

FX interventions

Insights from a Markets Committee workshop chaired by Gerardo García López (Bank of Mexico)

Introduction

Foreign exchange (FX) interventions can be an important component of the policy toolkit, particularly in emerging market economies (EMEs). During the Covid-19 pandemic, such interventions were part of central banks' responses in addressing market dysfunction and moderating excessively strong capital flows during periods of volatility. Recognising the importance of FX interventions (FXIs), the Markets Committee held a workshop in November 2021 to discuss this topic.

This paper summarises workshop insights, and supplements them with evidence from a background survey, based on 21 responses – 12 from emerging market economy (EME) and nine from advanced economy (AE) central banks.¹ Section 1 discusses intervention goals and objectives, benefits and costs. Section 2 concerns the intricacies of FXIs, such as the timing, size or means of execution. Sections 3 and 4 present insights about FXI effectiveness and communication, respectively.

1. Intervention goals and objectives, benefits and costs

FX intervention activity in EMEs increased at the height of the Covid-19 crisis in 2020 before falling back to lower levels in 2021 (Graph 1). While intervention activity increased in 2020, the goals, objectives and tactics of FXIs have generally not changed in the light of the Covid-19 crisis.

In recent years, containing stressed trading conditions was identified as the most important FXI goal for EME central banks (Graph 2).² Compared with 2018, EME central banks are more likely to intervene to alleviate FX funding shortages, while all other goals have become less relevant (except building reserves). The most important FXI goals for AE central banks are price stability followed by containing stressed trading conditions.

The survey highlighted that the most important intermediate objectives of FX interventions for EME central banks are keeping exchange rate volatility in check and

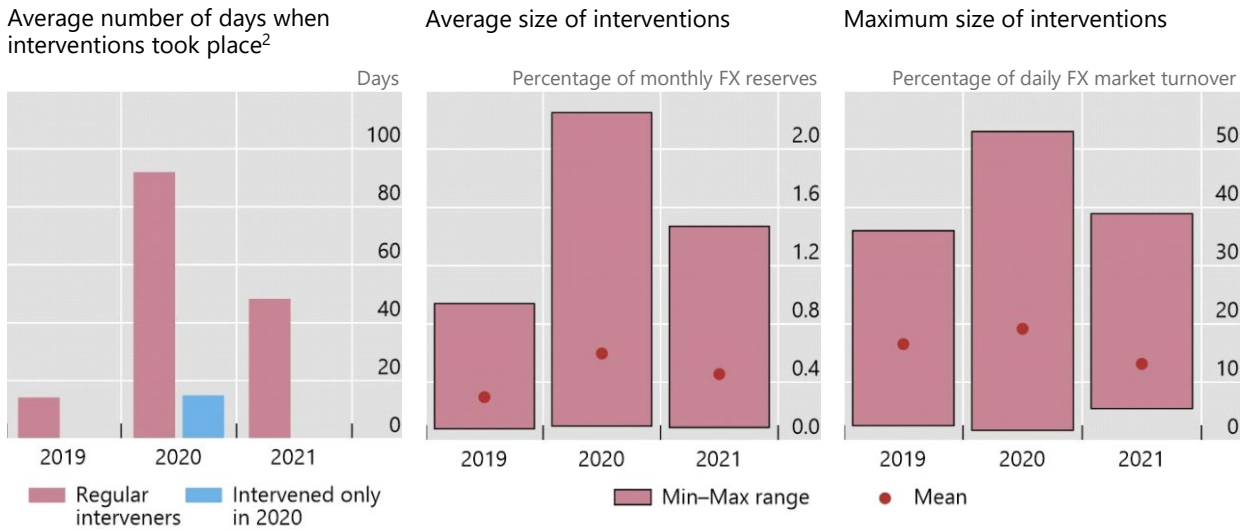
¹ Answers for EMEs are benchmarked against previous BIS surveys conducted for BIS emerging market deputy governors' meetings, which are discussed extensively in Patel and Cavallino (2019). These authors also provide further detail on the concepts and definitions underpinning the survey questions. See N Patel and P Cavallino, "FX intervention: goals, strategies and tactics", *BIS Papers*, no 104, 2019, www.bis.org/publ/bppdf/bispap104b_rh.pdfwww.bis.org/publ/bppdf/bispap104b_rh.pdf.

² According to Patel and Cavallino (2019), "goals" refer to the ultimate purposes of an FXI, while "intermediate objectives" operationalise the goals.

providing liquidity to thin markets (Graph 3). By contrast, AE central banks do consider influencing the level of the exchange rate as the main intermediate objective.

EME central banks used FXIs in response to the Covid-19 shock¹

Graph 1



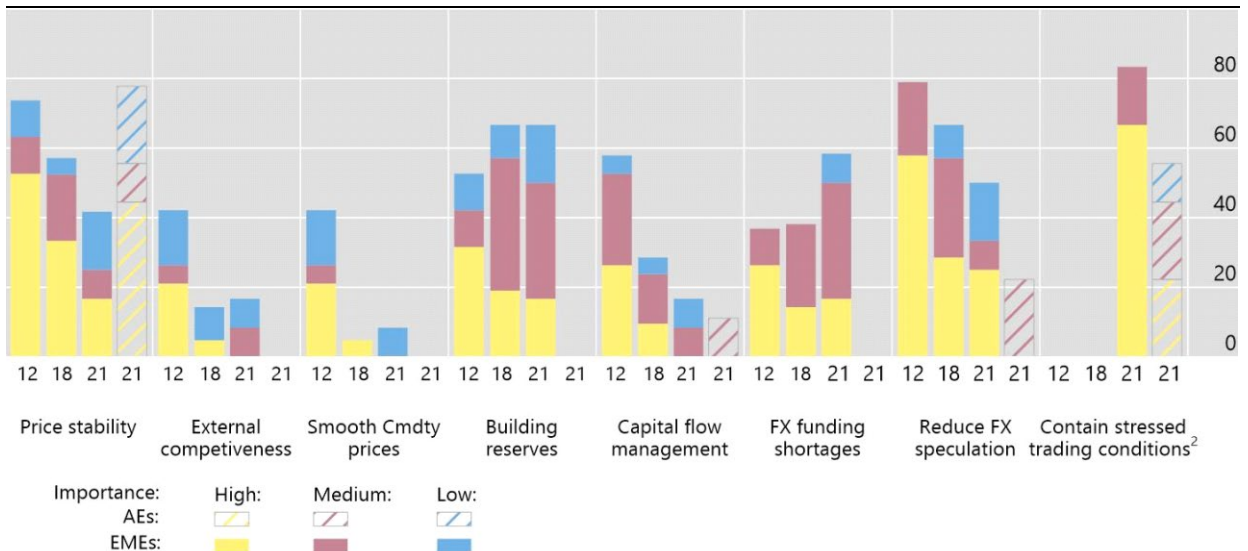
¹ Based on the responses of EME central banks that reported non-zero values (eight). ² The responses are grouped by the frequency of interventions. Regular interveners include those that intervened only in all three years according to the survey.

Source: BIS survey on FX intervention 2021.

Containing stressed trading conditions is the key goal of FX interventions in 2021¹

As a percentage of respondents

Graph 2



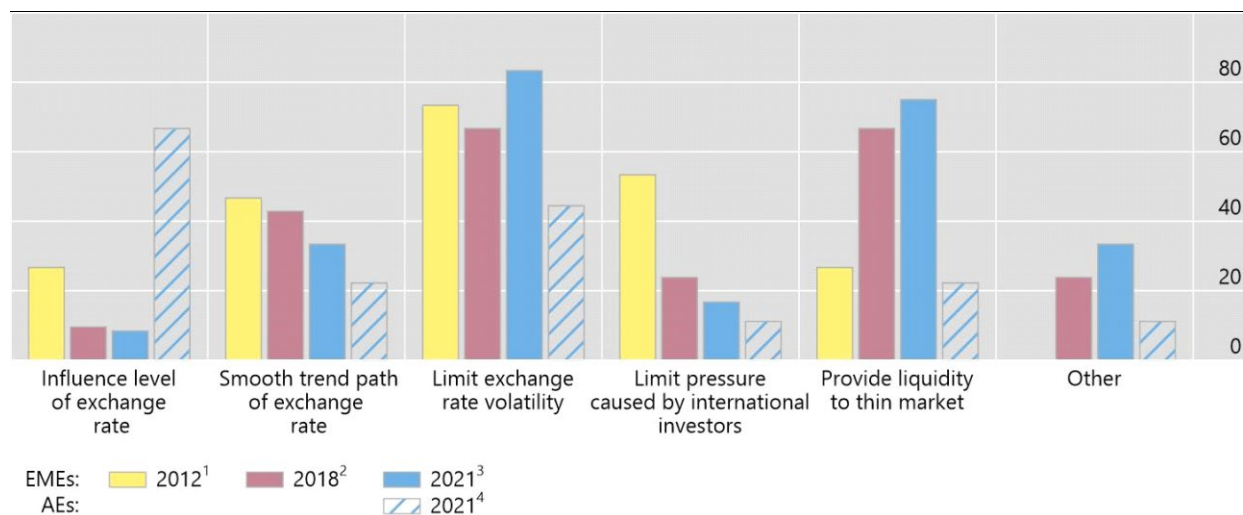
¹ 2012: based on the responses of 19 EME central banks. 2018: based on the responses of 21 EME central banks; 2021: based on the responses of nine AE and 12 EME central banks. As no central banks indicated that the goal was "Containing excessive credit growth", this goal is not included in the graph. ² "Containing stressed trading conditions" was not included in the 2012 and 2018 surveys.

Sources: BIS surveys on FX intervention 2012, 2018 and 2021.

Limiting FX volatility and providing liquidity are the most important intermediate objectives

As a percentage of respondents

Graph 3



¹ 15 central banks. ² 19 central banks. ³ 12 EME central banks. ⁴ 9 AE central banks.

Sources: BIS surveys on FX intervention 2012, 2018 and 2021.

But FXIs are no panacea, as they are not without costs. These include (i) moral hazard and encouragement of greater risk-taking; (ii) negative effects on market development (eg, hampering the development of derivative markets by removing the need for currency hedges), which in turn may increase the need for FXIs in the future, as the more developed the markets are, the less the need for intervention; (iii) potential difficulties in balancing the orderly functioning of local FX markets with the need to maintain openness to foreign investors; and (iv) possible inconsistencies between monetary policy and FXI, as there are non-trivial interactions that are hard to understand and communicate, which in turn may increase overall policy uncertainty.

Views differ about the relative importance of these different costs. Some participants seemed to be most concerned about hindering the development of derivatives markets, others thought the muddying of waters about the monetary policy stance to be of first-order importance.³

There are also the carry costs of holding reserves, but these may be secondary to policy objectives.⁴ The global financial safety net (eg, IMF credit lines, central bank swap lines and repo facilities) can also be helpful in mitigating carry costs, as they provide additional access to FX as a complement to reserves. US dollar swap lines, in particular, were very helpful in alleviating dollar funding pressures at the height of the Covid-19 crisis, reducing the need for central banks to sell reserves.

³ Participants mentioned a couple of approaches to help underscore the separation between monetary and FX policy. One approach is to enshrine the separation between monetary policy and FX policy objectives by allocating the respective decision-making responsibilities to separate bodies. Another approach is to rely on communication and the central bank's track record, which puts a premium on central bank credibility. Another (discussed below) is to use communication.

⁴ For a more detailed discussion see Y Arslan and C Cantú, "The size of foreign exchange reserves", *BIS Papers*, no 104, 2019, https://www.bis.org/publ/bppdf/bispap104a_rh.pdf.

In general, there is an agreement that, together with sound macroeconomic fundamentals, the first line of defence against destabilising capital flows is the exchange rate itself, which should adjust accordingly. To this end, some central banks have stressed the need to further develop onshore FX markets, as well as to build greater capacity for market participants to manage FX risk efficiently. Exchange rate flexibility might not be enough in extreme circumstances, however, in which case a central bank might want to lean against inflows or outflows. Leaning against outflows requires the ex ante accumulation of FX reserves, which in turn often requires FXIs.

2. The intricacies of FX interventions

Policy objectives and the specific circumstances warranting an FX intervention matter for the optimal choice of intervention timing, size, instrument, means of execution and choice of counterparty. For instance, a central bank seeking to maintain orderly trading conditions in FX markets might intervene in the face of persistent pressure on its currency but refrain from intervening if pressure is transient or broad-based.

In general, market intelligence (MI) is a crucial input into FXI decisions, particularly given increasing fragmentation, complexity and sophistication of FX markets. MI can also help central banks to better understand new counterparties such as non-bank financial intermediaries, whose footprint in FX markets is growing. Workshop participants remarked that MI can be informative about the factors driving FX markets (the “what” of FXIs), about the characteristics of market participants (the “who”) and about developments in the market microstructure (the “how”). The first two of these aspects (“what” and “who”) have a bearing on the decision of whether to intervene, while the third (how) informs the specifics of intervention (eg, timing, size, in on-shore vs off-shore markets, and in spot vs derivative markets). A good understanding of market microstructure is also essential in determining which quantitative indicators to monitor. Among the factors driving FX markets, market sentiments may also be worthy of monitoring.

But MI has to be put into context, as there can be a risk of misunderstanding market conditions by relying too heavily on it. This is because market participants’ intelligence might reflect their own expectations of what action the central bank might undertake, a circularity sometimes referred to as the “monkey in the mirror” problem.

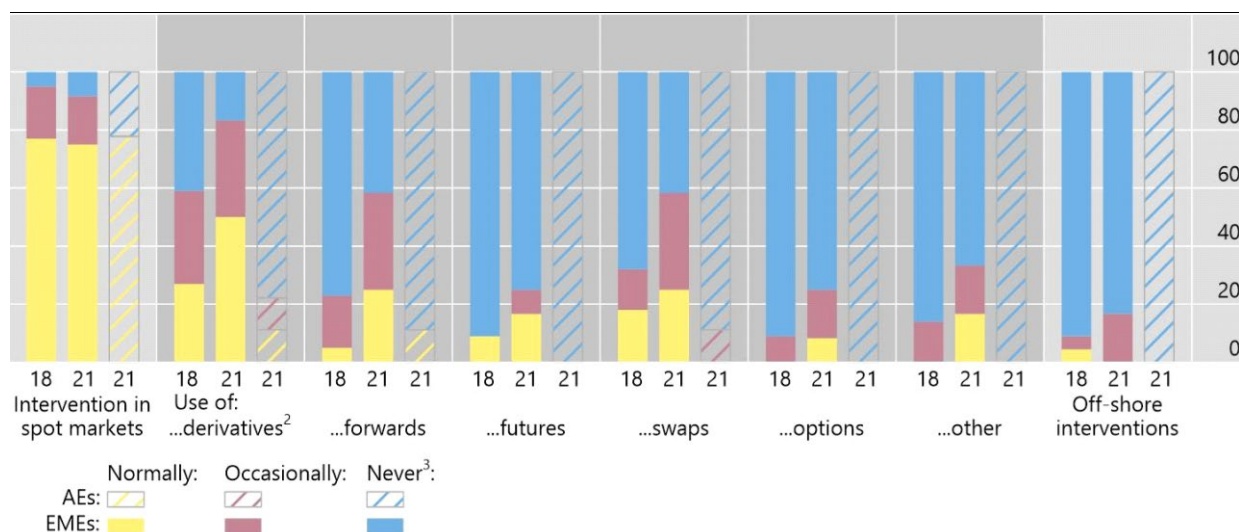
Central banks intervene in both spot and derivative markets. Spot market interventions remain most common in both EMEs and AEs (Graph 4). But the majority of EME central banks also rely on derivatives, at least occasionally, with some employing FX swaps to provide liquidity without affecting the exchange rate.

The choice of whether to intervene in the spot or derivative markets can depend on a range of factors. A central bank seeking to smooth exchange rate volatility might intervene in spot or derivative markets depending on the source of FX pressure. For example, if market participants struggle because of a dollar liquidity shortage, it may be better to use spot interventions. But if market participants struggle to hedge FX positions, then using derivatives may be more suitable.

Spot market interventions remain most common but most EME central banks rely also on derivatives¹

As a percentage of respondents

Graph 4



¹ Based on the responses of nine AE and twelve EME central banks, regardless of whether or not they intervened over the last three years. ² Use of at least one derivative instrument. ³ Categories for which a response is lacking are assumed to constitute a “Never”.

Sources: BIS surveys on FX intervention 2018 and 2021.

The choice of where to intervene can also depend on operational considerations. For example, spot markets may be better suited for automated operations (execution algorithms), as electronic trading is less readily available in forward markets.⁵ That said, the size of spot market interventions to contain stressed trading conditions is necessarily limited by the size of reserves. In contrast, using NDFs settled in domestic currency may help to mitigate the use of reserves.

Central banks can also face the choice of whether to intervene offshore or not. The use of offshore interventions – at least occasionally – has increased slightly relative to 2018 (Graph 4). In general, offshore markets require careful monitoring. And several central banks emphasised the need for operational readiness to intervene offshore. Others face legal constraints on offshore FXIs. Some central banks also reported closer convergence between off- and onshore markets. Another central bank noted that offshore NDFs are less of a concern due to the low volume. Central banks might find it easier to monitor market developments and target FXIs appropriately if offshore NDF transactions are reflected in onshore markets.

FXIs tend to be mostly discretionary and in response to market developments, in both EMEs and AEs (Graph 5).⁶ However, the share of EME central banks that normally intervene in a discretionary fashion decreased relative to 2018 from around 70% to 40%. Instead, the number of EME central banks that normally follow a rules-based approach has edged up. Pre-emptive interventions have also become more prevalent.

⁵ Execution algos to support FXIs may be used for the accumulation and management of reserves as this can help to reduce market distortions.

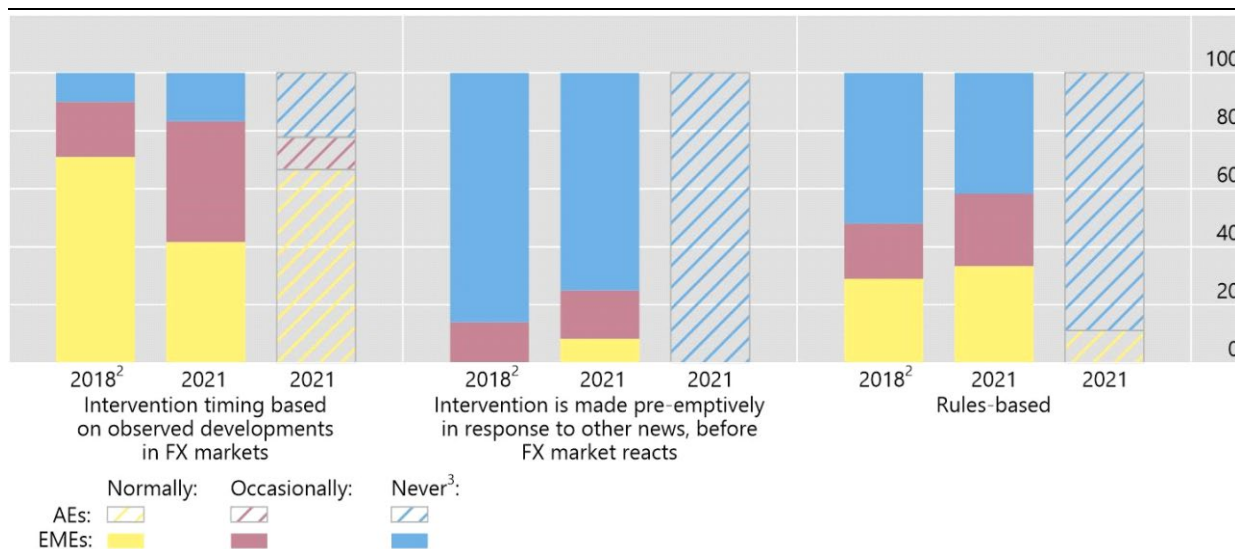
⁶ Some of the jurisdictions represented at the workshop display a mix of discretionary and rules-based FXIs. For instance, the Bank of Mexico has operated a pre-announced rules-based mechanism to achieve a target stock of reserves but intervened to provide liquidity in high volatility episodes on a discretionary basis.

One benefit of discretionary operations is that these allow for an “element of surprise” vis-à-vis sophisticated market participants. These sophisticated actors might otherwise anticipate the central bank’s reaction and add pressure to the currency.

Interventions are mostly discretionary and in response to market developments¹

As a percentage of respondents

Graph 5



¹ 2018: based on the responses of 21 EME central banks; 2021: based on the responses of nine AE and 12 EME central banks. ² Answers from one central bank corresponds to 2017. ³ Categories for which a response is lacking are assumed to constitute a “Never”.

Sources: BIS surveys on FX intervention 2018 and 2021.

3. Intervention effectiveness

FXIs are generally considered effective in achieving the different intermediate objectives in the short run (up to one month) (Graph 6). Interventions are also seen by some EME central banks as effective in the medium run (up to six months) for limiting exchange rate volatility or providing liquidity to thin markets.

However, judging FXI effectiveness is especially hard for several reasons. First, central banks cannot rely on counterfactuals or controlled experiments. Second, factors outside a central bank’s control might also have a bearing on FXI objectives, the impact of a country’s fiscal position on the volatility of its currency or the broader framework in place being a case in point. Judging the effectiveness of buying FX to build up reserves may be easier because it does not need to be as responsive to market conditions – which also makes it a good candidate for a rules-based approach or automation.

There are also several preconditions for FXIs to be effective. First, a clear understanding of the objectives of the intervention, underpinned by the appropriate communication. Second, consistency with other policies. Third, good execution, which requires a sound understanding of the market microstructure.⁷

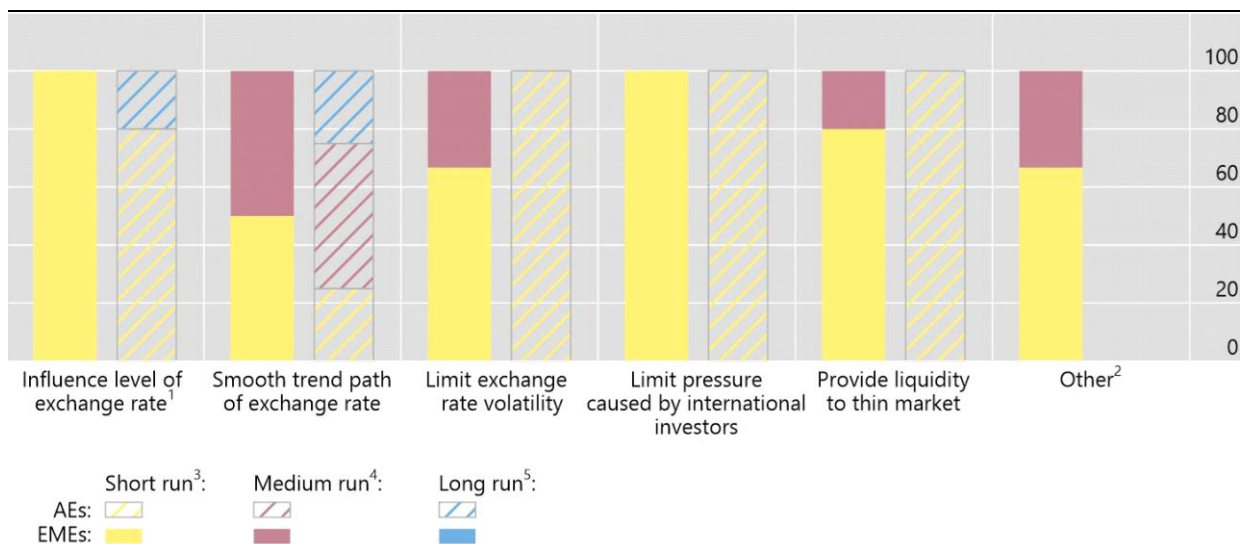
⁷ MI can play a critical role in generating this understanding.

FXIs can work through the signalling or the portfolio channel,⁸ depending on market conditions. For example, the portfolio channel may be especially relevant when there are binding constraints on market-makers. Given the important role of communication in ensuring effectiveness (see next section), the signalling channel can also play a critical role.

FX interventions are seen as effective in the short to medium run, but not beyond

As a percentage of respondents who pursue the respective objective, as indicated in Graph 3

Graph 6



¹ Based on the responses of five instead of seven central banks, as two central banks did not make an assessment. ² Based on the responses of two instead of five central banks, as three central banks did not make an assessment. ³ Up to one month. ⁴ One to six months. ⁵ More than six months.

Source: BIS survey on FX intervention 2021.

4. Transparency and communication

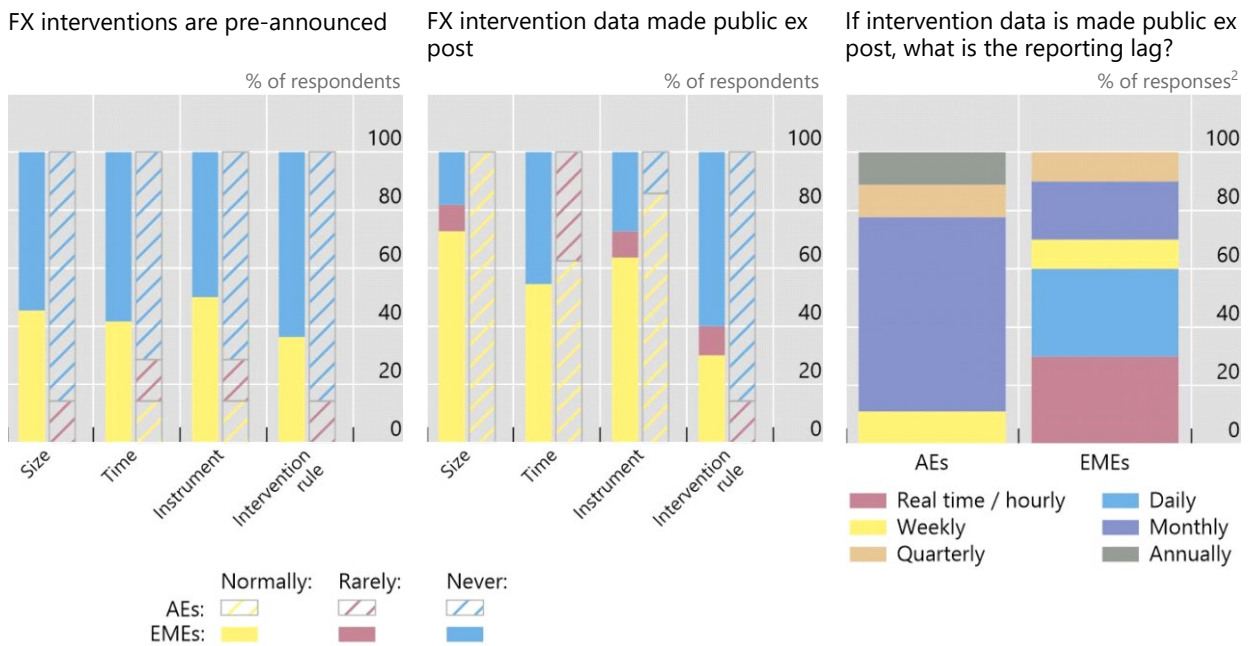
The survey highlighted that transparency about FXIs differs across central banks (Graph 7). Ex post transparency is widespread in EMEs and AEs, with only a minority of central banks not releasing information about the size, timing or instrument. Compared with their AE counterparts, EME central banks disclose sooner. Some 30% of EME respondents disclose information in or close to real time and another 30% daily. In contrast, AEs have a typical reporting lag of one month. On an ex ante basis, Latin American central banks are particularly transparent (Table 1). A sizeable fraction of EME central banks release information ex ante, with at least 40% of respondents normally willing to disclose some data on the intervention size, timing or choice of instrument.

⁸ A portfolio balance channel operates when agents regard assets denominated in different currencies as imperfect substitutes. A signalling channel shifts market participants' expectations about macroeconomic fundamentals or future policy.

Data on FX interventions is released mainly ex post¹

How much information do you provide publicly?

Graph 7



¹ Based on the responses of nine AE and 12 EME central banks. ² Some central banks reported multiple frequencies.

Source: BIS survey on FX intervention 2021.

While communication can help to increase the benefits and reduce the costs of FXIs, there are limits to what it can achieve. On the benefits front, the signalling channel relies on the transparency and visibility of the central bank's action, putting a special premium on communication efforts. That said, there are limits to how transparent central banks can be. Maintaining a surprise element can also be important for FXIs to be effective vis-à-vis sophisticated market participants. With regard to intervention costs, communication can help market participants distinguish when a central bank is in the market for monetary policy or for FX policy reasons. Some participating central banks use the frequency and the predictability of announcements to help market participants ascertain which actions are driven by which objective (eg, monetary policy actions are pre-announced, while FXIs are communicated as they happen).

Public information on FX interventions

As a percentage of respondents

Table 1

| | Normally | | Rarely | | Never/no response | |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | 2018 ¹ | 2021 ² | 2018 ¹ | 2021 ² | 2018 ¹ | 2021 ² |
| Does the central bank pre-announce FX interventions? | 32 | 50 | 0 | 0 | 68 | 50 |
| Latin America | 83 | 100 | 0 | 0 | 17 | 0 |
| Asia | 13 | 17 | 0 | 0 | 88 | 83 |
| Other emerging market economies | 0 | 0 | 0 | 0 | 100 | 100 |
| FX intervention data made public ex post | 59 | 67 | 5 | 8 | 36 | 25 |
| Latin America | 100 | 80 | 0 | 0 | 0 | 20 |
| Asia | 25 | 67 | 0 | 0 | 75 | 33 |
| Other emerging market economies | 33 | 0 | 33 | 100 | 33 | 0 |

¹ Based on the responses of 22 central banks. ² Based on the responses of 12 EME central banks.

Sources: BIS surveys on FX intervention 2018 and 2021.