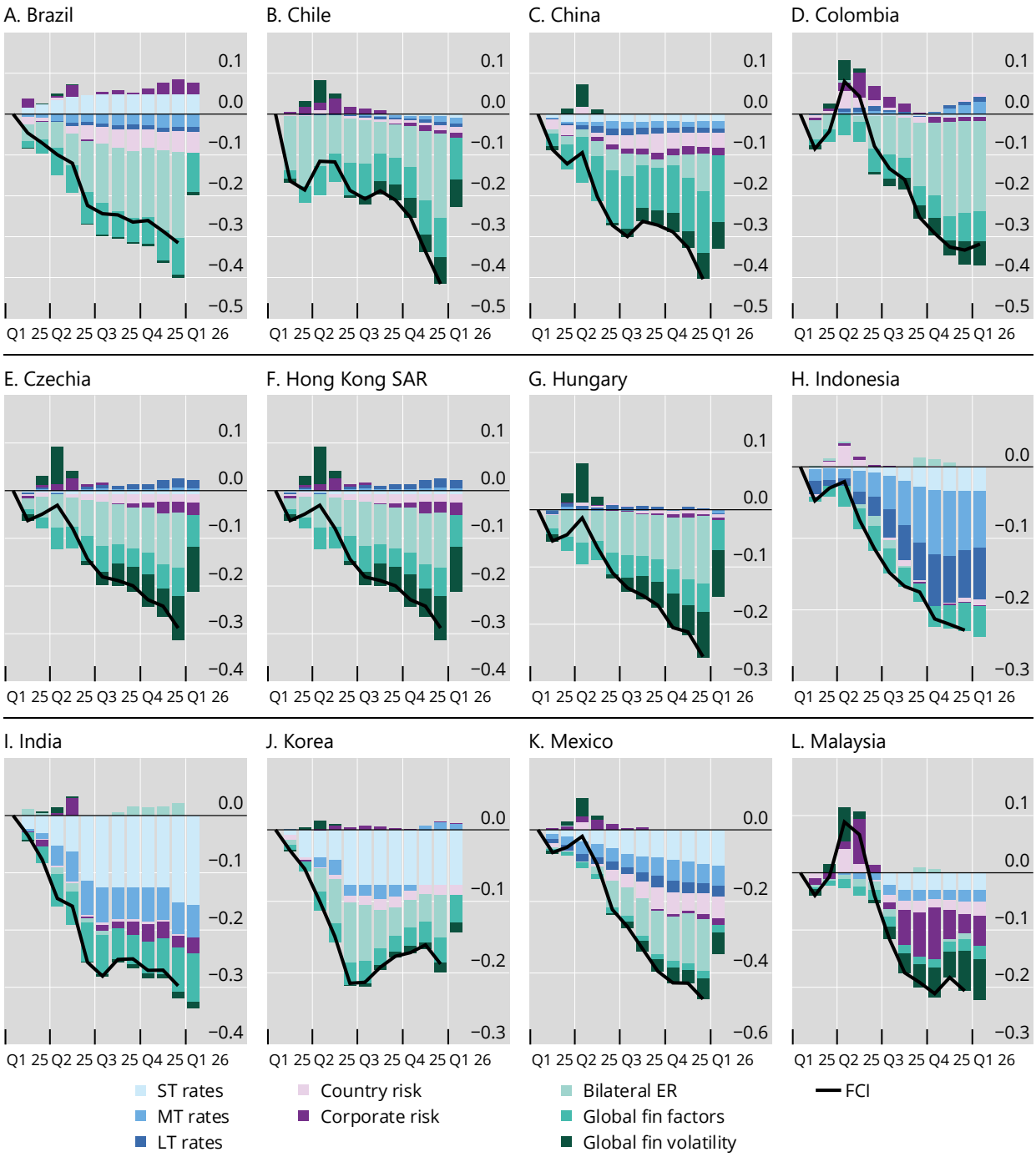
[1] FCIs are normalised with positive values indicating tighter financial conditions relative to history. For more details, see the footnote to Graph 15.

Source: BIS.

Decomposition of FCIs in individual EMEs since January 2025[1]

Standardised units

Graph A.13



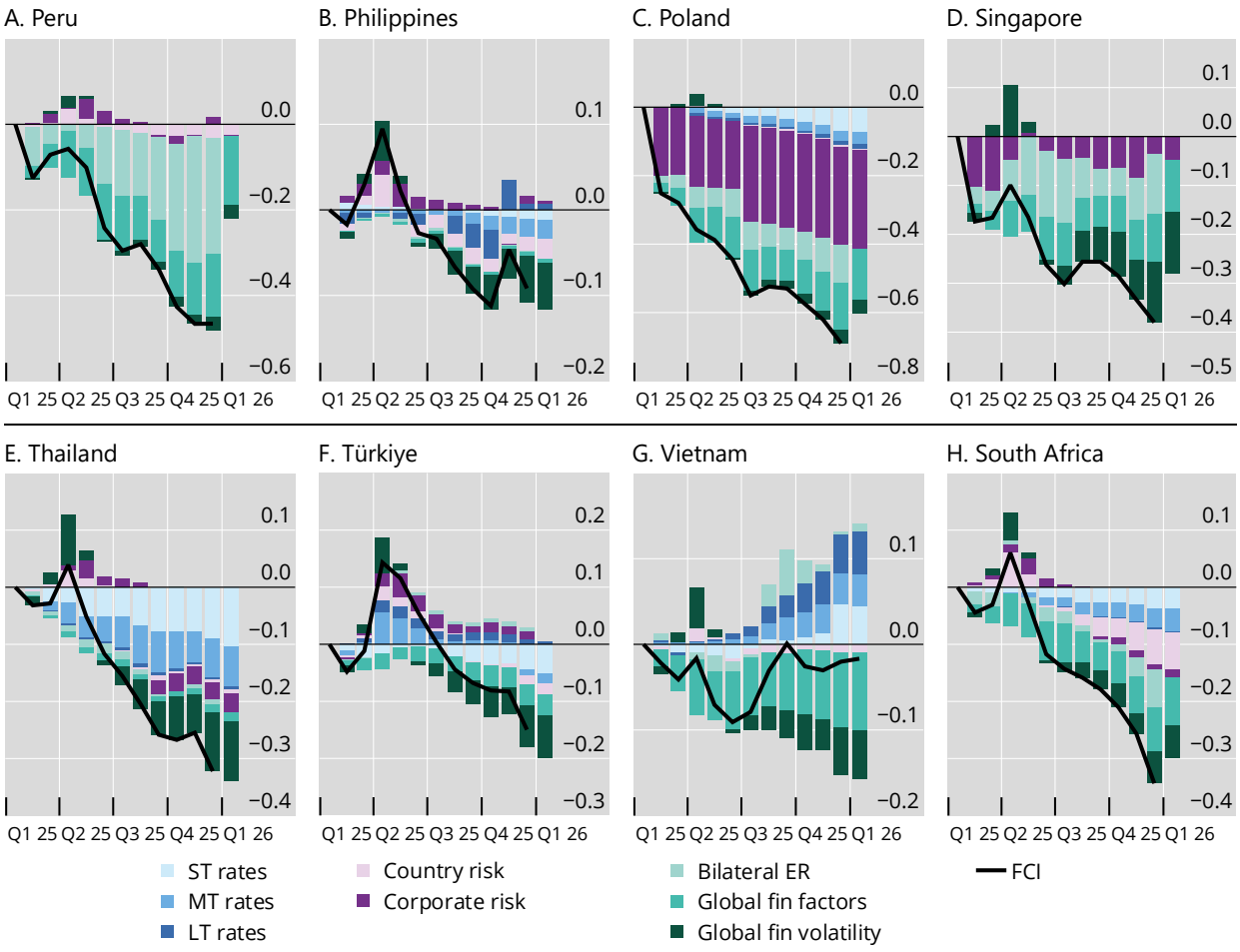
ER = exchange rate; LT = long-term; MT = medium-term; ST = short-term.

[1] Global financial factors include the nominal broad US dollar index and long-term US Treasury yields, while global financial volatility is measured by the Merrill Option Volatility Estimate (MOVE) Index.

Source: BIS.

Decomposition of FCIs in individual EMEs since January 2025 (continued)[1]

Standardised units — Graph A.13



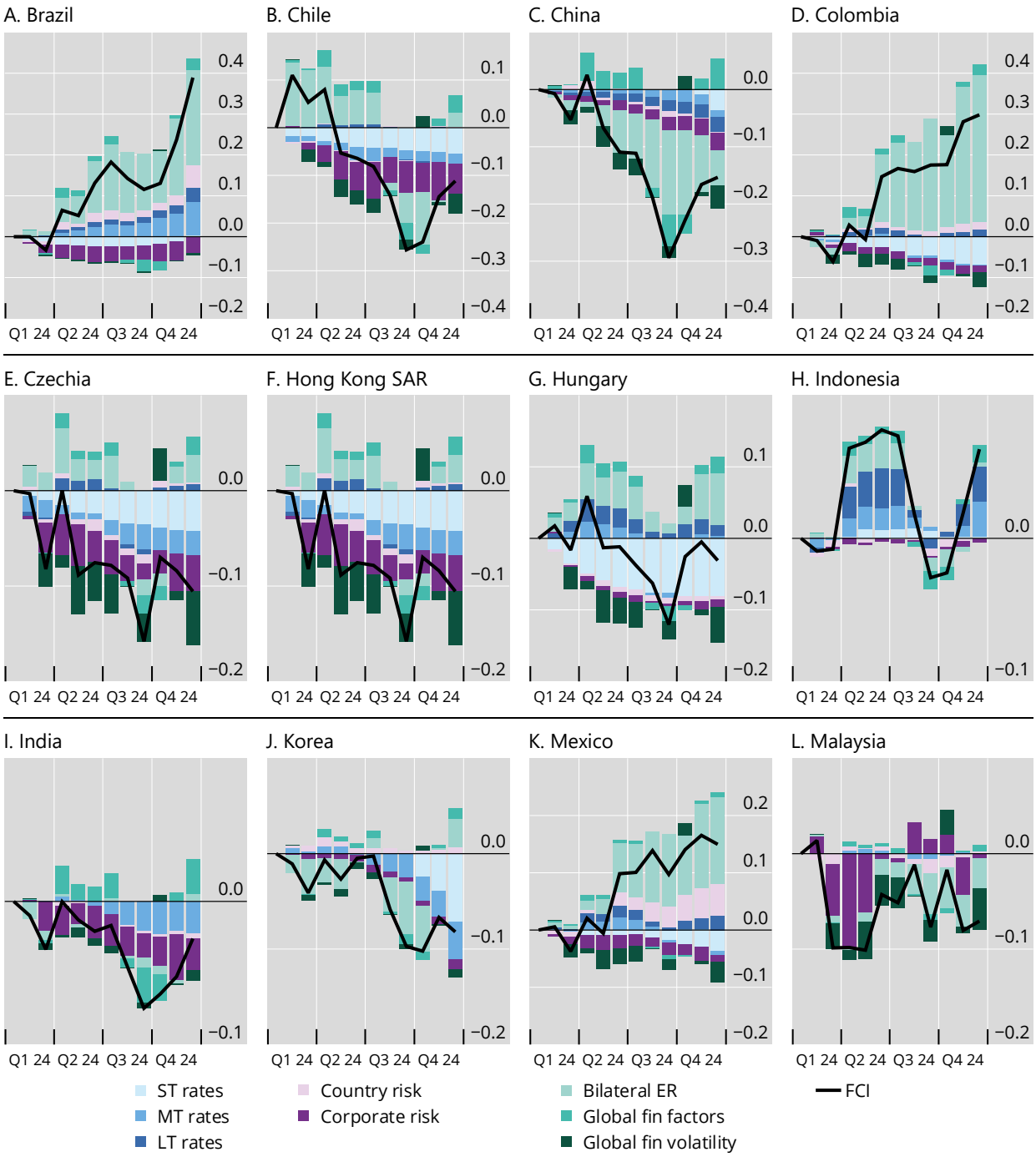
ER = exchange rate; LT = long-term; MT = medium-term; ST = short-term.

[1] Global financial factors include the nominal broad US dollar index and long-term US Treasury yields, while global financial volatility is measured by the Merrill Option Volatility Estimate (MOVE) Index.

Source: BIS.

Decomposition of FCIs in individual EMEs since January 2024[1]

Index, January 2024 = 0 Graph A.14



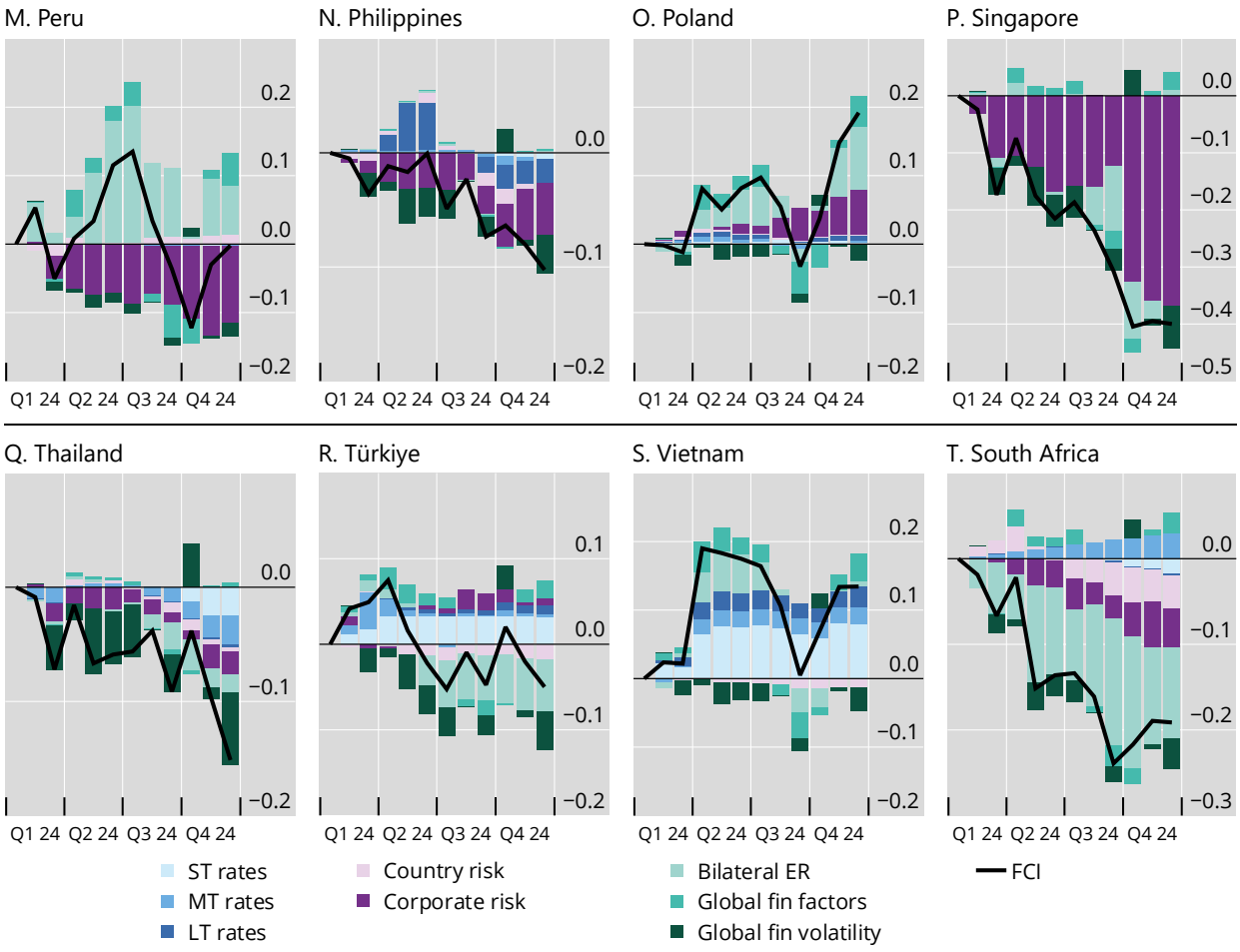
ER = exchange rate; LT = long-term; MT = medium-term; ST = short-term.

[1] Global financial factors include the nominal broad US dollar index and long-term US Treasury yields, while global financial volatility is measured by the Merrill Option Volatility Estimate (MOVE) Index.

Source: BIS.

Decomposition of FCIs in individual EMEs since January 2024 (continued)[1]

Index, January 2024 = 0 Graph A.14



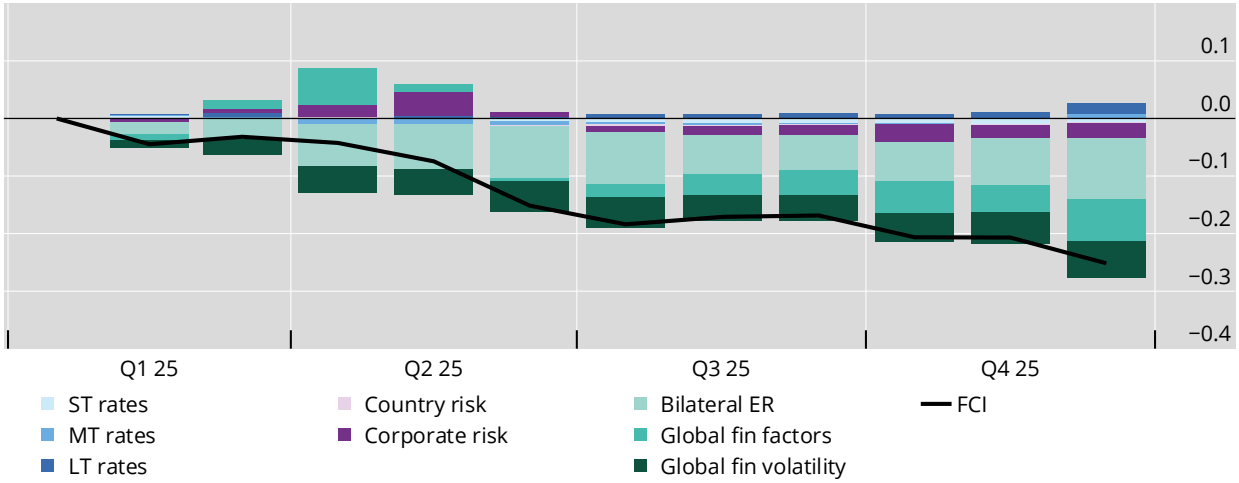
ER = exchange rate; LT = long-term; MT = medium-term; ST = short-term.

[1] Global financial factors include the nominal broad US dollar index and long-term US Treasury yields, while global financial volatility is measured by the Merrill Option Volatility Estimate (MOVE) Index.

Source: BIS.

Average decomposition of FCIs since January 2025 in 7 advanced economies

Index, January 2025 = 0 Graph A.15



ER = exchange rate; LT = long-term; MT = medium-term; ST = short-term.

[1] Global financial factors include the nominal broad US dollar index and long-term US Treasury yields, while global financial volatility is measured by the Merrill Option Volatility Estimate (MOVE) Index. Seven AEs consist of Australia, Canada, France, Germany, Japan, Switzerland and the United Kingdom. The above decomposition is calculated from the simple average of country-by-country decomposition across the seven AEs.

Source: BIS.

Financial conditions index methodology in EME central banks

Table A.1

	What variables are included?	How are weights on these variables calculated?	What are the current weights?	What is the main approach /method to construct FCI?
AE	1. Asset prices (real estate, equities). 2. Oil prices. 3. Lending rates. 4. Changes in private credit.	Estimated to maximize the FCI's predictive power for future bank default rates over a two-year horizon.		Weighted average of a broad set of transformed macro-financial indicators. Each underlying variable is standardized by mapping its values onto the unit interval through percentile transformation.
AR		In most cases, averages.		Depends on the index.
BR	26 domestic and external variables in 7 groups: 1. Domestic interest rates. 2. Foreign interest rates. 3. Risk. 4. Currencies. 5. Oil prices. 6. Commodities. 7. capital markets.	Calculated from regressions capturing the ability of the principal components (PCA) of each group to bring information on the future variation of the economic activity index.	1. Domestic interest rates = 0.34. 2. Foreign interest rates = 0.33. 3. Risk = 0.18, 4. Currencies = 0.20. 5. Oil prices = 0.23. 6. Commodities = –0.13. 7. Capital markets = –0.15.	Build an indicator that incorporates daily information on general financial market conditions, having as a reference for its construction the ability to generate information on future economic activity
CL	1. Exchange rates. 2. Bond yield 3. Stock prices, local and American.			Measure FC's impact on GDP and the tightness of current FC by historical standards.
CO	1. Short term corporate loan rates vs TES. 2. Corporate loan rates vs TES. 3. Consumer loan rates vs TES. 4. Confidence indicators: commercial, consumer, and industrial . 5. Expectations: growth, inflation, and spreads from the EOF survey. 6. Market volatility: conditional volatility of the equity market and TES. 7. Standard deviation of inflation expectations from the central bank's survey.	Each variable is standardized and, depending on its nature, multiplied by -1 so that a positive movement reflects an improvement in financial conditions. The final index is calculated as the simple average of all standardized variables.	Weight of 0.1428 for each variable	Index can be used as a proxy for understanding how financial conditions may influence real economic activity.
DZ	1. Interest rates, 2. Credit spreads. 3. Credit growth. 4. Exchange rates. 5. Government 5-year bond yield.			Informing monetary policy, monitoring financial stability and forecasting economic growth.
HK	1. Stock index volatility 2. Three-month interbank rate spread to central bank bills and notes yield 3. QoQ change in 3-month interbank rate. 4. QoQ % change in REER. 5. QoQ % change in stock price. 6. QoQ % change in property price index 7. QoQ % change in domestic currency credit.	Calculated based on VAR model.	Coefficients: 1. Stock index = –0.0013. 2. 3-m interbank rate spread to CB bill/note yields = –1.36. 3. 3-m interbank rate = –0.79. 4. REER = –0.16. 5. Stock price = 0.12. 6. Property price index = 0.22. 7. Dom currency credit = 0.14.	Estimated impact of financial variables on GDP growth
HU	Endogenous variables: 1. 3-m interbank rate. 2. NEER. 3. Real GDP. 4. Corp loan volume 5. Consumer loan volume 6. The bank interest margin on corporate loans. 7. The bank interest margin on consumer loans. Exogenous variables: 1. 3-m EURIBOR. 2. MNB's import-based foreign demand indicator.	Based on impulse response functions from a VAR model, we quantified the impact of the individual components of the index. The variables were weighted in the index according to the strength of these effects.		
ID	The Financial System Stability Index (FSSI) is composed of three main components: 1. The Resilience Index consists of: credit risks; liquidity risks; capital risks; market exposure risks 2. The Intermediary Index is weighted by the lending shares of banks and other financial corporations (OFCs), incorporating banks' lending growth and loan-to-deposit ratios alongside OFC financing growth. 3. Efficiency Index weighted by intermediary shares evaluates bank/OFC performance through net interest margin & operating cost–income ratios.	The Financial System Stability Index (FSSI) is composed of three main components: the Resilience Index (70%), the Intermediary Index (20%), and the Efficiency Index (10%). The indicators are weighted using Principal Component Analysis (PCA) and professional judgement.		To serve as a tool to gauge financial stability, regularly reported in Board of Governor Meetings and published in the Financial Stability Review. To act as one of the key indicators for determining the macroprudential policy stance To function as one of the main indicators within the Crisis Management Protocol.

Financial conditions index methodology in EME central banks

Table A.1

	What variables are included?	How are weights on these variables calculated?	What are the current weights?	What is the main approach /method to construct FCI?
KR	1. Short-term interest rate. 2. Real effective exchange rate. 3. Stock prices. 4. Term spread. 5. Risk premium. 6. Housing prices.	Weights are calculated with the relative impact on GDP gap		Assess overall tightening or easing based on its impact on GDP, and also compared historically with past periods
MX	1. The FCI-A considers 18 variables from the foreign exchange market, foreign financial conditions, the stock market, country risk, the debt market and macroeconomic variables. 2. The FCI-B has 9 financial variables: short- and long-term interest rate, sovereign spread, corporate spread, stock index, exchange rate, USD, VIX, and a US FCI.	FCI-A is calculated using the methodology proposed by Koop & Korobilis (2014). Variable weights and model parameters are dynamic and are calculated using a TVP-FAVAR with a dual Kalman filter. FCI-B uses PCA.		As an indicator of financial vulnerabilities, it tracks the source of vulnerabilities. Used as indicator of the impact of monetary stance on financial variables, eventually affecting economic activity. Interpreted as proxy to monetary stance.
MY	Twelve variables categorised into 3 major areas: 1. Banking system (credit spreads, money growth) 2. FX markets (exchange rate levels and volatility; and changes in official foreign reserves) 3. Capital markets (term premia; risk premia in bond yields; equity market size, level volatility).	Weights result from principal component analysis.	Weights are typically higher for FX and capital markets respectively.	Tool to measure whether overall financial conditions are tightening or loosening relative to a base period.
PE	For the FCI in domestic currency: 1. 3-m prime lending rate. 2. 10-y yield of Soberanos Bond. 3. Spread between the domestic currency interbank rate and the federal funds rate. 4. Spread between 10-y yield of Soberanos Bond and 10-y yield of US Treasury bonds. 5. Spread between 3-m prime lending rate and 3-m central bank securities interest rate. 6. Spread between 10-y yield of Soberanos Bond and 3-m central bank securities interest rate. For the FCI in foreign currency: 1. Interbank rate in Foreign Currency. 2. 3-m prime lending rate. 3. 10-y yield of Global Bond. 4. Spread between the 3-m prime lending rate and the interbank interest rate. 5. Spread between 10-y yield of Global Bond and 10-y yield of US Treasury bonds.			
PH		GaR framework: weights for are determined using linear discriminant analysis (LDA). PCIFS: all indicators used to measure financial stress in each sub-market are assigned equal weights in forming the composite index.		GaR framework assesses current macro-financial conditions using financial market indicators to anticipate future economic growth. PCIFS provides a measure-ment of current stress in financial markets.
SA		Financial conditions are assessed through a Financial Stability Heatmap.		Assessing tightness/looseness of financial conditions relative to historical trends.
SG	1. Interest rates. 2. Asset prices. 3. Credit and money supply. 4. Global market indicators of risk sentiments. 5. Growth expectation. 6. S&P 500 equity index. 7. VIX implied volatility index. 8. BCOM index for global commodity prices	Calculated via a Principal Component Regression.		Measure the impact of a broad range of financial variables on Singapore's output gap.
TH	FCI is the weighted average of 4 sub-indices: 1. Funding cost: interbank rate, new loan rate, average MLR and MRR of 6 commercial banks, corporate spread for A up and BBB rating group, 2-year and 10-year government bond yields level and volatilities. 2. Private credit: business and household loans, corporate bond excluding financial institution. 3. Equity prices: SET index, MAI index, SET volatility. 4. Foreign exchange: gap of Thai baht and NEER to their long-term trend; and Thai baht volatility.	Weights for each sub-indices derived from its respective impact on real GDP over next 4 quarters by using Bayesian VAR with sign restrictions. To construct a sub-index, all variables in sub-index normalized to z-score and weighting by its contribution to first principal component from factor model	The sub-indices weights are: 1. Funding cost = 33%. 2. Private credit = 22%. 3. Equity prices = 19%. 4. Foreign exchange = 26%.	Assess the tightness or looseness of current financial conditions relative to historical period, while explicitly linking these conditions to real economic activity.

Financial conditions index methodology in EME central banks

Table A.1

	What variables are included?	How are weights on these variables calculated?	What are the current weights?	What is the main approach /method to construct FCI?
TR		Currently, we are reassessing and revising the variables and weights, reconciling their approach, methodology and construct indexes with some new methodology.		Past indexes aimed to measure impact of financial conditions on GDP growth. We aim to measure tightness of financial conditions by historical standards as well.
ZA	1. Ten-year government bond yield. 2. Sovereign CDS spread; term spread. 3. Rand-Dollar exchange rate volatility. 4. Equity (Alsi) volatility 5. Equity (Alsi) prices, m-o-m growth rate. 6. Real household price index, m-o-m growth rate. 7. Credit to households, m-o-m growth rate. 8. Credit to corporates, m-o-m growth rate.	The variables are equally weighted.		1. Measure the tightness of current financial conditions by historical standards. 2. Measure the impact of financial conditions on GDP growth.

Sources: 2026 EME Deputy Governors meeting survey; BIS.

Estimated impact of a depreciation of the US dollar on domestic financial conditions

Table A.2

	What is the estimated impact of a 1% depreciation of the US dollar on domestic financial conditions?	
AE	No nominal impact due to a fixed exchange rate regime.	
BR	A 1% depreciation of the US dollar generates:	A 0.23% decrease in the FCI (less restrictive financial conditions).
CL	The source of exchange rate depreciation is crucial in understanding its impact.	
	If the depreciation is driven by a less restrictive monetary policy in the United States, it tends to have a positive effect on Chilean financial markets—leading to:	- 0.5% increase in the stock index. - 3 bp decline in the 10-year sovereign bond yield.
	If the depreciation of the dollar stems from a reduction in global risk, it leads to:	- 0.1% increase in the stock index. - 1.3 bp decline in the 10-year sovereign bond yield.
CO	A 1% appreciation of the US dollar generates:	- 0.000004 bp increase in the three-years TES yield - 0.000006 bp increase in the six-years TES yield - No significant effect on the one-month and one-year yields.
CZ	Most likely, direct consequences of a mild US dollar depreciation would be insignificant.	
DZ	Very moderate impact on domestic financial conditions	
HK	Under the Linked Exchange Rate System (LERS), the HKD stays within the Convertibility Zone of HKD7.75-7.85 per USD. For this reason, the impact of a depreciation of the USD on domestic financial condition is non-linear, as it depends on whether the exchange rate movement is large enough to trigger the strong-side Convertibility Undertaking (CU) at HKD7.75 per USD. - When the strong-side CU is triggered, the HKMA will sell HKD to banks for USD and the Aggregate Balance (a component of the Monetary Base) will then expand to push down HKD interest rates. - When the strong-side CU is not triggered, the impact would be less pronounced when the USD depreciates. Moreover, when the USD depreciates against a broad basket of currencies, the HKD NEER will closely mirror this depreciation against the basket, and the depreciation will have the usual effects on the domestic economy and financial conditions.	
IN	The impact of rupee depreciation works through trade and finance channels. Since, the trade channel works with a lag and is found to be weaker, finance channel is usually predominant in the short run. Rupee depreciation leads to an increase in debt servicing cost, thus leading to tighter financial conditions.	
MX	Based on FCI-A, a 1% depreciation of the US dollar is associated with:	- .0.2379% decrease in corporate credit spread. - 3.2435% increase in equity prices. - 0.0077% decrease in sovereign CDS spread. - No significant effect on FCI or government bond yields.
	Based on FCI-B, an appreciation of the US dollar tightens domestic financial conditions by:	- Increasing EMBI spread. - Increasing long-term yield. - Decreasing stock exchange returns.
MY	A depreciation of the US dollar and an appreciation of the ringgit results in a loosening of domestic financial conditions, as measured by the Financial Conditions Index.	
	During the 2006-2007 episode of USD weakness, where the DXY declined by 15.9%	- The MYR appreciated by 14.3%, alongside a broad-based easing in financial conditions. - Bond yields declined by 9.6 bp reflecting increasing demand for domestic bonds. - Credit spreads narrowed by 0.5 bp.
	In recent periods of USD weakness, particularly in 2025. Year-to date (Up to 25 November 2025), the dollar (DXY) has weakened by -7.7%.	- MYR has appreciated by 8.2%, contributing to an easing in domestic financial conditions. - Bond yields declined by 39 bp amid higher demand for domestic bonds. - Credit spreads narrowed by 17.6 bp.
PE	A 1% depreciation of the US dollar generates:	- 0.7 bp in the bank lending rate in PEN one-year ahead - No significant effect on bank lending rate in USD.
PH	A depreciation of the US dollar, or an appreciation of the domestic currency, is expected to help ease financial conditions in the country.	
SA	If the depreciation of the U.S dollar is driven by changes in policy rates, domestic financial conditions should loosen.	
SG	Domestic interest rates are heavily influenced by US rates, though often with a discount, in the sense that domestic rates remain lower than US rates, most likely reflecting market expectations of appreciation in the domestic currency. This "discount" can average slightly around 110 bps (when the low interest rate years post-GFC are excluded) or around 80bps for the full sample from 2000-25.	
TH	In addition to trade channel, U.S. dollar depreciates leads to tighter financial conditions for Thailand mainly through financial channel. This is because Thailand is a net exporting country with (1) mostly unhedged USD-invoiced export revenues and (2) mostly domestic borrowing. Therefore, financial channel does not countervail, but instead adversely amplifies trade channel. The impact through other channels such as funding cost, private credit, and equity prices appears relatively limited, as these factors are mainly driven by domestic conditions.	
TR	An appreciation of local currency against hard currency due to exogenous shocks are expected to decrease credit spreads and increase demand for local financial assets, while the expected effects could vary depending on global and domestic financial conditions. Moreover, financial conditions are highly associated with expectations on the outlook of the financial markets.	
VN	When the US dollar depreciates by around 1%, domestic financial conditions tend to ease slightly in the short term.	- Government bond yield may decline due to increased capital inflows into the domestic market. - Credit spreads often narrow as risk sentiment improves. - The stock market also tends to rise, reflecting renewed attractiveness of VND-denominated assets.

Sources: 2026 EME Deputy Governors meeting survey; BIS.

Estimated impact of changes in the US federal fund rate and US long-term Treasury yield on domestic financial conditions

Table A.3

	What is the estimated impact of a 1% depreciation of the US dollar on domestic financial conditions?	
AE	A 100 bp policy rate hike links to:	- Time deposit growth of about 20 bp.
BR	A 1% increase in the US ten-year treasury yield is associated with:	- Positive but inelastic rise in the ten-year local-currency government bond yield.
CL	A 10 bp increase in the ten-year US treasury yield leads to:	- 0.2% decline in the stock market. - 1 bp increase in the 10-year sovereign bond yield. - 0.1% depreciation of the CLP.
CN	The China-U.S. interest rate spread serves as a primary transmission mechanism influencing the RMB exchange rate against the USD. A decline in the U.S. federal funds rate and long-term Treasury yields tends to narrow the inversion of the China-U.S. interest rate spread, thereby alleviating depreciation pressure on the RMB against the U.S. dollar. As a large open economy, China's monetary policies have always given prominence to the country's own development. In recent years, with the optimization of economic structure and the enhanced competitiveness of manufacturing industry, China's current-account surplus has remained within the range of a reasonable equilibrium, providing solid support for the stability of the RMB exchange rate. Since 2020, despite the Fed's aggressive quantitative easing and tightening monetary policy, the RMB exchange rate has exhibited relatively low volatility compared to global peers, cross-border capital flows remained broadly stable, the international balance of payments maintained a basic equilibrium, and the economy was relatively resilient to external shocks.	
CO	Ruiz and Christensen (2023) analyse the term structure of interest rates in Colombia and finds that local currency public debt bonds (TES) respond to international financial variables primarily through changes in the inflation risk premium. A VAR model including the first principal component of global risk indicators (VIX, MOVE, DXY, and the CDS spread of emerging economies), which is refer to as RI shows the following effects on the TES (Colombia's local currency public debt bonds). The results indicate that tighter external financial conditions translate into tighter domestic financial conditions, as measured by the IDOAM, particularly:	- A 1 ppt in the 10-year US treasury yield increase by 14 bp the 5-year Colombia inflation risk premium. - A 10 point increase in the MOVE index increases Colombia's inflation risk premium by 5 bp. - Before 2014 and during 2014–2022, a one unit increase in the RI increases approximately 30 bp in the ten-year TES yield. - After 2022, the effect remains statistically significant but is shorter-lived and comparatively smaller, at around 20 bp.
CZ	Direct impact is negligible. Indirectly through pressures on ECB and CNB interest rates and "hot money" flows. Any such changes have first to reach European bond markets. If they do, Czech bond rates usually adjust to their German benchmarks, unless there are autonomous shocks that specifically affect the EUR/CZK segment of the forex. Occasionally, "hot money" flows to/from the Czech market can be temporarily affected by unexpected Fed measures, but the magnitude is limited.	
DZ	Very moderate impact on domestic financial conditions	
HK	Under the Linked Exchange Rate System, Hong Kong dollar interbank rates generally track their US dollar counterparts, and the yields of the long-term HKD HKSAR government bonds generally follow the movements of US long-term Treasury yields.	
ID	A 1 ppt increase in the US 10-year treasury yield is associated with:	- Positive but inelastic rise in the 10-year local-currency government bond yield
IN	Higher India-US yield differential is associated with tighter financial conditions. This is because an increase in yield differential reflects relatively higher domestic interest rate, which compensates for the expected rupee depreciation and country risk premium under the interest rate parity condition.	
MX	Based on FCI-A, a 1% decline in the three-month US T-bill rate is associated with: Based on FCI-A, a 1% decline in US ten-year T-bond rate is associated with: Based on FCI-B, an increase in the US long term yield leads to:	- 0.3671% decline in the FCI. - 0.0051% decline in the ten-year sovereign peso yield. - 5.1517% increase in equity prices. - 0.0177% decline in the ten-year sovereign US dollar yield. - 0.0026% decrease in the ten-year sovereign peso yield. - 0.0032% decrease in the ten-year sovereign US dollar yield. - No significant effect on the FCI-A. - Increase in the Mexican long-term yield. - Decrease in the EMBI. - No significant response of the exchange rate.
MY	Changes in the US Federal Reserve policy rate affect interest rate differentials and impact Malaysia's financial conditions primarily through portfolio flows and exchange rate movements. During the Fed tightening cycle in 2022-2023, the federal funds rate was raised by 525 bps and UST yields increased by 169 bps.	- MYR depreciated by 8.1%. - Domestic bond yield increase by 125 bp.
PE	Following Aguirre et al. (2022), we estimate that the pass-through effect of a 1 percent increase in the 3-month SOFR results, after one year, in:	- A 4.7 bp increase in the domestic bank lending rate in soles.
PH	According to (Bagsic, 2024) a 1 ppt increase (decrease) in the US fed fund rate results in:	- A decrease (increase) in relative foreign borrowing of non-financial corporates by 4.5 ppts.
SA	Given the Saudi Riyal's peg to the U.S. dollar, policy rates are aligned with the U.S. federal reserve. which result in a direct impact on domestic financial conditions.	
SG	Domestic interest rates are heavily influenced by US rates, though often with a discount, in the sense that domestic rates remain lower than US rates, most likely reflecting market expectations of appreciation in the domestic currency. This "discount" can average slightly around 110 bps (when the low-interest rate years post-GFC are excluded) or around 80bps for the full sample from 2000-25.	

TH	Changes in the U.S. interest rates usually impact Thai financial conditions through exchange rate channel, while bond yield and credit spreads play a limited role due to low level of non-resident participation in bond market. To illustrate, when the federal funds rate rises, the U.S. dollar typically appreciates, which may lead to depreciation of the Thai baht and a loosening of domestic financial conditions. However, this effect may be temporary due to the fluctuating nature of exchange rates.
TR	An increase in US FED funds rate or long-term Treasury yields is likely to direct capital flows from an emerging market to the rest of the world. Thus, this could result in tightening in the domestic financial conditions.

Sources: 2026 EME Deputy Governors meeting survey; BIS.

Gravity, global and crypto risk factors as drivers of Bitcoin flows[1]

Table A.4

	IBS claims	Exports	Bitcoin flows		
	(1)	(2)	(3)	(4)	(5)
Gravity					
Distance	-0.774***	-0.749***	-0.075***	-0.075***	-0.075***
	(0.069)	(0.037)	(0.016)	(0.016)	(0.016)
Common border	0.921***	0.693***	0.007	0.007	0.007
	(0.192)	(0.098)	(0.035)	(0.035)	(0.035)
Common language	0.213	0.086	0.095***	0.095***	0.095***
	(0.151)	(0.088)	(0.021)	(0.021)	(0.021)
Global factors (t-1)					
VIX			1.571***	2.027***	2.180***
			(0.019)	(0.032)	(0.030)
High-yield spread				-3.749***	-3.354***
				(0.043)	(0.041)
Dollar index			-9.817***		
			(0.178)		
Federal fund rate				-0.007*	0.000
				(0.004)	(0.004)
US growth				-0.037***	0.010***
				(0.002)	(0.002)
Crypto risk factors (t-1)					
BTC-USD volatility			0.743***	1.014***	
			(0.043)	(0.040)	
Crypto market					7.070***
					(0.076)
Crypto size					-2.074***
					(0.090)
Crypto momentum					-5.714***
					(0.231)
N	81,716	468,828	529,746	529,746	529,746
Pseudo R^2	0.860	0.919	0.878	0.930	0.938
FE: sender×t & receiver×t	Yes	Yes			
FE: sender & receiver			Yes	Yes	Yes

[1] *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is the quarterly US dollar amount of bilateral (1) cross border interbank (IB) claims; (2) merchandise exports; and (3–5) bilateral cross-border Bitcoin (BTC) flows. To ensure comparability across the different specifications, the regressions are estimated based on using observations from Q1 2017 up to Q2 2023, consistent with the last available quarter of observation for the crypto risk factors (i.e. Q1 2023) at the time of writing. Robust standard errors, clustered by country pairs, in parentheses.

Source: Auer et al (2025).

Drivers of cross-border flows in ETH, USDC and USDT[1]

Table A.5

	ETH	ETH	USDC	USDC	USDT	USDT
	(1)	(2)	(3)	(4)	(5)	(6)
Gravity	-0.028***	-0.028***	0.003	0.003	-0.016***	-0.016***
Distance	(0.008)	(0.008)	(0.004)	(0.004)	(0.003)	(0.003)
	0.006	0.006	0.019	0.019	0.017	0.017
Common border	(0.020)	(0.020)	(0.015)	(0.015)	(0.013)	(0.013)
	0.080***	0.080***	0.032***	0.032***	0.005	0.005
Common language	(0.018)	(0.018)	(0.010)	(0.010)	(0.010)	(0.010)
	-0.028***	-0.028***	0.003	0.003	-0.016***	-0.016***
Global factors (t-1)						
VIX	1.953***	3.286***	1.371***	6.721***	1.499***	6.907***
	(0.020)	(0.039)	(0.032)	(0.092)	(0.021)	(0.043)
Dollar index	-13.156***		-1.294*		-1.868***	
	(0.183)		(0.702)		(0.266)	
High-yield spread		-4.774***		-7.848***		-8.432***
		(0.054)		(0.156)		(0.065)
Federal fund rate		0.069***		0.507***		0.566***
		(0.005)		(0.012)		(0.003)
US growth		0.062***		0.036***		0.062***
		(0.002)		(0.003)		(0.003)
Crypto risk factors (t-1)						
BTC-USD volatility	-0.496***		-2.710***		-2.394***	
	(0.056)		(0.122)		(0.050)	
Crypto market		6.956***		-6.215***		0.397***
		(0.080)		(0.502)		(0.108)
Crypto size		-3.009***		-6.740***		-6.771***
		(0.074)		(0.156)		(0.111)
Crypto momentum		-3.467***		10.546***		1.776***
		(0.240)		(0.678)		(0.242)
US dollar index		6.956***		-6.215***		0.397***
		(0.080)		(0.502)		(0.108)
N	521,234	521,234	384,669	384,669	434,253	434,253
Pseudo R^2	0.820	0.938	0.806	0.909	0.763	0.912
FE: sender×t & receiver×t	Yes	Yes	Yes	Yes	Yes	Yes

[1] *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is the quarterly US dollar equivalent of bilateral cross-border flows in (1-2) ETH (Ether); (3-4) USDC (USD Coin); and (5–6) USDT (Tether) respectively. To ensure comparability across the different specifications, the regressions are estimated based on using observations from Q1 2017 up to Q2 2023, consistent with the last available quarter of observation for the crypto risk factors (i.e. Q1 2023) at the time of writing. Robust standard errors, clustered by country pairs, in parentheses.

Source: Auer et al (2025).

How are crypto flows related to country-specific factors?[1]

Table A.6

	BTC	ETH	USDC	USDT	USDC	USDT
	(1)	(2)	(3)	(4)	(5)	(6)
Sender (t-1)						
High inflation	0.066***	0.183***	0.492***	0.147***	0.624***	0.156***
	(0.017)	(0.016)	(0.053)	(0.017)	(0.077)	(0.021)
High GDP growth	0.082***	0.062***	-0.021	0.046***	-0.016	0.033
	(0.012)	(0.013)	(0.016)	(0.015)	(0.018)	(0.021)
High Bitcoin awareness	0.093***					
	(0.016)					
High Ethereum awareness		0.291***	0.408***	0.351***		
		(0.020)	(0.037)	(0.024)		
High stablecoin awareness					0.144***	0.151***
					(0.027)	(0.022)
Receiver (t-1)						
High inflation	0.090***	0.144***	0.277***	0.225***	0.318***	0.275***
	(0.019)	(0.017)	(0.029)	(0.021)	(0.036)	(0.024)
High GDP growth	0.034***	0.031**	0.064***	0.015	0.068**	0.023
	(0.012)	(0.013)	(0.021)	(0.015)	(0.028)	(0.020)
High Bitcoin awareness	0.245***					
	(0.015)					
High Ethereum awareness		0.242***	0.378***	0.297***		
		(0.023)	(0.051)	(0.028)		
High stablecoin awareness					0.224***	0.188***
					(0.051)	(0.021)
High bilateral FX volatility	0.005	-0.003	0.004	0.038**	0.009	0.105***
	(0.014)	(0.016)	(0.043)	(0.018)	(0.060)	(0.024)
N	159,937	155,361	116,939	136,684	18,452	21,708
Pseudo R^2	0.895	0.897	0.893	0.867	0.845	0.784
Gravity controls	Yes	Yes	Yes	Yes	Yes	Yes
Global factors	Yes	Yes	Yes	Yes	Yes	Yes
FE: sender & receiver	Yes	Yes	Yes	Yes	Yes	Yes

[1] *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is the quarterly US dollar equivalent of bilateral cross-flows in the crypto asset reported in the top row. All regression includes controls for gravity (distance, common language and common border), lagged global factors (VIX, high-yield spreads, US policy rate change and US growth). High inflation and high GDP growth are binary variables equal to one (zero otherwise) for values in the top quartile of the sample distribution. High awareness is a binary variable equal to one (zero otherwise) if the number of Google searches for "Bitcoin" (column1), for "Ethereum" (columns 2 to 4), and for "Stablecoin" (columns 5 and 6), respectively, are in the top quartile of the country's own time series of searches. Robust standard errors, clustered by country pairs, in parentheses.

Source: Auer et al (2025).

Crypto as an emerging substitute for remittances?[1]

Table A.7

	Remittances	BTC	ETH	USDC	USDT	BTC<$500	BTC<$200
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Remittance cost (t-1)	-0.111***	-0.001	0.006	0.013***	0.016***	0.088**	0.101***
	(0.041)	(0.004)	(0.004)	(0.004)	(0.006)	(0.034)	(0.033)
Distance	-0.690***	-0.067***	-0.027***	0.006	-0.015	-0.310***	-0.346***
	(0.114)	(0.019)	(0.007)	(0.009)	(0.015)	(0.109)	(0.107)
Common border	0.782**	-0.069**	-0.011	-0.110***	-0.006	-1.623***	-1.496***
	(0.343)	(0.033)	(0.026)	(0.038)	(0.021)	(0.135)	(0.143)
Common language	0.674***	0.122***	0.038***	0.032***	-0.001	0.461***	0.537***
	(0.133)	(0.022)	(0.012)	(0.011)	(0.009)	(0.133)	(0.133)
N	2,029	8,766	8,766	6,705	7,755	5,232	5,232
Pseudo R^2	0.869	0.996	0.998	0.999	0.999	0.985	0.985
FE: sender×t & receiver×t	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Frequency	Annual	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

[1] *** p<0.01, ** p<0.05, * p<0.1. The dependent variable is the quarterly US dollar amount of bilateral remittances in column (1) and cross border crypto flows in columns (2) to (7). Remittance costs are measured based on the log of the (lagged) mean of the total percentage of the transaction value charged for payments. Robust standard errors, clustered by country pairs, in parentheses.

Source: Auer et al (2025).