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Capital Flows in the Quantitative Easing Era: Building Resilience in Emerging Economies

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Abstract

Unconventional Monetary Policies (UMPs), initially designed to resuscitate domestic growth in advanced economies, have now permeated into the deepest cracks of the global financial system. The prevalence of near-zero interest rates and large Quantitative Easing programmes have acted as a drug to the global economy – any deviation from an accommodative monetary stance, from higher interest rates to slowing down of asset purchases, sends ripples of volatility across financial markets. In the context of a global economy with very strong financial linkages, the fate of which is increasingly intertwined with asset price movements, it is critically important to evaluate the ensuing spillovers from such UMPs.

The build-up of systemic risk in the form of asset bubbles and the increased vulnerabilities from rapid capital flows can be especially detrimental to emerging economies. Currently, emerging economies do not have in place the institutional capacity and flexible mechanisms to quickly adjust to adverse shocks from a reversal of capital flows. This paper seeks to highlight the risks that emerging economies are exposed to given extended use of UMPs in advanced economies. Subsequently, the paper explores a few ideas that can be implemented in the short, medium and long term to increase the financial resilience of emerging economies and ensure stable economic growth.

Introduction

A world of easy money

Following the global financial crisis, central banks in many advanced economies have taken a highly accommodative monetary policy stance. *Short term* interest rates have been pushed down to near zero

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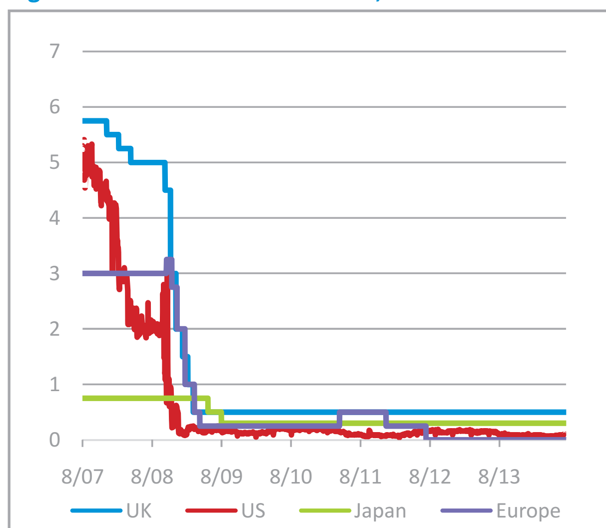
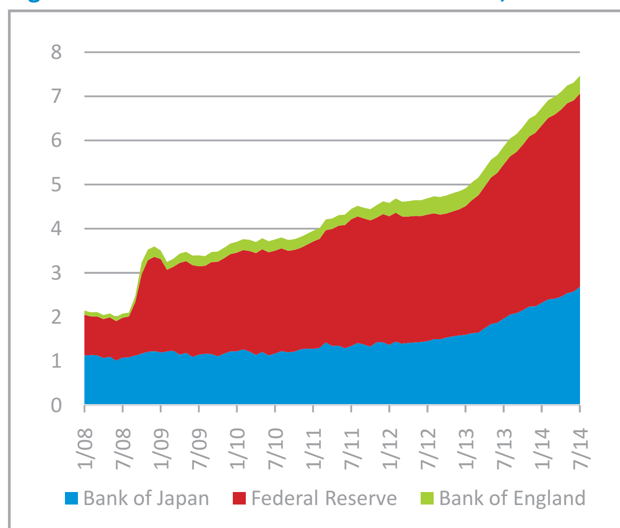
levels (Figure 1) and large-scale asset purchases, or Quantitative Easing (QE) programmes have simultaneously depressed *long term* interest rates. By easing credit conditions in times of the crisis, these Unconventional Monetary Policies (UMPs)[1] have no doubt paved the way for economic recovery–QE in the United States alone reduced unemployment by 1.5 percent according to the Federal Reserve's estimates.[2] However, these policies have also ended up in a prolonged period of low interest rates and unleashed an unprecedented scale of market liquidity – central banks in the United States, United Kingdom, Japan and Europe have collectively injected more than US $5 trillion in their economies since 2008 (Figure 2). With the European Central Bank (ECB) speculated to join the QE bandwagon soon, the volume of market liquidity is likely to be maintained even as the United States concludes its own QE programme.[3] Moreover, with the latest data showing the global economy on tenterhooks as well as the slow and uncertain domestic recoveries in advanced economies themselves, central banks are unlikely to raise interest rates in the near future.

Figure 1: Central Bank Base Rates, %



Source: Federal Reserve, ECB, BoE, BoJ

Figure 2: Size of Central Bank Balance Sheets, USD Trillion



Source: Federal Reserve Bank of St. Louis

By perpetuating an environment of low interest rates and cheap liquidity, UMPs have encouraged excessive financial risk-taking *globally* without a proportionate increase in economic risk taking.[4] Global asset prices have surged and valuations have stretched beyond what is indicated by economic fundamentals. This has even led market watchdogs such as the Bank for International Settlements (BIS) to comment on a seeming dissociation of financial markets from the real economy.[5]

Emerging economies, in particular, are precariously poised. These countries have witnessed a surge in capital inflows from foreign investors seeking higher returns than those prevailing in the advanced economies. This risk-seeking behaviour can distort emerging market fundamentals and stoke fears of inflation and currency misalignment. Additionally, volatility of the capital flows can lead to a rapid loss of liquidity and threaten to derail economic growth. This paper will highlight the risks faced by emerging economies as a result of UMPs in advanced economies. Subsequently, the paper will delve into possible sources of coordination and contingent arrangements to mitigate these risks.

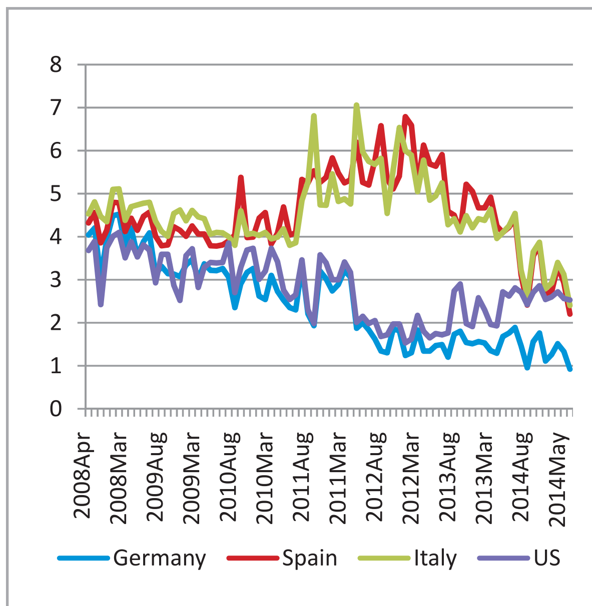
Risks from Unconventional Monetary Policy (UMP)

Asset bubbles and 'search for yield'

The prolonged use of UMPs has led to a surge in asset prices across a broad range of asset classes including equities, fixed income and real estate. Equity markets have experienced consistent highs and global bond markets have been flushed with liquidity. As investors embark on a 'search for yield' in a low interest rate world, share valuations have surged without a proportionate increase in underlying corporate performance and spreads between investment grade and junk bonds have significantly narrowed (Figure 5). Stock markets in the US and Japan have seen a nearly secular increase of as much as 91 per cent and 57 percent, respectively, since 2012 without a similar increase in corporate earnings (Figure 4). Borrowing costs for Spain and Italy are at the lowest level in five years despite gross public debt as a percentage of GDP for the two economies at 102 per cent and 122 percent respectively (Figure 3). There has also been a rally in high yield 'junk' bonds with US$148 billion flowing into the asset class between April to June 2014 compared to a historic average of $30 billion.[6]

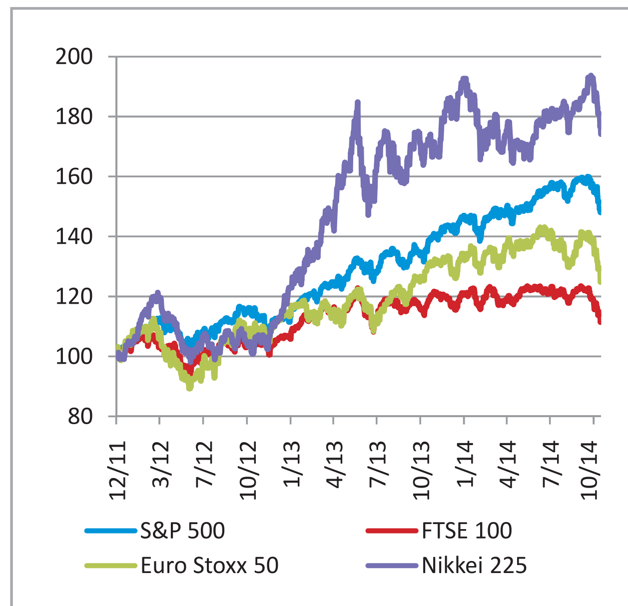
Asset price inflation at such a broad level can jeopardise the stability of the global financial system. According to a simulation by the IMF, a mean reversion to historic norms of term premiums in bond markets and credit risk premiums can potentially reduce global bond value portfolios by more than $3.8 trillion or 8 percent.[7] Changes in UMP can lead to such an adjustment that, if occurring in a narrow time frame, can compromise the stability of global markets including emerging economies. In this context, it becomes critical to evaluate spillovers resulting from the use of highly accommodative monetary policy in advanced economies.

Figure 3: 10-year Government Bond Yields, %



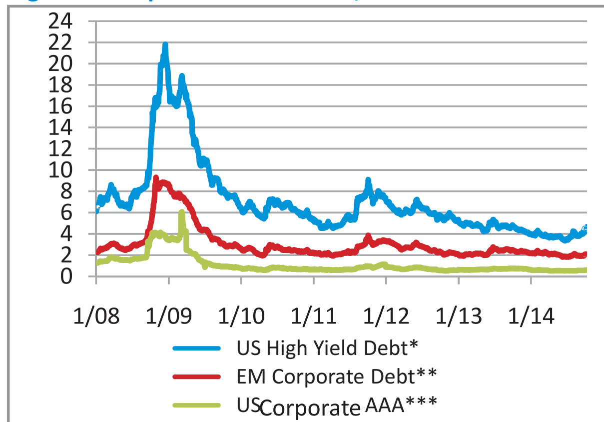
Source: ECB, Federal Reserve

Figure 4: Major Equity Indices (30/12/2011=100)



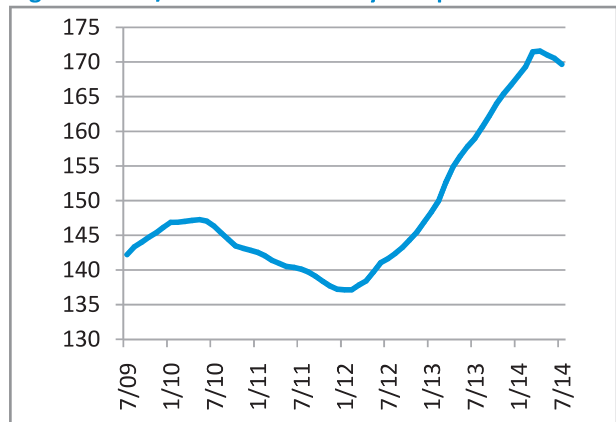
Source: Bloomberg

Figure 5: Corporate Bond Yields, %



*BofA Merrill Lynch High Grade Emerging Markets Corporate Plus Sub-Index Option-Adjusted Spread
**BofA Merrill Lynch US High Yield Master II Option-Adjusted Spread
*** BofA Merrill Lynch US Corporate AAA Option-Adjusted Spread
(Source: St. Louis Fed)

Figure 6: S&P/Case-Shiller 20-City Composite

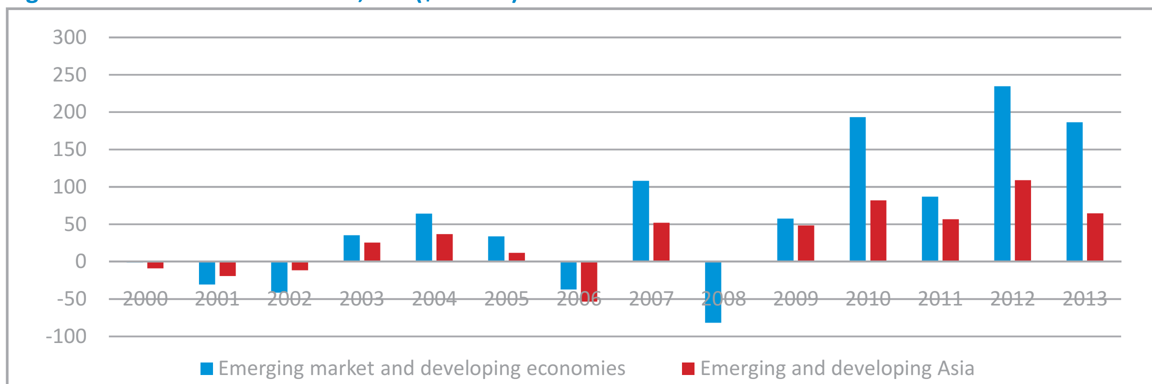


Source: Federal Reserve

Negative Spillovers into Emerging Economies

Greater financial linkages have increased portfolio flows to emerging economies. Portfolio investors now allocate about 13 percent of their total investments to emerging market bonds and equities.[8] With the prolonged use of UMPs, investors have increased their exposure to emerging economy bonds and equities to get a higher return. As a result, capital flows to these economies has surged – net private portfolio inflows to emerging and developing economies in the QE era (post-2008) totalled US $760 billion compared with US $131 billion from 2000 to 2008 (Figure 7). Any adverse shock resulting from abrupt changes in UMPs can trigger a rapid outflow of capital from emerging economies.

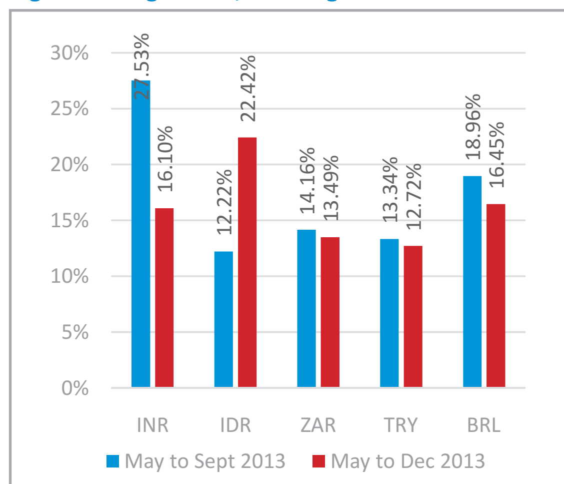
Figure 7: Private Portfolio Flows, net ($ billion)



Source: IMF WEO

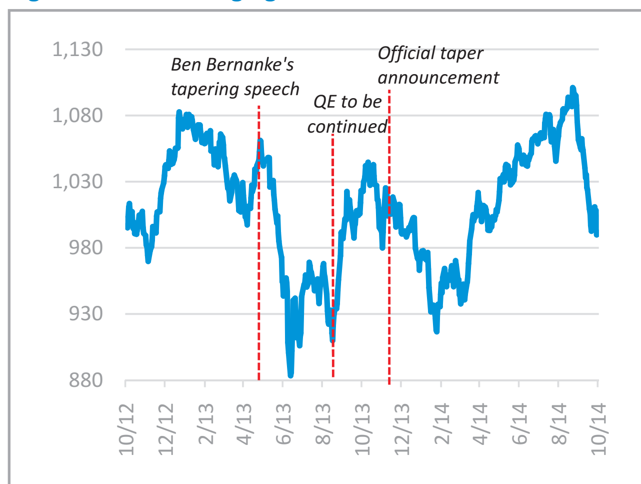
Ben Bernanke's speech[9] in May 2013 about 'tapering' the pace of asset purchases led to sudden capital outflows and considerable volatility in many emerging economies. This episode – commonly referred to as the 'taper tantrum' – was marked by a collective withdrawal by investors from emerging markets. In particular, the 'Fragile Five' – India, Brazil, Turkey, Indonesia and South Africa – saw a sharp depreciation in their currencies and a concomitant worsening of current account deficits. India's current account deficit worsened to 4.8 percent of GDP in the quarter ended June 2013 and its currency depreciated by 27.53 per cent from May to September.[10] Other members of the 'fragile five' found themselves in a similarly dire macroeconomic environment (Figure 8).

Figure 8: Fragile Five, Exchange Rate



Source: Yahoo Finance

Figure 9: MSCI Emerging Markets



Source: MSCI

The MSCI Emerging Markets Index aptly demonstrates the correlation between US monetary policy announcements and financial stability in emerging economies(Figure 9). The month following Ben Bernanke's tapering speech saw a nearly 16 per cent drop in the index; in September 2013 the Federal Reserve announcement to continue asset purchases reflected in a 7 per cent increase in the index for the month.

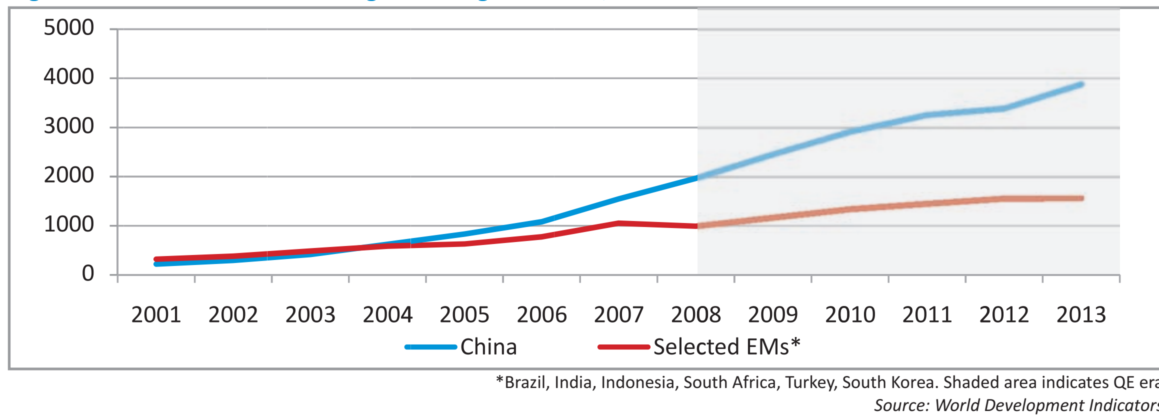
THE WAY FORWARD – Ensuring financial stability in emerging economies

Short term solutions – Macroprudential measures and liquidity backstops

To effectively manage spillovers from UMPs, it has become imperative for emerging economies to act quickly to effectively manage volatility in cross-border capital flows. In the very short term, these countries have no choice but to resort to measures such as raising interest rates and implementing macroprudential measures to prevent currency destabilisation and current account deterioration. For example, India had to impose restrictions on outward investment to reduce its ballooning current account deficit[11] while Indonesia was forced to raise benchmark interests by 175 basis points from May to December 2013[12] to control the depreciation of the rupiah. Brazil also had in place a two per- cent tax on bond and equity flows to manage volatile capital flows.[13]

Additionally, emerging economies have resorted to building foreign exchange buffers to prevent future episodes of volatility. Over a one year period, India alone has increased its total reserves from $276 billion on September 27, 2013 to $318 billion.[14] In fact, there has been a steady increase in foreign exchange reserves of major emerging economies since the early 2000s (Figure 10). The prolonged use of UMPs can perpetuate another 'global savings glut' that can further supress real interest rates and increase the inherent risk in the global financial system.[15] However, unless there is clear communication on global implications of UMPs, emerging economies must use all available options to stabilise their own economies.

Figure 10: Accumulation of foreign exchange reserves, $ billion



*Brazil, India, Indonesia, South Africa, Turkey, South Korea. Shaded area indicates QE era

Source: World Development Indicators

Medium Term Solutions–Building International Safety Nets

During the financial crisis, the Federal Reserve extended dollar swap lines of up to $30 billion to central banks of Brazil, Mexico, Singapore and South Korea that were witnessing large outflow of capital.[16] Similar swap arrangements of varying sizes were offered to other central banks including the ECB during the Eurozone crisis and played an important role in addressing negative spillovers and easing short term funding pressures.

Table 1: China's bilateral currency swap arrangements (December 2008 to June 2013)[17]

Bank	Date	Amount (billion yuan)	US Dollar Equivalent (billion)
Bank of Korea	12-Dec-08	180	26.3
	26-Oct-11	360	56.5
Hong Kong Monetary Authority	20-Jan-09	200	29.2
	22-Nov-11	400	62.9
Bank Negara Malaysia	8-Feb-09	80	11.7
	8-Feb-12	180	28.6
National Bank of the Republic of Belarus	11-Mar-09	20	2.9
Bank Indonesia	23-Mar-09	100	14.6
Central Bank of Argentina	2-Apr-09	70	10.2
Central Bank of Iceland	9-Jun-10	3.5	0.5
Monetary Authority of Singapore	23-Jul-10	150	22.1
	7-Mar-13	300	48.2
Reserve Bank of New Zealand	18-Apr-11	25	3.8
Central Bank of the Republic of Uzbekistan	19-Apr-11	0.7	0.11
Bank of Mongolia	19-Apr-11	5	0.8
	20-Mar-12	10	1.6
National Bank of Kazakhstan	13-Jun-11	7	1.1
Bank of Thailand	22-Dec-11	70	11.1
State Bank of Pakistan	23-Dec-11	10	1.6
Central Bank of the United Arab Emirates	17-Jan-12	35	5.5
Central Bank of the Republic of Turkey	21-Feb-12	10	1.6
Reserve Bank of Australia	22-Mar-12	200	31.7
National Bank of Ukraine	26-Jun-12	15	2.4
Banco Central do Brasil	26-Mar-13	190	30.6
Bank of England	22-Jun-13	200	32.6

In the medium term, emerging economies can explore the design of similar international safety nets to manage market illiquidity in times of crisis. This may include different types of bilateral, regional and multilateral arrangements to swap currencies or extend lines of credit to mitigate the effects of

temporary liquidity and credit constraints. Indeed, emerging economies should take a cue from China that has been proactive by negotiating 25 different bilateral currency swap agreements worth over $400 million (Table 1).[18] The Contingent Reserve Arrangement (CRA) worth $100 billion signed by the BRICS economies in August 2014 is another example of a liquidity mechanism at a multilateral level.

Although multilateral liquidity arrangements can potentially act as a useful option, particularly during crises, they are yet to be tested in a greater capacity by any emerging economy. Asymmetry in incentives between borrowers and lenders can result in potential concerns about repayment of credit lines and subsequent tendencies to impose credit conditionalities on borrowing countries. This can be problematic, especially from a sovereignty perspective and is a likely reason why even a large network like the Chiang Mai initiative was never utilised during the financial crisis.[19]

To ease political concerns associated with bilateral and regional liquidity arrangements, the IMF can step in to play the role of a neutral coordinator. Another possible arrangement can involve the IMF itself extending pre-determined lines of credit. In this case, countries facing a short-term liquidity crisis can be excluded from a typical programme of structural reform, provided the crisis is deemed temporary and induced by external factors.

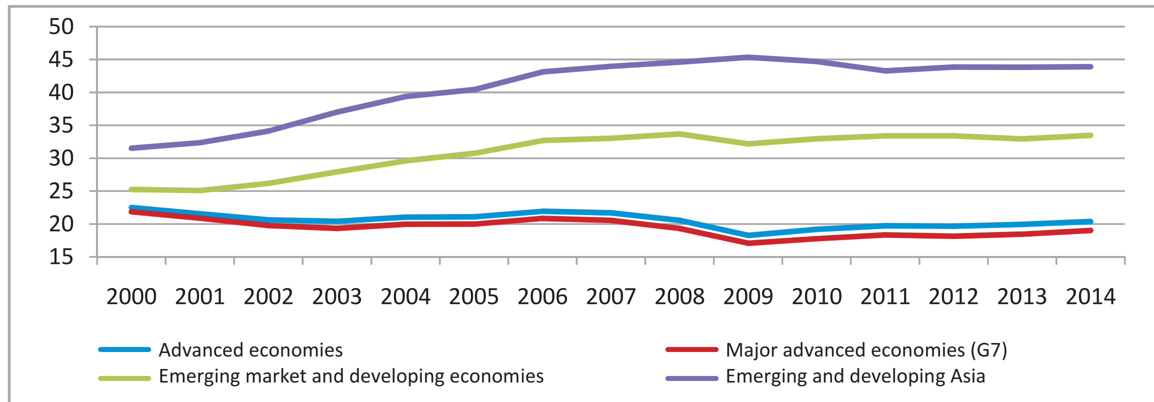
Long Term Solutions–Ensuring steady flow of capital

While it is essential to design a broad range of instruments and mechanisms to mitigate liquidity pressures in the form of 'sudden stops' of capital flows and current account crises, long-term measures require more structural amendments to the financial architecture within emerging economies. A key objective while building financial resilience should be establishing a stable investment climate. In particular, emerging economies must create a macroeconomic environment that can generate adequate domestic liquidity to offset any episodes of volatility in foreign capital flows. In this regard, emerging economies share three specific challenges that can be overcome to collectively improve the long term investment climate in these countries.

a. Utilising domestic Savings

Emerging economies have historically displayed higher gross savings than the advanced economies (Figure 11). The disparity in savings rate has become more prominent in the past decade. Spillovers from UMPs and the build-up of global systemic risk will naturally increase the tendency to accumulate international reserves and contribute to the 'global saving glut'. Structural factors like demography will further increase the saving gap.

Figure 11: Gross Savings (% of GDP)



Source: IMF WEO

Domestic gross saving in emerging economies represents an important conduit of capital. If directed towards productive sectors within emerging economies, these savings can represent sustainable investment and increase market liquidity. To realise this untapped potential, households must be encouraged to deploy their savings towards financial assets and away from cash and physical assets. For instance, there is a significant scope of utilising household saving in a country like India where financial saving represents less than a third of total household saving.

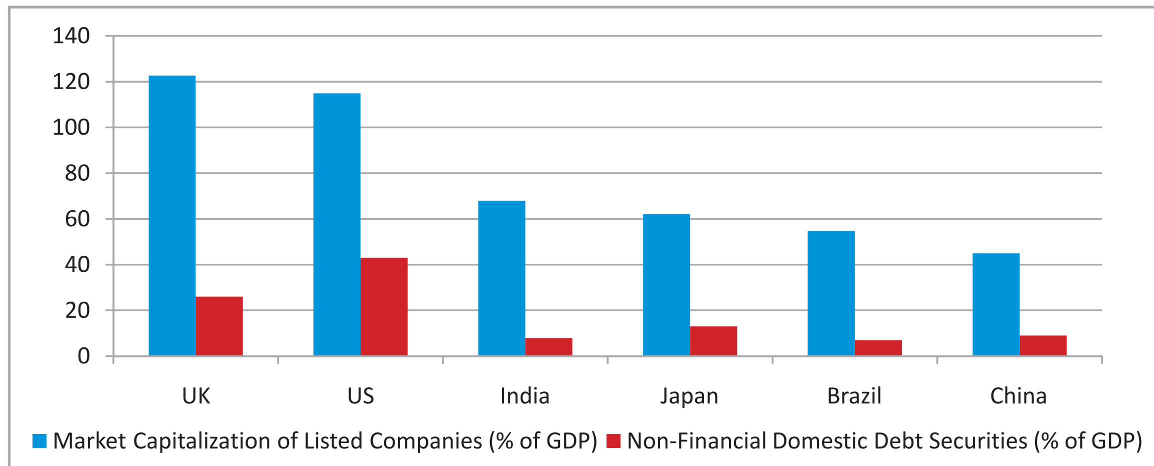
Although the provision of basic banking services is a crucial first step, emerging economies also need to encourage retail participation in capital markets. Innovative products ranging from derivative products for farmers to specialised mutual funds for expansion of Small and Medium Enterprises (SMEs) can be used to bolster retail participation. However, at the same time, these initiatives must be counterbalanced by programmes aimed at investor awareness and safeguards to facilitate investor protection.

Boosting liquidity and retail participation in domestic equity and fixed-income markets can have an added benefit of building financial resilience in emerging economies. By reducing the systemic dependence on foreign investors, retail participation can considerably reduce the volatility associated with portfolio flows from foreign investors.

b. Building deep and vibrant capital markets

Participation and liquidity can also be boosted by laying down the regulatory foundations of deep and vibrant capital markets. Equity and fixed-income markets in emerging economies are at relatively nascent stages compared with those in advanced economies (Figure 12). In fact, bank loans still constitute a predominant share of corporate financing that is often the only available option for financing small-scale projects as well as long-term, capital-intensive projects. Corporate bonds auctions are often under subscribed.

Figure 12: Market Depth Indicators



Source: BIS, SEBI, World Development Indicators

To build a more robust financial system, market regulators in emerging economies must create an enabling environment that can encourage equity offerings and demand for corporate bond issuances on the primary market. Developing an appropriate regulatory framework can improve the stability of capital flows and avoid future episodes similar to the 'taper tantrum'. The rapid growth of domestic debt market in the last decade – roughly around seven times in both India and China – should be seen as an encouraging sign to initiate capital market reform.

To mitigate spillovers from UMPs, emerging economies can also consider cooperating with each other on financial market reform. Financial markets can be integrated by developing common regional exchanges and allowing investors to trade freely in their respective local currencies. The BRICS Exchange Alliance, established in March 2011 allows cross-listing of benchmark equity index derivatives and the recently announced Shanghai-Hong Stock Connect allows cross-listing of a variety of stocks and derivatives. These initiatives can offer a useful template for more coordination mechanisms in the future.

c. Attracting long-term infrastructure finance

Emerging economies face tremendous requirements of infrastructure finance ranging anywhere between five to eight percent of GDP annually according to different estimates. Indeed, for its 12th Five Year Plan period (2012-17), India alone has an infrastructure requirement of $1 trillion (about 10 percent of GDP annually).

In the face of these gargantuan requirements, traditional sources of long-term capital will not be sufficient with both government budgets and bank balance sheets stretched to their limits. It is thus essential for emerging economies to find alternative sources to fund their long term capital requirements. Infrastructure finance is not only important to support strong economic growth but, by locking down long-term investment, it can also become an important avenue for ensuring financial stability in emerging economies.

Institutional investors including pension funds, insurance companies and sovereign wealth funds collectively hold more than $100 trillion of assets under management (AUM) and represent a huge potential source of long term finance for emerging economies (Table 2). Although asset allocation towards emerging economies currently constitutes only a meagre share of the total with the share of infrastructure investment even smaller, an appropriate policy framework can unlock a gamut of capital in emerging economies.

Table 2: Asset Allocation of Institutional Investors[20]

Type of Investors/Asset Allocation	**Assets Under Management (USD Trillion)**	**Current Investment in Infrastructure**	**Current Investment in Emerging Economies**
OECD Institutional Investors	80	1%	Up to 10%
Emerging Market Institutional Investors	5	<1%	70-80%
Sovereign Wealth Funds	4	2%	30-50%
Other global institutional capital	20	1%	Up to 10%

Source: BIS, SEBI, World Development Indicators

Long-term infrastructure assets can also be used as an investment strategy by institutional investors like pension funds and insurance companies that typically have liabilities extending over many decades. Moreover, in an environment of near-zero interest rates and asset 'bubbles', infrastructure investment – particularly in emerging economies – can be important to increase returns as well as diversify risks. Such investment can be routed through several options either *directly* (via conventional debt/equity financing or co-investment vehicles with commercial banks/other institutional investors) or *indirectly* (via commercial/government funds).

Given the sensitive nature of their liabilities like pensions and insurance, institutional investors need to evaluate projects on a stringent risk-return rubric. In this context, infrastructure assets in emerging economies can be perceived to entail considerable degree of inherent risk that can act as a barrier to long-term investment. Fund managers are relatively inexperienced with infrastructure projects and the policy framework in emerging economies. On top of this, institutional investors are typically subject to a higher standard of regulatory requirements that may hinder certain forms of investments altogether. Lack of financially viable infrastructure projects within emerging economies can itself be a binding constraint to long-term finance.

To mitigate these risks, emerging economies need to develop a suitable enabling environment for long term finance towards developing their infrastructure. A uniform, transparent pricing and regulatory regime can improve cash flow projections and fiscal support for viability gap funding can incentivise long-term finance. An overall stable political environment and good governance can reduce the sovereign risk premium associated with emerging economies. To consolidate such efforts, national infrastructure banks and multilateral development banks can also step in with their own resources and

expertise. This can include financial leverage tools like loan guarantees or political risk insurance as well as due diligence exercises to rate different infrastructure projects. These agencies can even help in the design of co-investment vehicles to direct long-term private capital into infrastructure assets.

Conclusion

Unconventional Monetary Policies (UMPs), initially designed to resuscitate domestic growth in advanced economies, have now permeated into the deepest cracks of the global financial system. The prevalence of near-zero interest rates and large Quantitative Easing programmes have acted as a drug to the global economy – any deviation from an accommodative monetary stance, from higher interest rates to slowing down of asset purchases, sends ripples of volatility across financial markets. In the context of a global economy with strong financial linkages, the fate of which is increasingly intertwined with asset price movements, it is critically important to evaluate the ensuing spillovers from such UMPs.

The build-up of systemic risk in the form of asset bubbles and the increased vulnerabilities from rapid capital flows can be especially detrimental to emerging economies. Currently, emerging economies do not have in place the institutional capacity and flexible mechanisms to quickly adjust to adverse shocks from a reversal of capital flows. This paper has explored a few ideas that can be implemented in the short, medium and long term in order to make emerging economies financially resilient from international shocks.

In the short-term, macro prudential measures and foreign exchange buffers can slow down the pace of capital outflows to give emerging economies time to adjust to sudden shifts in UMPs. In the medium term, emerging economies must coordinate with each other as well as gain the support of multilateral agencies towards building international safety nets. These arrangements can act as a liquidity backstop in times of a credit crunch – indeed, arrangements such as the liquidity swap lines extended by the Federal Reserve were instrumental in absorbing the shock of the financial crisis in different parts of the world. Such arrangements should be explored by emerging economies on both bilateral as well as multilateral levels.

In the long-term, emerging economies must secure long-term investments to improve the productive capacity of their own economies. Emerging economies have had a higher trend of gross savings, which should now be channelled into investment flows. Building deep and more liquid financial markets can also attract a steady flow and greater volume of capital. Finally, an enabling environment must be created to procure long term finance from institutional investors that can then be deployed into the real economy. This can fulfil the dual mandate of ensuring higher growth as well as building financial resilience.

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Endnotes:

1. Unconventional Monetary Policies (UMPs) refer to central bank policies that hold down short term interest rates to near zero or balance-sheet policies like large-scale asset purchases, also known as Quantitative Easing (QE), that result in depressing long term interest rates.
2. Hess Chung, Jean-Philippe Laforte, David Reifschneider, and John C. Williams, "Estimating the Macroeconomic Effects of the Fed's Asset Purchases," *FRBSF Economic Letter2011-03* (2011).
3. Brian Blackstone and Todd Buell, "ECB's Draghi Keeps Door Open to Quantitative Easing," *Wall Street Journal*, September 22, 2014, accessed October 10, 2014,http://online.wsj.com/articles/ecbs-draghi-hints-at-quantitative-easing-1411396176.
4. International Monetary Fund, "Global Financial Stability Report—Risk Taking,Liquidity, and Shadow Banking: Curbing Excess while Promoting Growth" (Washington, October 2014): ix-xii.
5. Bank for International Settlements, "84th Annual Report – 1 April 2013-31 March 2014" (Basel, June 2014):3.
6. "Scoping the new subprime as watchdogs cry 'bubble',"*Reuters*, July 9, 2014, accessed October 10, 2014,http://ca.reuters.com/article/businessNews/idCAKBN0FE0F420140709?sp=true.
7. Global Financial Stability Report, IMF.
8. Jose Vinals, "The New Global Imbalance: Too much Financial Risk Taking, Not Enough Economic-Risk Taking,"*iMFdirect*, October 8, 2014,http://blog-imfdirect.imf.org/2014/10/08/the-new-global-imbalance-too-much-financial-risk-taking-not-enough-economic-risk-taking/.
9. Greg Robb, "Bernanke: 'Step down' in QE could come soon," *Market Watch*, May 22, 2013, accessed September 20, 2014,http://www.marketwatch.com/story/bernanke-premature-tightening-could-end-growth-2013-05-22.
10. Data from the Reserve Bank of India (RBI).
11. Victor Mallet, "India restricts outward investment to bolster rupee," *Financial Times*, August 15, 2013, accessed October 7, 2014, http://www.ft.com/intl/cms/s/0/8d630886-055f-11e3-9e71-00144feab7de.html#axzz37hmK2Rz5.
12. "Indonesia's central bank unexpectedly raises rates," *CNBC*, November 12, 2013, accessed October 10, 2014,http://www.cnbc.com/id/101151973#.
13. Jonathan Wheatly, "Brazil sets 2% tax on capital inflows," *Financial Times*, October 20, 2009, accessed October 10, 2014,http://www.ft.com/intl/cms/s/0/7d275f18-bd05-11de-a7ec-00144feab49a.html#axzz36xu7kzQH.
14. RBI data.
15. Ben Bernanke, "The Global Saving Glut and the U.S. Current Account Deficit"(Remarks presented at the Sandridge Lecture, Virginia Association of Economists, Richmond, Virginia, March 10, 2005).
16. Arvind Subramanian, "International Impacts of the Federal Reserve's Quantitative Easing Programme" (Prepared testimony submitted to the House Committee on Financial Services Subcommittee on Monetary Policy and Trade, January 9, 2014).
17. Eswar Prasad, "Global Implications of the Renminbi's Ascendance," *ADBI Working Paper* 469 (2014): 18.
18. James Shotter and Gabriel Wildau, "China and Switzerland sign bilateral currency swap line," *Financial Times*, July 21, 2014, accessed July 31, 2014,http://www.ft.com/intl/cms/s/0/d79001d8-10b8-11e4-812b-00144feabdc0.html#axzz3GlbkV6bI.
19. The Chiang Mai initiative is a network of multilateral currency swap arrangements (worth $240 billion) between the ASEAN+3 nations designed following the Asian Financial Crisis in 1997.
20. Georg Inderst and Fiona Stewart, "Institutional Investment in Infrastructure in Emerging Markets and Developing Economies," *Public-Private Infrastructure Advisory Facility* (March 2014): 32.

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