Capital Flows and External Vulnerabilities of EMEs

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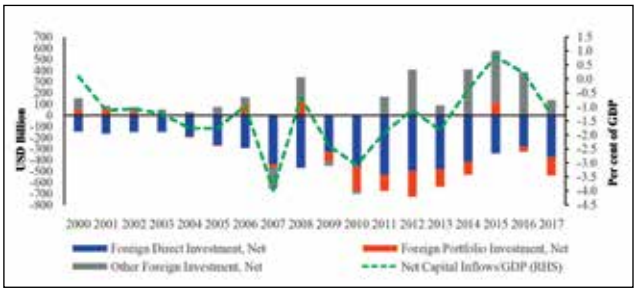
External shocks have been more frequent in the 21st century in an era of financial globalization. Notable among them are sub-prime crisis in the US in 2007, European sovereign debt crisis surfaced in 2010, Taper Tantrum in 2013, Chinese stock market crash in 2015, UK's exit from the European Union (popularly known as Brexit) in 2016, and normalization of the US monetary policy since December 2015. Capital flows to emerging market economies (EMEs) have been adversely affected in response to these shocks (Chart 1). Massive fluctuations in capital flows - surge, sudden stop, and reversal - to EMEs since 2007, have exposed them to severe macro-economic vulnerabilities.

Traditionally, low levels of foreign exchange reserve and currency over-valuation have been considered as major predictors of the pre-2008 financial crises in EMEs. Moreover, overheating indicators like GDP, growing above the potential and credit growth, well above the long-term trend, have not been currently perceived as major sources of vulnerability in EMEs. Even indicators like external current account deficit, money supply, and inflation are at manageable levels in most EMEs. Are we in a different situation where EMEs are vulnerable despite major lead indicators of vulnerability remaining within safe limits? The answer is an un-qualified yes. Relatively less lethal predictors of vulnerability like debt profile, capital flows, external debt, corporate leverage, debt repaying capacity, etc., have emerged as potential threat to financial stability in EMEs.

The vulnerability of EMEs seems to have increased due to turnaround in the global interest rate cycle following normalization of monetary policy in advanced economies (AEs), led by the US Fed. Despite recent recovery of the global economy, there is heightened uncertainty as regards capital follows to EMEs going forward. An attempt has been made here to examine the gravity of the problem associated with large capital flows to EMEs. Rest of the paper is divided into six sections. Section I examines the recent trend, nature and underlying reasons of capital flows to EMEs. Section II highlights different dimensions of vulnerability associated with large capital flows to EMEs. Appropriate policy responses, necessary to insulate domestic economies against volatile capital flows, are discussed in Section III. Section IV provides India's position with respect to cross-border capital flows. Section V reflects on implications for banks in India. Section VI provides concluding observations.

Chart 1: Net Capital Inflows to Emerging Market and Developing Economies



Source: WEO database, IMF.

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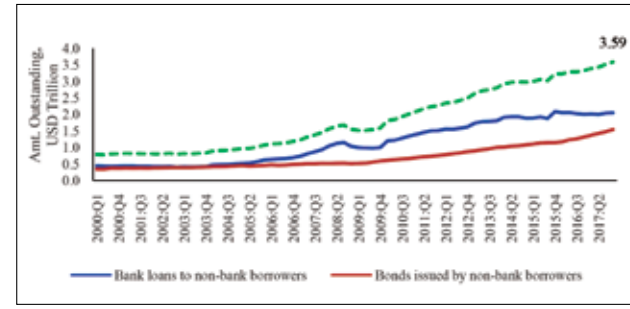
I. Capital Flows to EMEs

There are at least two major episodes of large capital flows to EMEs in the recent past; one is before the East Asian Crisis (EAC), which exploded in the late 1990s and the other is prior to the sub-prime crisis (SPC) in the US, intensified into the Global Financial Crisis (GFC) after the collapse of the Lehman Brothers in September 2007. The nature of capital flows and the driving forces behind such flows to EMEs in these two episodes have been different. Before the EAC, capital flows to EMEs were mostly in the form of Foreign Direct Investment (FDI). As these inflows predominantly financed their Current Account Deficit (CAD), EMEs could not accumulate adequate reserves during this episode. Moreover, exchange rates in EMEs were relatively less flexible during this period. Large CADs and overvalued currencies were not sustainable leading to EAC in the late 1990s.

Capital flows to EMEs prior to SPC were mostly in the nature of bank lending and portfolio flows in search of high yield. Easy monetary policy pursued by most developed countries during the period of great moderation (2002 to 2007), contributed significantly to such capital flows to EMEs. On the basis of lessons learnt from the previous crises, EMEs have not only built up sizeable reserves, particularly in the aftermath of the EAC, but also allowed their exchange rates to be more flexible, barring a few countries in the Middle East, which preferred to remain under fixed exchange rate pegged to the US dollar. Macro-economic fundamentals of the EMEs were somewhat better prior to SPC in 2007. Nevertheless, there were disruptions in capital flows to EMEs immediately after the global financial crisis. In the post crisis period, capital flows to EMEs resumed in 2010, and sustained till 2015, amidst intermittent disruptions due to adverse international developments mentioned above. Moreover, portfolio allocation was mostly in favour of debt rather than equity (Fratzscher, 2011). Since Chinese stock market crash in 2015, capital flows to EMEs declined dramatically. Net capital flows to EMEs seems to have dried up coinciding with normalization of the US monetary policy since December 2015. According to the Bank for International Settlements (BIS), the outstanding stocks of US dollar credit to non-bank EME borrowers roughly doubled since 2008 and stood at USD 3.6 trillion in December 2017 (Chart 2). Growth was specifically pronounced in international debt securities (BIS Annual Economic Report, 2018).

Chart 2: USD Denominated Credit to EME Non-Bank Borrowers



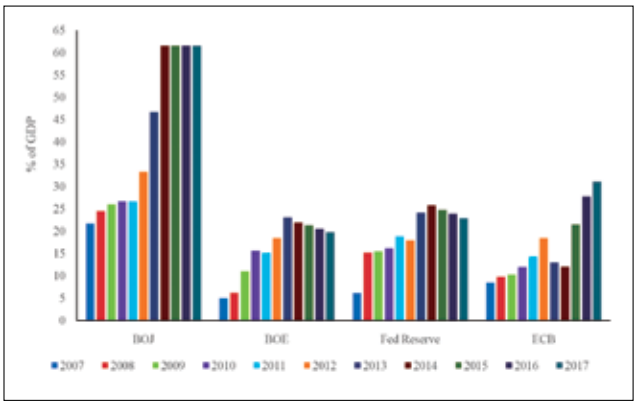
Source: Annual Economic Report, 2018, BIS.

Notwithstanding modest CADs, why was capital flows to EMEs so large after the GFC? Was there a genuine increase in risk appetite by Foreign Institutional Investors (FIIs)? Or was it an arbitrage opportunity – borrowing from AEs at ultra-low interest rates and investing them in EMEs at sufficiently higher rates? Major determinants of capital flows to EMEs, as available in the literature, are global liquidity, interest rate differentials, the US monetary policy, volatility in global financial markets, and country-specific factors like growth potential, return on equity, twin deficits – gross fiscal deficit (GFD) and CAD, exchange rate, and domestic inflation rate. According to empirical findings: a) global 'push' factors dominated idiosyncratic 'pull' factors in respect of gross capital flows to EMEs in the post-GFC period; b) foreign direct investment was mostly influenced by growth differentials and country-specific fundamentals; c) portfolio flows were more sensitive to quantitative easing/ global liquidity and interest rate differentials

during the post-crisis period (Ahmed et al. 2013, Acharya et al. 2017, Chandrasekhar 2008, Ghosh et al. 2017).

Immediately after the GFC, most advanced economies (AEs) pursued ultra-accommodative monetary policy. Large scale quantitative easing, popularly known as Unconventional Monetary Policy (UMP), could not stimulate growth in AEs although prevented a 1930s-type depression. Where did the liquidity, unleashed by the UMP, go? A sizeable part of this money was deposited in central banks pursuing UMP, making the size of their balance sheets unusually large, reflecting underlying weaknesses in those economies (Chart 3). Compression of term and risk premiums in AEs was un-precedented, which triggered capital flows to EMEs in search of higher return. Despite surge in liquidity, commodity market did not benefit as commodity prices continued to remain subdued in global markets. While portfolio investment in EMEs by Foreign Institutional Investors (FIIs) was largely driven by interest rate differential, non-bank non-financial companies in EMEs also preferred to borrow from AEs, particularly through issuance of corporate bonds due to prevailing low yield.

Chart 3: Major Central Banks' Balance Sheet Size

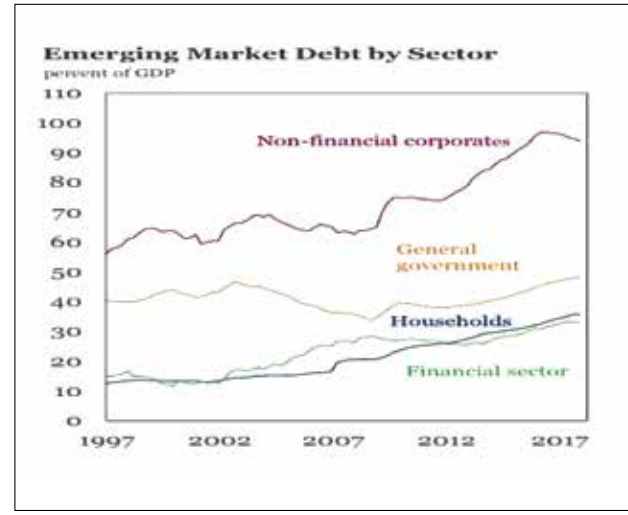


BOJ: Bank of Japan; BOE: Bank of England; ECB: European Central Bank

Sources: WEO database, IMF and Bloomberg.

The non-bank non-financial companies in EMEs have been highly leveraged in the post-GFC period (Chart 4). They borrowed heavily from domestic as well as overseas markets in the post-crisis period following compression of yield and rock bottom lending rates. The debt-to-GDP ratio in EMEs increased phenomenally since 2009, and surpassed the same for the developed countries since 2014, (Chui et al. 2018). The share of bond issuances as proportion to total debt by the corporate in EMEs have gone up from around 10 per cent in 2009 to around 17 per cent in 2014. Of the total bonds issued by EMEs, while local currency bonds constituted the major chunk, the share of foreign currency bonds also increased significantly. Moreover, increasing portion of local currency bonds is being held by non-residents due to opening up of the local debt market by EMEs to foreign portfolio investors.

Chart 4: Emerging Market Debt by Sector



Source: Global Debt Monitor, IIF.

II. Dimension of Vulnerabilities

Portfolio flows are susceptible to capital flight in response to adverse global developments. Flight to safety has been recently observed due to fall in the interest rate differentials between AEs and EMEs coinciding with normalization of the US

monetary policy. Despite sustained macro-economic fundamentals in EMEs, it is intriguing to observe sudden decline in risk appetite by FIIs. Large outflow of portfolio investment, particularly from the debt segment, has been a matter of concern for EMEs. The trend is likely to continue keeping in view turnaround in the global interest rate cycle, particularly in the context of rise in the US interest rates - both short-term and long-term.

As global banks were risk-averse and global interest rates were perceived to remain low for a longer period, corporates in EMEs like South Africa, Brazil, Chile, Russia, Indonesia, Philippines, Mexico and Turkey accelerated their borrowings from the global markets through issuance of foreign currency bonds. Moreover, corporates in the non-tradable sector borrowed more in foreign currency vis-a-vis in home currency, than those in the tradable sector (Chui et al. 2018).

Immediately after the GFC, outflows of capital from EMEs were mostly from the equity segment of the capital market, but after the taper talk in 2013, outflows were mostly from the debt segment (Acharya et al. 2017). Since the time of taper tantrum, EMEs have generally encountered bouts of depreciation pressure on their currencies. Despite depreciation of home currency, export growth from EMEs continues to remain sluggish. Moreover, the recent revival of export growth is likely to be short-lived mainly due to intensification of trade war. Hence, corporates in the tradable sector in EMEs, despite having natural hedge in terms of earning in foreign exchange, find it difficult to service their external debt.

Corporates in the non-tradable sector, who have exposure in foreign currency, will encounter serious repayment problem due to currency mismatch. As their earnings are in local currency, they are at risk on three counts. First, overseas debts are typically negotiated at variable rates linked to LIBOR, which is on the rise since 2016. Second, corporates generally do not hedge their foreign currency exposures, particularly during the phase of currency appreciation. Third, they have to bear the burden of currency depreciation while converting their earnings in local currency into foreign currency for servicing their external loans.

There is another dimension too relating to debt repayment capacity. The debt servicing burden of corporates in EMEs looks alarming in the context of deterioration in their profitability, solvency, and asset quality. According to the BIS working paper (No 550), return on equity, both in developed and EMEs, was around 12.5 per cent in 2013. By 2015, this has come down significantly to about 8 per cent in EMEs compared to above 10 per cent in developed countries. Moreover, the debt repaying capacity, measured by interest coverage ratio - the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) to interest expenses - has dwindled to below 6 in EMEs compared to more than 10 in developed countries in 2015.

III. Policy Responses

Large capital inflows to EMEs generally push up domestic prices, exert appreciation pressure on the Real Effective Exchange Rate (REER), and contribute to overheating of the economy due to low absorption capacity. Sudden reversal of capital flows typically creates undue volatility in financial markets like fall in equity prices, depreciation of the home currency, hardening of interest rates, etc. Moreover, conduct of independent monetary policy becomes difficult due to large variation in capital flows. Policy makers in EMEs typically respond to large capital flows through a combination of instruments. Although generalization is not appropriate, broad trends can be analyzed with regards to EMEs' policy responses during large capital inflows and outflows.

Literature suggests at least five tools to mitigate adverse consequences of large capital flows to EMEs (Ghosh et al. 2017). These are: a) monetary policy, b) fiscal policy, c) exchange rate policy, d) macro-prudential policy, and e) capital controls. As large

capital inflows are inflationary, EMEs typically pursue tight monetary policy. Capital inflows, particularly portfolio debt inflows to EMEs, accelerate following tight monetary policy as interest rate differentials widen between AEs and EMEs. The REER generally appreciates during large capital inflows, which provides an opportunity to FIIs to remain un-hedged while taking arbitrage position. Unfettered portfolio investment is not advisable as these funds quickly move out of EMEs as soon as stress on exchange rate is visible or interest rate differentials shrink.

According to the conventional wisdom, fiscal policy should be restrictive during large capital inflows. This would supplement tight monetary policy and avoid inflationary pressures to build up further. In reality, fiscal tightening is rarely used as there is great temptation to accelerate growth and thereby, attract more capital by improving growth potential. As the absorption capacity is low in EMEs, potential growth is quickly reached. Thereafter, overheating concern emerges defeating the very purpose of accommodative fiscal policy at the time of excess capital inflows.

Market intervention by central bank is the most commonly used policy response during large capital inflows. This can prevent currency appreciation for a temporary period, but complicates liquidity management. Tight monetary policy, advocated as alternate policy response to control inflationary pressures associated with large capital inflows, is compromised due to market intervention. Hence, central banks typically pursue sterilization through open market sale of securities together with market intervention. Sterilization is expensive and distortionary. Therefore, it cannot be a good policy option on an enduring basis. Many countries relax capital outflows in such a situation so that both overheating and currency appreciation pressures can be reduced. Premature relaxations of capital outflow by EMEs may prove to be counter productive if large capital inflows are found to be temporary.

If credit growth is excessive following surge in capital inflows, it would be appropriate to pursue tight macro-prudential policy to control aggregate demand. This would obviate the need for hefty hike in policy interest rate to control inflation. In fact, a combination of modestly tight monetary policy and stringent macro-prudential policy works well to control inflation triggered by large capital inflows. There is a range of options so far as tight macro-prudential policies are concerned, which include, inter alia, lower loan-to-value ratio / debt-service-to-income ratio, hike in countercyclical capital buffers, increase in dynamic provisioning, tight liquidity coverage/ net stable funding ratios besides prudential policies related to currency-derivatives. Commercial banks often find it difficult to adjust to both tight monetary policy and stringent macro-prudential policy. More difficult is the adjustment process when policy reversals take place quickly in response to the sudden outflow of capital.

In order to avoid frequent policy changes, capital controls have also been advocated as a policy option in response to large capital inflows to EMEs. It has been observed that FII inflows rise with the fall in volatility index (VIX) and vice versa. Causation runs from VIX to FII flows, not the other way round (Lim et al. 2016). Distinction is often made between types of capital flows to EMEs. The FDI, for example, is typically influenced by growth potential unlike portfolio flows and, therefore, reversal of FDI is not as smooth as portfolio flows. Within portfolio flows, reallocation of portfolio has been intensified in favour of debt rather than equity in the post-GFC period. This has in fact increased vulnerabilities of EMEs during the recent period. The primary objective of capital control is to curb arbitrage driven portfolio inflows to EMEs, which create financial instability besides repayment problems due to currency/ maturity mismatches. To the extent that capital inflows to EMEs are driven by global factors, there is a clear case of capital controls supplemented by

other policy options (Ghosh et al. 2017). In case, capital flows are driven by idiosyncratic factors, capital controls may be a misguided policy option. The capital scarce EMEs may be deprived of foreign capital due to capital controls.

The policy-mix pursued by EMEs is non-standard and largely depend on country-specific situations. Financial stability concern may call for utilization of macro-prudential policy. Central banks may intervene in the foreign exchange market when REER appreciates and tighten monetary policy if overheating is visualized. The real problem starts when there is capital outflow. Defending exchange rate through market intervention has not been very successful in EMEs except reducing exchange rate volatility for a temporary period.

There has been significant escalation of global uncertainties in the post-crisis period. While financial globalization is the major reason behind heightened uncertainties, some uncertainties have been man-made. These include intensification of trade war, sanctions against a number of countries, geopolitical risks associated with oil prices, and inadequate global safety net. At least political leadership at the global level should come to the negotiating table to reduce man-made uncertainties and promote multilateral trade.

The best safeguard against volatile capital flows is to pursue structural reforms so that medium-term fundamentals remain sound in EMEs. It is, therefore, suggested that EMEs should increase the resilience of their economies through structural reforms. The guideposts, inter alia, include responsible fiscal policy, sustainable CAD, and low inflation. Better to keep the house in order, so that collateral damage to the economy due to large capital flows is limited.

IV. India's Position as Regards Capital Flows

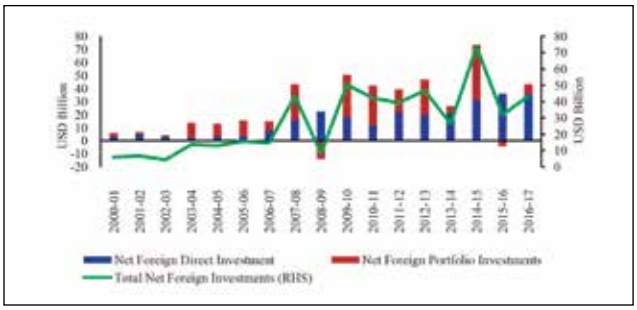
India's external sector policy has been cautious ever since structural reforms started in 1992. Despite significant moves towards liberalization, Indian rupee is not convertible so far as capital account transactions are concerned. As regards cross-border capital flows, liberalization progressed in a calibrated manner. Debt flows have been regulated more stringently compared to equity flows. External commercial borrowings have been regulated. Portfolio debt flows have been allowed within limits set by RBI for both sovereign papers and corporate bonds from time to time.

Aggregate capital flows to India in the post-GFC have been large, bulk of which has been foreign investment (Chart 5). However, volatility of capital flows to India has increased significantly since 2013-14, mainly due to fluctuations in foreign portfolio investment by FIIs while foreign direct investment flows have been relatively more stable (Chart 6). There has been noticeable improvement in India's CAD since 2013-14, coinciding with the fiscal consolidation, except recent deterioration mainly due to rise in crude oil prices. As a consequence of low CAD and large capital flows, REER of rupee has appreciated since 2013-14 (Chart 7). India's foreign exchange reserves, which were sufficient for 7 months of import cover in 2013-14, has gone up to nearly 12 months following significant build-up of foreign exchange reserves. Resilience of India's external sector has improved significantly now as compared to 2013-14 when taper tantrum was announced.

Chart 5: Components of Capital Flows

Source: Handbook of Statistics on Indian Economy, RBI.

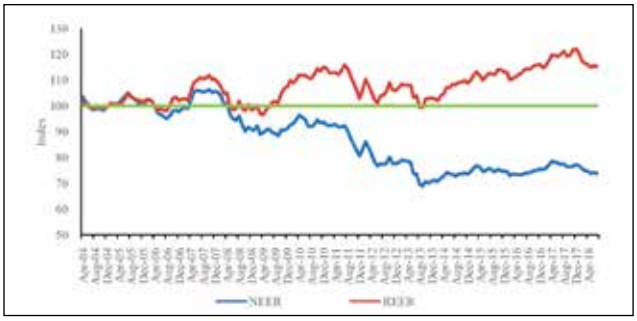
Chart 6: Composition of Foreign Investments



Source: Handbook of Statistics on Indian Economy, RBI.

Chart 7: Nominal and Real Effective Exchange Rate (Trade Weight)

(CPI-Based) (36 Currency) (Base: 2004-05 = 100)



Note: Increase in indices indicates appreciation of Rupee, and vice versa.

Source: Bulletin, RBI.

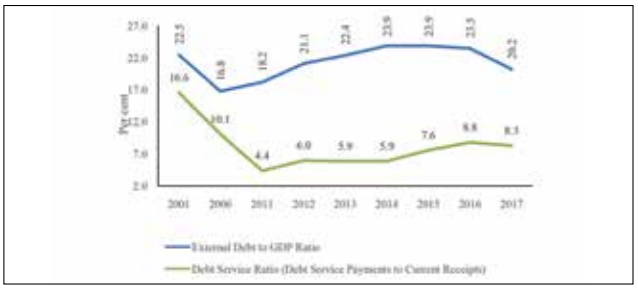
Despite sound external sector, low inflation rate and sustainable CAD/GFD, Indian economy is not fully immune to capital flight. During 2018 so far (August 21), FIIs have withdrawn about ₹68 billion from India's debt market and ₹48 billion from equity market. India's equity market continued to remain buoyant as purchases by Mutual Funds more than offset FIIs' withdrawal. Depreciation of rupee could not be prevented notwithstanding RBI's market intervention. Although orderly correction of REER is desirable, sudden capital outflow is a cause for concern despite sound macro-economic fundamentals.

India's debt market is under pressure for several reasons. FIIs' sudden loss of appetite for Indian debt papers is one of the major reasons for the recent rise in 10-year benchmark yield. Several other factors like two successive hikes in repo rates by RBI, inching up of inflation rate and turnaround in the domestic credit cycle have contributed to the hardening of yields.

V. Implications for Banks in India

India's twin balance sheet problem continues to linger. While NPA problem of banks are being addressed through multiple initiatives, it cannot be completed without improvement in the balance sheets of corporate sector. India's external debt-to-GDP ratio is modest, even external debt service ratio is within the safe limit of about 20 per cent (Chart 8). Nevertheless, India's short-term debt to total debt as per residual maturity is as high as 42 per cent. Corporates who have borrowed earlier from the overseas market have to bear the burden on several counts. First, turnaround in global interest rate would increase their interest liabilities. Second, rupee depreciation would require more funds to convert domestic earning into foreign currency to service overseas debt. Third, foreign debt cannot be a good substitute for domestic debt anymore, as overseas interest rates are moving northward following normalization of monetary policy in AEs. Given the inherent balance sheet weaknesses, it would be difficult for Indian corporate sector to face domestic insolvency burden as well as overseas repayment commitments at a time of rising interest rate cycle in India and abroad.

Chart 8: India's External Debt-GDP and Debt Service Ratios



Source: Annual Report, RBI.

The impact of capital outflows on banks' balance sheet would be significant. First of all, there will be shortage of liquidity in the market for several reasons such as market intervention (dollar sale) by the RBI, pick-up in credit growth due to industrial recovery and redemption pressure arising out of liquidation of FII's portfolio investments (debt / equity). Second, treasury management will be complicated following shortage of liquidity in the market. Third, while adjusting to evolving tight credit conditions, commercial banks may have to reduce gradually their debt portfolios and incur loss on account of recent rise in sovereign yields. Fourth, banks' NPA problem may deteriorate further due to increase in delinquency as most of the corporate borrowers from overseas markets have not fully hedged their foreign exchange exposures. Fifth, sudden crash of equity markets may compound the problem as Mutual Funds, to meet redemption pressures of their clients, may withdraw their investments from banks' Certificate of Deposits (CDs). Finally, in a tight liquidity situation, it would be difficult for banks to borrow from the domestic market at competitive rate for their capital requirements.

Going forward, commercial banks may have to further tighten their risk management in respect of all cross-border transactions. They may have to reduce their dependence on Mutual Funds for short-term deposits, and also to pro-actively carry out their treasury management function in a tight liquidity condition. Banks serving as custodian to FIIs may be required to remain vigilant on FII's activities. Further, holding of excess SLR securities may be beneficial for banks for their liquidity management as well as meeting liquidity coverage ratio. Banks may also have to sensitize their customers to reduce unhedged foreign currency exposures to minimize vulnerability arising out of currency mis-matches. Commercial banks may have to refrain from overseas borrowings for capital requirements, particularly at variable rates, as the global interest rate cycle is at the early stage of upswing.

VI. Concluding Observations

Financial globalization has opened up new opportunities and challenges for EMEs. Capital flows, particularly portfolio flows to EMEs, have been more volatile in the post-GFC period. Normalization of monetary policy in advanced countries throws new challenges for EMEs due to turnaround in the global interest rate cycle. This has increased the burden of debt service payment by EME corporates, who have borrowed heavily from global markets, when interest rates were low. Going forward, synchronized contraction of balance sheets of major central banks is likely to reduce global liquidity. This together with normalization of monetary policy, would push up global interest rates further. As interest rate differentials between EMEs and AEs are expected to shrink, adequate margin would not be available for FIIs to sustain their risk appetite for EME's financial assets. Recent slowdown of capital flows to EMEs has already weakened most of the EME's currencies. Corporates in EMEs are currently facing exchange risks due to un-hedged exposures. Moreover, given the weaknesses of their balance sheets, they may find it extremely difficult to honour their external commitment unless there is appreciable increase in their debt servicing capacity.

Amidst heterogeneity, EMEs have used multiple policy tools to deal with large capital inflows. These include, inter alia, tight monetary/fiscal policies, market intervention, macro-prudential regulations and capital control. The global environment is progressively turning hostile against the EMEs. Capital flows to EMEs are likely to remain constrained due to headwinds coming from global uncertainties, shrinking of balance sheets of major central banks and tightening credit conditions following rise in interest rate cycle. While policy making has been complicated in an era of financial globalization, idiosyncratic risks can be reduced by maintaining domestic macro-economic balances. Moreover, corporate sector should be more responsible to

avoid large currency and maturity mis-matches. Commercial banks may have to further tighten their risk management and also be proactive in their treasury management.

The growth prospects for EMEs may become more uneven due to various factors, which include, inter alia, rising trade tensions, geopolitical concerns and tighter financial conditions. These evolving developments could potentially result in weakening of risk appetite of investors in EMEs markets causing frequent disruptions in portfolio adjustments along with volatility in exchange rate movements. This may in turn lead to further reversal of capital flows from EMEs, particularly from countries with weaker macro-economic fundamentals or higher geopolitical risks. EMEs may have to address such challenges by way of enhancing their resilience in medium-to-long term horizons through an appropriate mix of fiscal, monetary, exchange rate and macro-prudential policies. In a nutshell, the enduring solution lies in structural reforms to improve the resilience of EMEs, so that they can have least disruptions in the event of sudden reversal of capital flows.

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