How have external factors affected monetary policy in the EMEs?

Dubravko Mihaljek[1]

1.   Introduction

Over the past decade or so, economic and financial integration has reshaped the monetary policy frameworks and transmission channels in the emerging market economies (EMEs). Economic and financial linkages have become stronger, resulting in greater synchronisation of business cycles across advanced and emerging market economies. This has led to the faster transmission of shocks, especially through financial channels. Short-term and long-term interest rates as well as asset prices in the EMEs have thus become much more responsive to global financial conditions than 10 or 15 years ago.

Against this background, the 16th annual meeting of Deputy Governors from the major emerging market economies, held at the BIS in Basel in February 2011, addressed the question of how external factors had affected monetary policy in EMEs over the past few years. The present volume brings together papers prepared for that meeting.

The discussion was organised around four broad topics: (i) international banks, new liquidity rules and monetary policy in EMEs; (ii) exchange rates and monetary policy frameworks in EMEs; (iii) the implications of foreign exchange market intervention for central bank balance sheets; and (iv) additional supporting policies that central banks can use to address the policy dilemmas from the influence of external factors. BIS staff prepared background papers on these topics, and central banks contributed their own studies on different aspects of these issues. These contributions are compiled in the chapters that follow this overview.

One of the main conclusions of the meeting, highlighted in the contribution by Subir Gokarn and Bhupal Singh (Reserve Bank of India), was that financial globalisation has multiplied the number of transmission channels and associated risks through which external factors influence domestic economic and financial conditions in EMEs. This complicates the assessment of the outlook for inflation and growth. It also introduces an additional dimension – the evaluation of financial stability risks – to the objectives of central banks. Monetary policy in EMEs has become much more complex as a result.

The remainder of this overview summarises the main findings of the papers in this volume and the key points raised in discussions of Deputy Governors at the meeting in Basel.

2.   International banks, new liquidity rules and monetary policy

International banks play a large role in emerging markets. As noted in the BIS background paper entitled "International banks, new liquidity rules and monetary policy in EMEs" prepared by Előd Takáts and Agustín Villar, total claims of international banks have been around one-quarter of emerging markets' GDP throughout the past 15 years. This means that international banks have on average expanded their business at roughly the rate of GDP growth in EMEs, ie by more than 8% per annum in US dollar terms. As a result, the claims of

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international banks in EMEs have tripled in size over the past 15 years – in 2010, they amounted to about $4 trillion. But relative to total domestic credit, which has grown faster than GDP, the claims of international banks have decreased from over 40% in the mid-1990s to less than 30% in 2010.

Evolving role of international banks in EMEs

One of the main findings of Takáts and Villar is that the differences between international and domestic banks seem to have faded over the past decade. In particular, foreign-owned banks today allocate credit across corporate, household and government sectors similarly to domestically owned banks. There has also been a major shift in the currency composition of bank lending. Despite their comparative advantage in accessing international credit markets, local offices of foreign banks today provide on average more than 50% of their total loans in local currency, compared with just 15% a decade ago.

Deputy Governors agreed that international banks were increasingly behaving like domestic ones. In particular, funding strategies nowadays seemed to explain banks' business models better than ownership. There was also broad agreement that international banks had contributed to the rapid financial and economic development of EMEs by improving the allocation of resources and transferring valuable banking technology and expertise to the emerging markets. But there are also cases where the activities of foreign-owned banks had led to the emergence of significant maturity or currency mismatches on bank balance sheets, as detailed in papers by Jong-Hwa Kim (Bank of Korea) and Áron Gereben, Ferenc Karvalits and Zalán Kocsis (Hungarian National Bank).

In the 2008–09 crisis, international banks had not withdrawn from the EMEs as they had in previous financial crises. At the same time, the crisis has shown that cross-border claims could fall in periods of turbulence regardless of how well a host country was performing.

International banks and monetary policy transmission mechanism

Greater involvement of international banks in the financing of emerging market economies may have weakened the transmission of domestic policy rates to long-term interest rates. Several central banks noted that long-term rates had been less responsive to the recent domestic policy rate increases than in the past. The reasons could be specific to the post-crisis environment of low global interest rates and strong inflows to domestic bonds in EMEs.

Central banks also felt some weakening of the exchange rate channel for the transmission of monetary policy. In particular, in the EMEs where dollarisation and foreign currency borrowing were widespread, any weakening of the domestic currency would on balance have a contractionary effect on output. The reason is that exchange rate depreciation in such a case stimulates output through an increase in net exports, but weakens domestic demand through the higher domestic currency cost of FX loan repayments. The paper by Kim shows that the threshold level of external debt at which the contractionary effect takes over is fairly low: in a sample of four Asian EMEs (Indonesia, Korea, Malaysia and Thailand) from 2000 to 2010, the effect of exchange rate depreciation on GDP growth becomes negative when the external debt ratio exceeds 12% of GDP.

Impact of new liquidity rules

How far banks are able to provide credit to the economy in times of crisis depends in part on internationally agreed liquidity rules. The new bank liquidity standards agreed by the Basel Committee on Banking Supervision in December 2010 have important implications for bank operations and monetary policy frameworks in EMEs. The aim of the new regulations is to

establish global liquidity standards that improve the banking sector's ability to absorb shocks arising from financial and economic stress.

Deputy Governors noted that banks in many EMEs already held a relatively high proportion of liquid assets on their balance sheets in the past, partly as a result of high reserve requirements, and partly due to specific regulations on liquidity (see the contribution by Miguel Angel Pesce, Central Bank of Argentina). But in the absence of internationally agreed rules on liquidity, many international banks (and in some cases their branches in EMEs) were subject to less stringent liquidity standards. This may have encouraged cross-border lending and led to growing maturity mismatches in some EMEs' banking systems. The new liquidity standards are therefore expected to promote a more resilient banking sector in EMEs.

Deputy Governors also welcomed regulations such as the net stable funding ratio, which are expected to focus the attention of banks on liquidity gaps in terms of maturities. In the past, such gaps were generally less pronounced because the short-term nature of funding implied that most bank loans were short-term; in addition, abundant inflows of foreign capital did not provide enough incentives for banks to promote long-term deposits.

The discussion also indicated that the new liquidity standards might lead to some reduction in, and a simultaneous redistribution of, claims in the portfolios of internationally active banks. In particular, by affecting credit multipliers, the new liquidity rules could lead to some reduction in domestic credit and cross-border bank lending. It was also pointed out that bond prices tended to fall more in EMEs than in advanced economies in periods of financial market turbulence. Large bond holdings could thus result in bank losses in a crisis, as was the case in several Latin American countries in the past.

New sources of funding

If tighter liquidity rules require international banks (and perhaps domestic banks) to reduce their maturity transformation, the question arises whether the banks active in emerging markets should start issuing more long-term debt to fund their lending.

The discussion at the meeting confirmed that banks in emerging markets (including foreign-owned ones) were by and large relying on deposits as the main source of funding. The need to reduce reliance on wholesale funding, which is one of the intentions of the new liquidity rules, is thus not as pronounced in EMEs as in many advanced economies. But private sector deposits have expanded more slowly than bank lending in recent years, so that emerging market banks have increasingly turned to external funding. In addition, maturity risks in some countries have increased, as banks have greatly expanded housing and infrastructure finance without lengthening the maturity of their liabilities.

There was broad agreement that these developments provided incentives for developing longer-term funding from domestic sources. Kevin Cowan and Carla Valdiva (Central Bank of Chile) highlight in their paper the benefits of developing a market for covered bonds compared with external credit or international bonds issued by domestic banks. Nevertheless, banks are not expected to replace capital markets as the main supplier of long-term funds in EMEs in the near term. In this connection, Sukudhew Singh (Central Bank of Malaysia) cautions in his paper that deep financial markets are not a panacea when it comes to sustained large capital inflows, as they have also posed considerable challenges to the conduct of monetary policy in some EMEs.

3.   Exchange rates and monetary policy frameworks in EMEs

Central banks in emerging market economies have managed the exchange rates of their currencies more actively in the last two or three years than they did in the decade or so

before the crisis. Reserve accumulation, capital controls and a variety of other tools have been used to one extent or another in many jurisdictions. This increased activism in exchange rate management is all the more surprising as some central banks that had previously been strong proponents of flexible exchange rates recently decided to build up their foreign exchange reserves to address the challenges of volatile capital inflows.

The nominal exchange rates of emerging market currencies indeed fluctuate widely. During the crisis of 2008–09, the currencies of Brazil, Korea, Poland and Russia first weakened by 40–60% against the dollar (between October 2008 and February 2009) and then appreciated by 20–40% (between March and September 2009). The implied volatility of EME exchange rates has also increased since the start of the recovery in 2009 compared with the 2005–08 pre-crisis period. There is no doubt that such large swings may affect financial markets and the real sector, especially if they are deemed to be unrelated to the fundamental determinants of exchange rates.

Motives for managing exchange rates

The BIS background paper entitled "Exchange rates and monetary policy frameworks in EMEs" by Andrew Filardo, Guonan Ma and Dubravko Mihaljek, classifies the motives for stabilising exchange rates into two broad categories: (i) concerns about the short-term impact of exchange rate fluctuations on macroeconomic and financial stability; and (ii) concerns about the medium- to long-term impact of exchange rates on resource allocation. The short-term motives include the pass-through of exchange rate changes to inflation; the impact of exchange rate volatility on asset prices and private sector balance sheets; and the fact that EME exchange rates have become much more sensitive to shifts in global risk aversion. The longer-term motives include the impact of exchange rate appreciation on external competitiveness and the impact of exchange rate misalignment on resource allocation.

Flexible exchange rates still enjoy broad support in many EMEs, especially in view of their disciplining effect on private sector behaviour. The paper by Hernando Vargas (Bank of the Republic, Colombia) notes that the increased volatility of the Colombian peso after the abandonment of the target zone in 1999 helped reduce the exchange rate pass-through to local prices, but also currency mismatches, by forcing residents to internalise currency risk in their financing decisions.

Inflation targeting central banks thus generally regard foreign exchange intervention as an unconventional monetary policy and plan to end it once global interest rates return to normal levels. They emphasised the need to intervene only in the event of very large or very rapid changes in exchange rates, and to avoid supporting the exchange rate when it starts to depreciate. One also had to possess deep knowledge of the functioning of financial markets in order to intervene successfully, as noted by Piotr Bańbuła, Witold Koziński and Michał Rubaszek (National Bank of Poland). Some central banks operating managed floats also realised that they had undermined their own credibility in the past by not articulating clearly their motives for exchange rate stability and reserves accumulation.

Yet almost all participating central banks also acknowledged increased involvement in exchange rate management since the start of the crisis – the only central bank participating in the meeting that has not intervened in the past seven to eight years is the Czech National Bank. The motives for intervention most frequently mentioned were building a cushion of reserves (which helps in a crisis and with credit ratings); reducing the incentives for speculation based on the expectations of a continuing appreciation (as described in the contribution by the Bank of Russia); and the need to support exports, given that many central banks in EMEs have a legal mandate to support growth or are not fully independent in exchange rate management.

It was also pointed out that exchange rate flexibility could not absorb external shocks on its own, if labour and product markets were rigid, or if the institutional setting was weak. In

particular, Wang Xiaoyi (People's Bank of China) argues in his paper that China's banks need time to acquire the FX risk management expertise and build the necessary infrastructure, including a deeper market for hedging instruments, before freeing up the exchange rate of the renminbi. Some managed floaters also felt that the low degree of financial literacy in the non-financial corporate sector made it too risky to let the exchange rate float freely.

Finally, some EME central banks still express a clear preference for exchange rate stability. Abdulrahman Al-Hamidy (Saudi Arabian Monetary Authority) notes, for instance, that for a resource-based economy such as Saudi Arabia, countercyclical fiscal policy and a fixed parity of the currency are more appropriate for containing output shocks than a flexible exchange rate.

Exchange rate as a medium-term policy target

If exchange rates are being more actively managed, the question arises as to what benchmarks central banks should be aiming for. In particular, is it feasible and desirable to aim for a real value of the exchange rate over the medium term? Table A1 in the background paper by Filardo et al summarises more than a dozen different empirical approaches to estimating equilibrium exchange rates, while Table A3 lists some 30 central bank publications on the estimation of the equilibrium exchange rates. One unresolved conceptual issue in this literature is the choice of the appropriate price index (CPI, tradable prices, unit labour costs, GDP deflators). Another is assumptions about the nature of the adjustment in foreign exchange markets – is the main driver of adjustments uncovered interest rate parity over long horizons, or do internal and external imbalances in EMEs play a key role?

Despite these drawbacks, several central banks felt that they could sustain a medium-term target for the real exchange rate by allowing appreciation in line with the underlying path of the equilibrium exchange rate. They have some sense – often from their own research – of the width of the "normal" fluctuation bands and the "permissible" pace of appreciation. For instance, Zvi Eckstein and Amit Friedman (Bank of Israel) analyse in their paper estimates of the equilibrium real exchange rate of the Israeli shekel and how they are used in deciding on interventions, while Mojmir Hampl and Michal Skořepa (Czech National Bank) discuss how measures of long-term equilibrium exchange rates are being used in assessing the timing of the Czech Republic's entry into the euro area.

In practice, it is often difficult for policymakers to be precisely guided in their decisions by estimates generated from models of equilibrium exchange rates. Concerns about the impact of exchange rate volatility on financial stability and fears about the loss of export revenue should exchange rates overshoot often lead policymakers to resist exchange rate appreciation by applying some combination of interest rate and exchange rate policies.

Factoring exchange rate considerations into monetary policy decision

If exchange rates play two different roles in the monetary policy frameworks of EMEs – first as a policy tool to help achieve the inflation target and output stabilisation, and second as a separate target of monetary policy in a way similar to the inflation target – then the question arises as to how these roles can be factored into monetary policy decisions. Filardo et al describe a simple conceptual framework that could be used to address this question. They estimate an exchange rate-augmented Taylor-type rule that describes how central banks choose between the policy interest rate and the nominal exchange rate in order to stabilise inflation and output. The estimated policy rates fit the actual policy rates fairly well in a number of EMEs, including Chile, India, Malaysia, Peru, Thailand and Turkey.

A special case of the use of the exchange rate as a monetary policy tool is that of Singapore. The Monetary Authority of Singapore (MAS) targets a trade-weighted value of the Singapore

dollar so that it appreciates when the economy is overheating and depreciates when the economy is weak. Thus, when very large capital inflows in October 2010 raised concerns about overheating, MAS widened the band in which the Singapore dollar exchange rate can fluctuate, thereby increasing a two-way risk for investors in domestic asset markets.

Another interesting case of taking exchange rate movements into account in monetary policy decisions is that of Turkey. As described in the paper by Mahir Binici and Mehmet Yörükoğlu (Central Bank of Turkey), when inflation in Turkey fell inside its target range in late 2010, the central bank lowered the policy rate in an effort to discourage short-term capital inflows and exchange rate appreciation, and at the same time raised reserve requirements in an effort to restrain domestic credit growth. This approach has since reversed the appreciation trend and slowed credit growth. Yet some central banks felt that changing interest rates in response to exchange rate developments represented a major departure from inflation targeting.

4.   Intervention, balance sheets and alternative policy instruments

The recovery of the global economy since mid-2009 has been associated with renewed foreign currency inflows to the EMEs, reflecting a combination of capital inflows and current account surpluses. Many emerging market central banks have responded to the resulting exchange rate appreciation by intervening in foreign exchange markets, in the process expanding their holdings of foreign assets and the overall size of their balance sheets. In addition to the well-known concerns about the effects of prolonged intervention on the financial system, the expansion of central bank balance sheets has raised concerns about the effectiveness of monetary policy.

Balance sheets of central banks in EMEs

As discussed in the BIS background paper entitled "Foreign exchange market intervention in EMEs: implications for central banks" by Ramon Moreno, the median ratio of total central bank assets to GDP was around 24% in 2010. Central banks with asset-to-GDP ratios that are well above the median include financial centres (Hong Kong SAR and Singapore); oil exporters (Algeria and Saudi Arabia); and some Asian economies (China, Malaysia and Thailand). Central banks with balance sheets well below the median are mostly inflation targeting regimes (Chile, Colombia, the Czech Republic, Mexico, Poland, South Africa and Turkey). Central bank assets in EMEs are generally larger than in advanced economies, even after account is taken of the sharp increases in the size of central bank balance sheets in the United States, the euro area and the United Kingdom. In addition, net foreign assets account for the bulk of central bank assets in EMEs – the median share was 87% in 2010.

Large foreign asset holdings appear to have been associated with significant costs for central banks. These involve sterilisation costs (reflecting the differential between the domestic interest cost of financing foreign asset positions, and the interest rate earned on foreign assets) and possible losses from domestic currency appreciation. These costs are quite high in a number of countries, ie close to or exceeding 1% of GDP assuming full sterilisation. For countries with large foreign asset holdings, valuation losses that could be associated with appreciation could be even larger. As a result, the return on foreign exchange assets in a sample of EMEs has decreased on average during the period of strong capital inflows.

Discussions at the meeting indicated that central banks were increasingly concerned about the high opportunity costs of holding large foreign exchange reserves. Many central banks as a result faced the problem of negative capital. Deputy Governors expressed concern that these quasi-fiscal costs were not well understood by politicians and other policymakers, and thus posed potential risks for central bank independence. Separately, it was noted that large reserves could give incentives to the private sector to take on more foreign exchange risk.

Despite these costs, there was broad agreement that high foreign reserves had been crucial for weathering the global financial crisis, including in Brazil, China, Korea, Mexico and Russia. Against this background, one alternative to accumulating reserves at the national level, discussed in the paper by Diwa Guinigundo (Central Bank of the Philippines), is to establish standby agreements and pooling facilities that provide regional safety nets against crises. Asian countries are currently leading several initiatives on this front.

Sterilisation operations

Central banks use a variety of mechanisms to sterilise partially or completely the impact of foreign asset accumulation on their domestic financial systems. In addition to the traditional domestic operations – selling treasury securities on their portfolio, issuing central bank debt or accepting government deposits – central banks can avoid the expansionary effects of FX intervention via foreign currency operations that reduce their net foreign assets (eg implementing offsetting transactions in forward or futures markets). These are market-based instruments for sterilisation. In a number of cases, central banks have also used non-market instruments, such as adjusting reserve requirements for commercial banks.

As discussed in the background paper by Moreno, the choice of sterilisation instruments will have different implications for a central bank's balance sheet and the risks and costs the central bank assumes. One particular issue worth noting is that, before September 2008, the growth in net foreign assets had been positively correlated with growth in reserve money (net of currency in circulation), M2 and credit. Since then, however, this relationship has broken down, indicating either more effective sterilisation, or the fact that weak demand for money and credit has dampened the effect of foreign asset accumulation on money growth.

Central bank contributions and discussion at the meeting confirmed that operational challenges could weaken the effectiveness of sterilisation. Sterilisation instruments could attract foreign investors even where they are not allowed to hold such instruments directly (as is the case in China, India, Peru and Russia), and thus offset the liquidity draining effects of sterilisation. One way of isolating the foreign exchange market from large foreign currency transactions is to channel them through the central bank. This is the practice, for instance, with dollar revenues of the state petroleum company in Mexico, as described the paper by José Sidaui, Manuel Ramos-Francia and Gabriel Cuadra (Banco de México).

Another challenge is the limited supply of treasury securities for sterilisation purposes, as well as legal restrictions on the issuance of central bank paper (eg in the Philippines). Cooperation between the central bank and the ministry of finance is essential in such circumstances. Many EMEs have achieved a high degree of cooperation, sometimes reflecting limited central bank independence, in other cases as a result of clear and transparent rules such as public memoranda of understanding between the central bank and the ministry of finance in Israel.

Alternative policy instruments

Most EME central banks have a broad mandate that includes not only price (or exchange rate) stability, but also the safeguarding of financial stability and the promotion of economic growth and, sometimes, financial development. To fulfil these multiple objectives within the constraints imposed by a particular policy regime – inflation targeting, fixed exchange rate or a managed float – central banks in EMEs have been accustomed to using different monetary policy tools. This experience has been particularly useful in the recent crisis.

The Annex to the BIS background papers entitled "Alternative central bank policy instruments" by Dubravko Mihaljek and Agne Subelyte reviews three broad categories of such tools: (i) reserve requirements and measures that in the past few years have come to be known as macroprudential tools (real estate market measures, limits on credit growth,

limits to foreign exchange exposures of banks and the non-financial corporate sector); (ii) balance sheet policies other than foreign exchange intervention; and (iii) fiscal and quasi-fiscal measures to offset the domestic consequences of FX intervention.

One of the alternative monetary policy tools discussed at some length was bank reserve requirements. The paper by Renzo Rossini, Zenón Quispe and Donita Rodríguez (Central Reserve Bank of Peru) elaborates how reserve requirements differentiated by domestic and foreign currency, residency of depositors, etc were used to manage capital in flows to Peru. Similarly, the paper by Vargas describes how managing banking sector liquidity through reserve requirements helped address the limitations of sterilisation in Colombia. One advantage of reserve requirements for the central bank is that, unlike sterilisation, quasi-fiscal costs are passed to the financial system. However, reserve requirements also create distortions by increasing interest rate spreads, which often leads to disintermediation.

The use of reserve requirements also creates communications challenges. It was noted that interest rates affect the entire economy, while reserve requirements affect only one part of the financial sector, ie banks. The two instruments might therefore not be independent enough to affect two different objectives, the exchange rate and credit growth. Moreover, reserve requirements could not help manage exchange rate risks in the corporate sector.

Among macroprudential tools, the one that has attracted particular attention is the loan-to-value (LTV) ratio for housing loans. The contribution by the Hong Kong Monetary Authority assesses the effectiveness of LTV policy and finds that it has helped reduce systemic risk associated with boom-bust cycles in property markets in Hong Kong SAR. Similarly, the Bank of Thailand notes in its contribution that the LTV ratio played an important role as a signal to shape potentially over-exuberant expectations in housing markets. But ultimately, such could not substitute for monetary tightening aimed at overall price stability.