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## Resilience of emerging market economies to global financial conditions



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### ABSTRACT

With lessons learned from previous episodes as well as substantial improvements in economic policies and fundamentals over the years emerging market economies (EMEs) on average are better positioned to withstand financial turbulences, both now and in the near future, than in the past. Since their respective last financial crises most EMEs have been implementing more prudent policies, made stronger their governance frameworks and created financial safety nets as a buffer against adverse shocks. As a result, they were able to strengthen their stock and flow balances and policy frameworks, deepen local capital markets, and diversify their production and exports together with stronger global trade and financial linkages.

### 1. Introduction

In recent years, the importance of emerging market economies (EMEs) has further increased as they account for not only a much increased share of world population but also a rising share of global economic output and exports, and a substantial fraction of world growth.<sup>1</sup> Emerging market (EM) countries have also become increasingly more connected to the global financial system as, on the one hand, with their strong growth prospects and higher interest rates they have attracted foreign investors and, on the other hand, they have accumulated large foreign assets as foreign exchange reserves. On the back of these developments the question whether these economies with still emerging financial markets have sufficiently advanced their resiliency to external shocks has a greater importance than in the past.

Indeed, the history shows that numerous financial crises and subsequent economic recessions took place in the EM world. With the help of strong pull such as the catch-up effect and push factors such as external shocks, on average, EMEs tend to grow at faster rates than advanced economies (AE) and are hence likely to incur external imbalances in the form of trade and/or capital account

deficits. Foreign investors finance these external imbalances to the extent that the resulting higher rates of return in EMEs are greater than those in AEs in risk adjusted terms. The imbalances often accumulated fast and worsened stock balances (such as government debt to GDP and external debt to GDP ratios) too. Furthermore, strong capital inflows to EMEs mostly led to a strong real appreciation of their currencies which, in turn, worsened their current account balances further as they suffered from the loss of competitiveness.

In the 1980s and 1990s EMEs experienced financial crises following a sudden reversal of capital flows. In fact, during this period there were two waves of financial crisis in the EM world. The first wave was associated with currency crises as significantly strengthened US dollar led to massive adjustments in the fixed EM exchange rates. This followed sovereign debt crises in many emerging markets, i.e., Mexico, Brazil and Argentina. The second wave was triggered by sudden stop of capital inflows. The EM banks having intermediated these flows, as a result, caused these severe financial crises in several EMEs such as Mexico and Turkey in 1994, East Asian countries after mid-1997 and Russia in 1998. The insufficient volume of external safety nets as well as the underdeveloped nature of financial markets in EMEs made financial crises unavoidable. In addition, having not able to implement countercyclical policies EMEs suffered from larger damaging effects of financial crises on their real economies otherwise.

It is noteworthy that despite the lack of capacities in avoiding financial crises EMEs mostly managed to recover swiftly from their acute past financial crises succeeding severe economic recessions.

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<sup>1</sup> Numerous books and reports underscore rising interests in EMEs. They include King (2010), Magnus (2012), Sharma (2012), Abiad et al. (2012), Karolyi (2015).

They include countries of the 1997 Asian financial crisis, Mexico, Turkey and others. Likewise, most EMEs survived once in a century event – global financial crisis of 2008 (GFC) in spite of its profound impacts on the financial systems of AEs. The GFC exposed excessive levels in private debts including households, nonfinancial companies and financial firms. The need for deleveraging of these debts led to balance sheet recessions in AEs, also deemed as the great recession. The unprecedented stimulus and bailout policies undertaken in the aftermath of the GFC probably had some mitigating effect on the great recession but could not prevent it. EMEs again escaped the great recession though some of them had brief economic recessions.

With lessons learned from previous episodes and improvements over the years EMEs are, on average, better positioned to withstand financial turbulences, both now and in the future, than in the past. They embarked on extensive structural reforms aimed at overhauling financial regulatory and supervisory systems, strengthening public finances and fiscal discipline, granting central banks independence, and adopting flexible exchange rate systems. These reforms enabled them to implement more prudent and countercyclical policies. EMEs supported their post crisis reforms by accumulating adequate foreign exchange reserves so as to avoiding the strict conditionality features of the International Monetary Fund (IMF) provided global financial safety nets as well as their insufficiency and by further deepening and broadening their domestic financial markets. As a result, stock and flow balances, policy frameworks, and levels of economic confidence and market development in EMEs have strengthened critically and radically. It is fair to say that they now look strong enough to render the adverse effects of external financial shocks manageable.

However, the current unconventional monetary policies of AEs in the form of low or even negative nominal policy rates as well as quantitative easing together with unintended consequences of the financial sector reforms across the world pose new challenges to EMEs. Until recently because of better growth prospects and lower levels of leveraging, EMEs attracted capital inflows with their non-financial corporates having lion shares. The normalization of global monetary policies has reversed the course of capital flows and led to the sizable depreciation of EM currencies against the dollar. This creates inflationary pressures due to the pass-through impact and impairs balance sheets due to tightening global financial conditions and worsening growth prospects. Furthermore, the sharp fall in oil prices exacerbates the deterioration in economic outlook for commodity importing countries. Going forward, the normalization of the US monetary policy, diverging monetary policies of AEs, uncertainty in commodity prices and the risk of China's economic hard-landing all will likely contribute to volatile global financial markets and widening spreads for EMEs.

This paper evaluates the developments, trends and frameworks characterizing the EM world. Section 2 describes stock and flow balances in EMEs. External shocks to EMEs are explained in Section 3. The final section provides a brief conclusion.

## 2. Strong stock and flow balances in EMEs

The great financial crises of 1980s and 1990s such as the Asian, Latin American and Turkish financial crises decisively altered the economic policy paradigm of the EM world. Almost in all cases the two factors—a rapid increase in leverage and a sharp appreciation of the currency<sup>2</sup>—caused these financial crises. Consequent IMF

stand-by programmes played the major role in this paradigm shift. The stand-by programmes painfully required them to embark on the so-called first generation of structural reforms involving the overhaul of financial regulatory and supervisory system, strong public finances and fiscal discipline, and central bank independence. In the wake of these crises EMEs have been methodically implementing prudent and countercyclical policies to prevent macroeconomic and external imbalances building. Having the institutional structures and policy frameworks in place the EMEs have not only prevented deteriorations in stock and flow balances but also recorded strong improvements.

### 2.1. Stock balances

#### 2.1.1. Public and private debt

Since EMEs mostly suffered from sovereign debt crises, fiscal discipline has been the cornerstone of the first generation of structural reforms. Prudent fiscal policies have played a key role in maintaining low budget deficits and hence lowered debt levels to the extent that budgets delivered primary surpluses (Fig. 1). Lower interest rates implied by improved financial needs of the government sector then further reinforced fiscal positions. As a consequence, the share of government bonds in emerging debt markets has declined and created room for the private sector debt market to grow (Fig. 2). Private debt levels in EMEs have also stayed at moderate levels on average (Fig. 3). This feature basically creates two advantages. The first is related to the fact that lower indebtedness levels are associated with lower degrees of debt overhang problem and hence makes adverse effects of negative shocks more manageable than otherwise. Second, low levels of debt indicate that there is room for creation of healthy loans that will support growth and economic development.

#### 2.1.2. External debt

Declined public debt also implied lower bases for external debt. In additions to this development, EM governments have consciously borrowed less in foreign currencies in the wake of their earlier financial crises. Combined effects have, on average, reduced government owned external debt to GDP ratio from 35 percent at the beginning of the 2000s to 25 percent in 2013 (Fig. 4). This decline in eurodollar loans manifests deepened domestic debt markets and hence have reduced the so called “original sin” problem of EMEs to the extent that foreign investors willing to lend in domestic currency as opposed to hard currencies. Hausmann and Panizza (2003, 2011) argue that one of the factors that created economic instability in EMEs is the original sin problem. According to this hypothesis emerging and developing countries are unable to

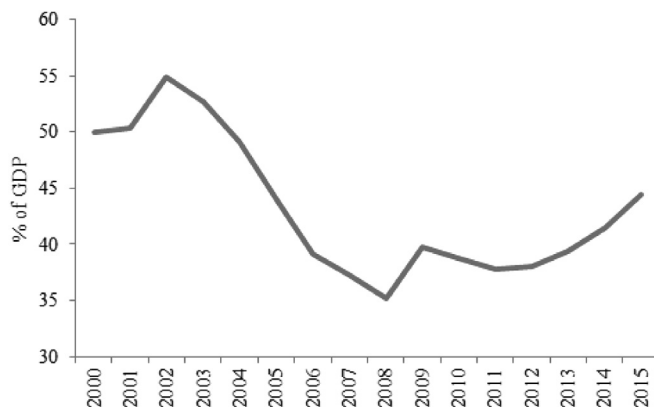


Fig. 1. EM gross government debt.

<sup>2</sup> See Gourinchas and Obstfeld (2012).

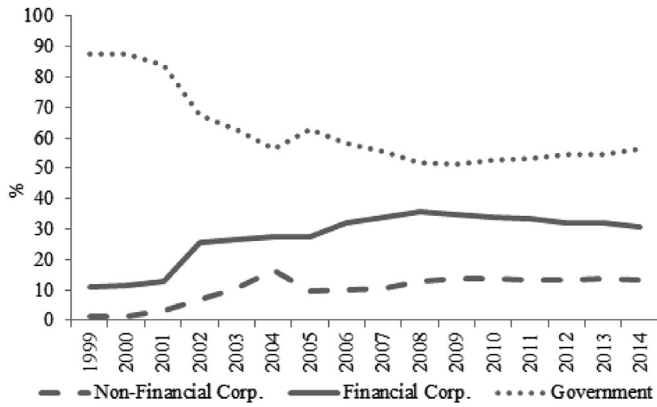


Fig. 2. Shares of sectors in domestic bond markets in EMEs.

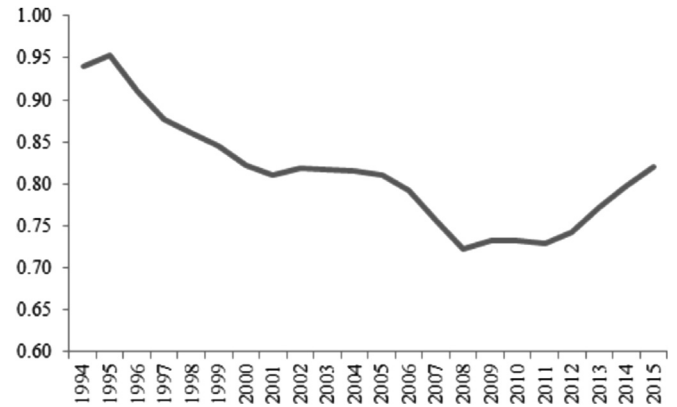


Fig. 5. The original sin.

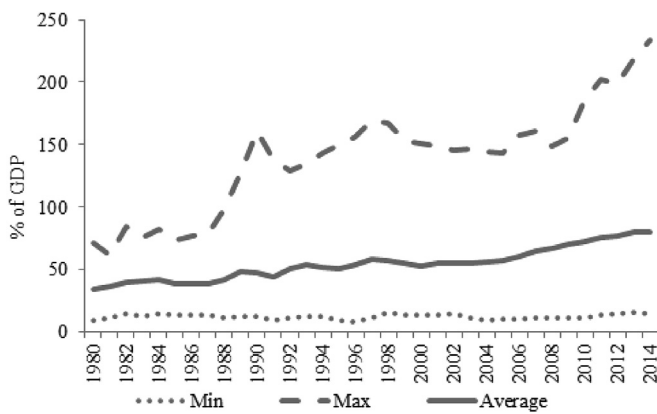


Fig. 3. Private credits in EMEs.

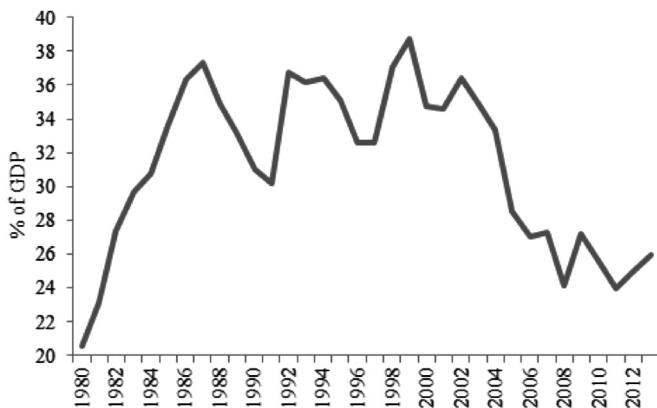


Fig. 4. External public debt of EMEs.

borrow abroad in their own currencies reflecting lower degrees of portfolio diversification at the global level to emerging currency denominated investments. Needless to say, borrowing in foreign currencies creates currency mismatch problem—increases in the cost of debt-servicing foreign currency denominated external obligations in cases of real exchange rate depreciation. The cost is measured in terms of the reduced purchasing power of domestic output over foreign claims following the depreciation. We update the original sin indicator of Hausmann and Panizza (2003) and report new results in Fig. 5. Although the indicator has been increasing since the beginning of 2012 it is much below the level of

the 1990s. In other words, EMEs share of obligations in foreign currencies are well below those observed in the 1990s.

### 2.1.3. Bank capital

Bailing out banks during the above mentioned EM financial crises put heavy burden on government budgets of EMEs. It was well-understood that banking sector plays a systemic role. In order to avoid bailout costs and disturbances to the intermediation of loans to real economy EMEs overhauled their banking sector regulatory and supervisory systems. These reforms tried to ensure that their banks hold adequate capitals to be resilient to shocks and, in general, run their businesses in a prudent way. Fig. 6 shows that leverage ratios measured as (risk unweighted) capital divided by total assets, on average, stayed above the average level of the 1980's and 1990's and also the average ratio of advanced economy banks.

## 2.2. Flow balances

After evaluating the key stock balances we now move to flow balances to reveal the dynamics governing stock balances in the economy. They include economic growth, inflation and current account balance.

### 2.2.1. Growth

Fig. 7 shows that average GDP growth rates of EMEs are still above that of AEs and EMEs still contribute to global growth significantly despite the latest synchronous and protracted slowdown in EMEs.

### 2.2.2. Inflation

Fig. 8 reveals that the probably biggest post-crises' success of EMEs is in the area of price stability. Prudent macroeconomic and

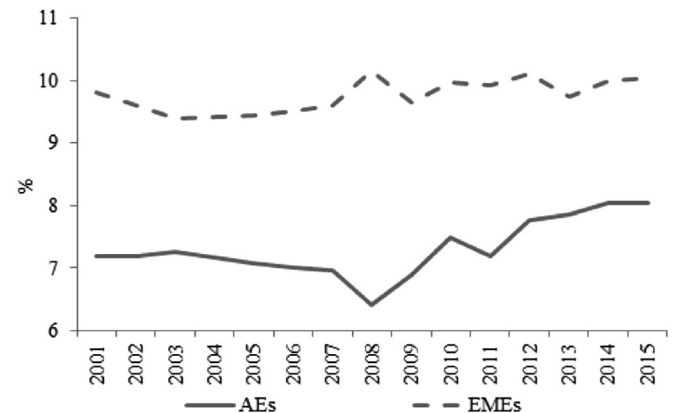


Fig. 6. Leverage ratio (bank capital to assets).

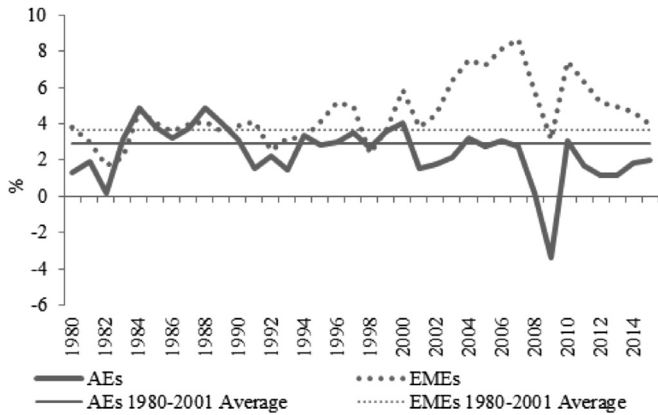


Fig. 7. GDP growth rates of EMEs and AEs.

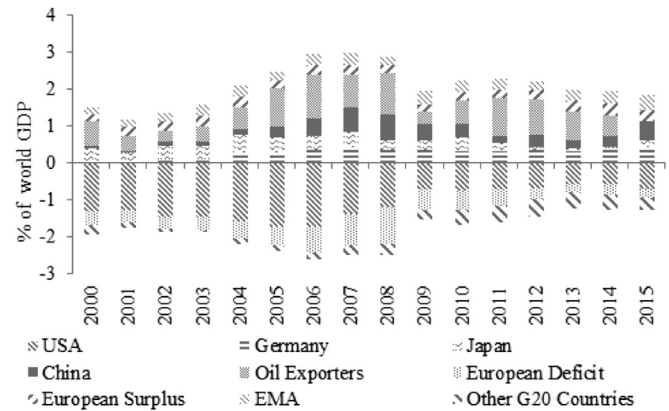


Fig. 9. Current account balances.

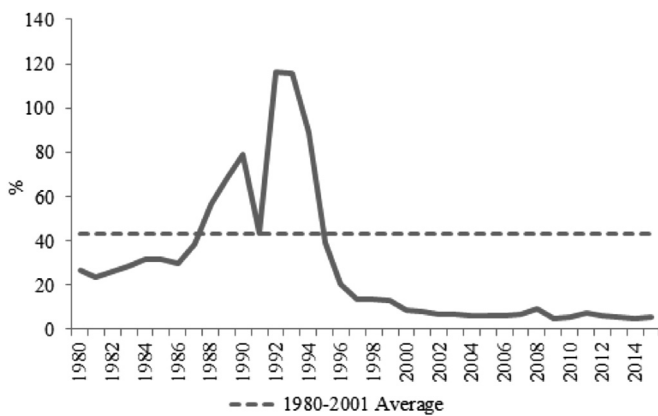


Fig. 8. Annual inflation of EMEs.

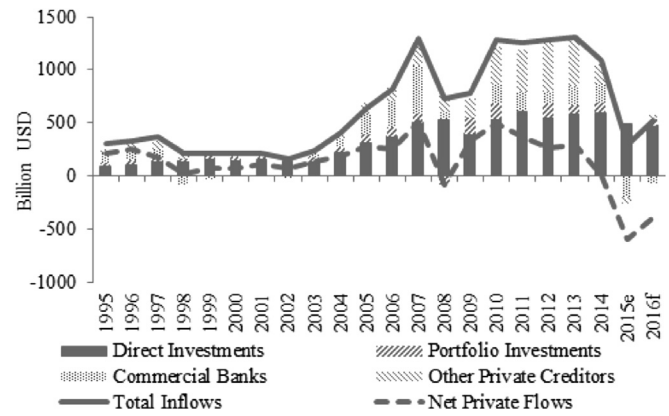


Fig. 10. Capital flows to EMEs.

financial policies and improved macroeconomic policy frameworks are the key factors behind this much lower inflation outcome. Among them the granting of independence to many EM central banks has been the most significant progress in improving the institutional quality of EM intuitions. Their successes in lowering inflation over the years have resulted in desirable gains in monetary policy credibility. The adoption of inflation targeting frameworks provided beneficial nominal anchors and further enhanced policy credibility. To the extent that prudent policies and frameworks succeeded in achieving their targets the key dominances, especially fiscal dominance, have eased and thereby significantly increased the effectiveness of monetary policy.

2.2.3. Current account balance

One of the chief causes of the GFC is the existence of global external imbalances (Fig. 9). The G20 led policy coordination has reduced the imbalance to a certain degree. In the process, some EMEs suffered from declines in their surplus levels but the others succeeded improvements.

3. How resilient are EMEs to global financial conditions?

In this section we assess EMEs' resilience to external shocks by discussing the ways and extents of external shocks are transmitted to domestic economies of EMEs<sup>3</sup> discuss the effects and

transmission channels of external shocks on EMEs in detail. The first transmission way of external shocks is the trade channel. In recent decades EMEs have increased their share of global exports and recorded strong growth in inter-regional and intra-regional trade among EMEs which makes up around one-fifth of the worlds total trade. In addition, they have diversified their production and exports.<sup>4</sup> Although EMEs' increased trade openness magnifies the impact of external shocks on EMEs, strengthened product and regional diversity dampen the impact. Similar arguments can be made for the second transmission channel—funding channel: increased external liabilities but well diversified sources together with significantly lengthened maturities. But there is a negative development worth mentioning that capital flows are mostly driven by the unconventional policies of major central banks (Fig. 10) and have become volatile (Fig. 11) since the GFC.

Finally, the aforementioned improvements in EMEs are likely to constrain the deterioration in business and consumer expectations. This is also a significant development as the lessons learned from the past financial turmoils and crises revealed that the most distinguishing feature of an emerging market economy is their significant deterioration effects on the real economy through the expectations channel. Among many advances in EMEs, rich policy frameworks have played an important role in improving economic agents' confidence in EM economies. In addition, EMEs' ability and policy to accumulate policy spaces have made significant

<sup>3</sup> Lane (2003), Mackowiak (2007).

<sup>4</sup> Didier et al. (2015).



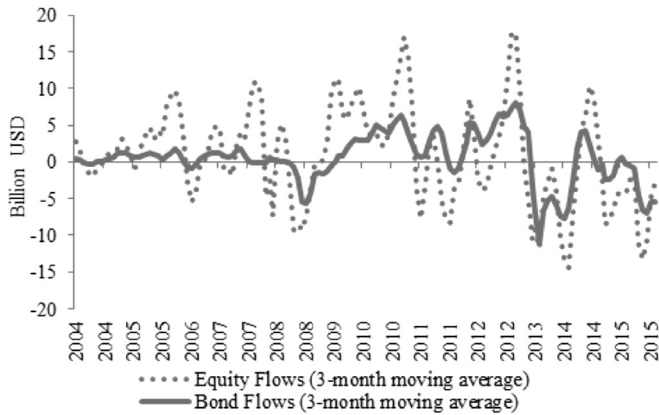


Fig. 11. Portfolio flows to EMEs.

contributions to solidifying gains in confidence. It is worth noting that in addition to conventional macroeconomic policies EMEs have also extensively used macro- and micro-prudential policies, serving as buffers for shocks (Fig. 12). In during the EM crises EMEs adopted a number of macro-prudential measures when conventional policies, such as rate hikes to manage aggregate demand, were realized to be ineffective and/or insufficient. Such macro-prudential tools have not only maintained low levels of leverage but also accumulated buffers that can serve as policy spaces in cases of economic downturn, as in EMEs fiscal policies. Additionally, macro-prudential policy helped monetary authorities implement monetary policy exclusively to achieve price stability. Finally, EMEs learned macro-prudential policy is more appropriate to limit and repair maturity and currency mismatch problems. In addition to the macro-prudential policy, EMEs learned to rigorously implement micro-prudential policies in order to make their financial firms, especially banks, more resilient and safer against financial stresses. The macro and micro prudential policies of EMEs in the previous decades have succeeded in lowering levels of leverage, not only in financial sectors, but also in non-financial and household sectors. This, in turn, lowered levels of maturity and currency mismatches. This created banking sectors in many EMEs that had high capital adequacy ratios and low non-performing loan ratios.

Moreover, in relative terms fiscal positions of EMEs have strengthened even further as those of AEs have worsened in the aftermath of the global financial crisis due to sizeable fiscal stimulus policies. Keeping this systemically important sector free from solvency risk has helped EMEs gain business confidence (Fig. 13).

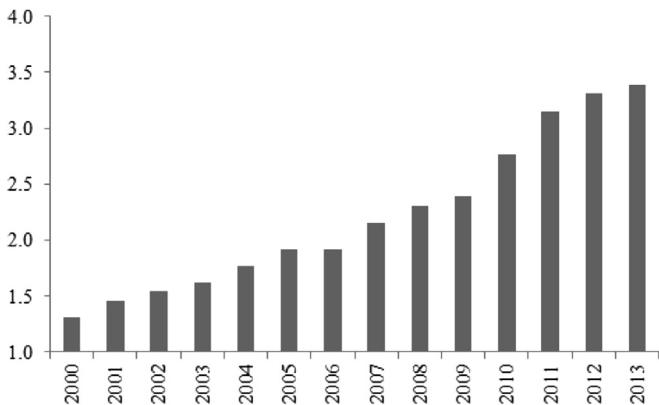


Fig. 12. Average number macroprudential policies implemented by EMEs.

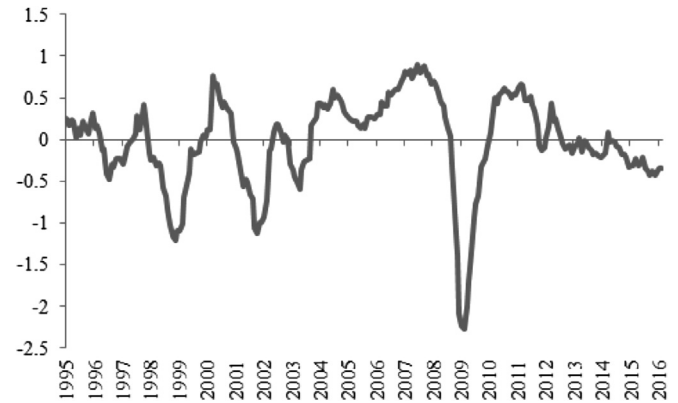


Fig. 13. Average business confidence level of EMEs.

Lower deficit and debt levels imply ample policy spaces for EMEs in cases of economic downturn. Creditworthiness together with policy spaces on the EM fiscal fronts have contained upward pressures on interest rates and have kept the effectiveness of other policies intact.

#### 4. Conclusion

In this paper we covered the key developments, trends, frameworks and balances in EMEs in the aftermath of their financial crises to answer the question whether they are now more resilient to external shocks or not. As a result of their reforms and prudent policies EMEs have significantly improved their stock and flow balances, and are now more diversified economies. Furthermore, they have accumulated substantial amounts of foreign exchange reserves and enjoyed significant improvements in policy effectiveness. The resulting ample policy spaces and buffers and improved confidence together with greater exchange rate flexibility have graduated EMEs to conducting countercyclical monetary policy. Finally, the developments, frameworks, balances and buffers covered in this paper will again be very useful for EMEs in withstanding the current financial turbulences stemming from the normalization of global monetary policies, the transition of some key EMEs to new economies and the terms of trade shocks.

#### Appendix. Data

**Gross Government Debt:** It is obtained from IMF World Economic Outlook (WEO) database as a share of GDP. It consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future.

**Shares of Sectors in Domestic Bond Markets:** Shares of sectors in domestic bond markets in developing countries are obtained from BIS Debt Securities Statistics. Sample of countries includes Argentina, Brazil, China, Chile, Hungary, India, Indonesia, Israel, South Korea, Mexico, Russia, South Africa, Thailand and Turkey. Domestic debt securities by sectors statistics are used and the average shares of countries are reported.

**Private Credits:** It is collected from the World Banks World Development Indicators (WDI) Database. Domestic credit to private sector refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment. The financial corporations include monetary authorities and deposit money banks, as well as other financial corporations where data are available.

**External Debt:** External Debt data is obtained from the IMF's WEO Database as a percentage of GDP. It reflects total external debt (all short and long-term debt).

**Bank Capital to Assets Ratio:** Bank capital to assets ratio is collected from the WDI database. It is the ratio of bank capital and reserves to total assets. Capital and reserves include funds contributed by owners, retained earnings, general and special reserves, provisions, and valuation adjustments. Capital includes tier 1 capital, and total regulatory capital, which comprise tier 2 and tier 3 capital. Total assets include all non-financial and financial assets.

**GDP Growth, Inflation and Current Account Balances:** GDP growth, Inflation and Current Account Balances are obtained from IMF WEO Database. Current account balances are reported as a share of total GDP. Sample of oil exporters include Algeria, Angola, Azerbaijan, Bahrain, Bolivia, Brunei Darussalam, Chad, Republic of Congo, Ecuador, Equatorial Guinea, Gabon, Iran, Kazakhstan, Kuwait, Libya, Nigeria, Norway, Oman, Qatar, Russia, Saudi Arabia, Timor-Leste, Trinidad and Tobago, Turkmenistan, United Arab Emirates, Venezuela, Yemen. Sample of EMA includes Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan Province of China, Thailand. European economies (excluding Germany) are sorted in to surplus and deficit each year by signs of their current account balances. Other G20 countries are Argentina, Australia, Brazil, India, Mexico, South Africa and Turkey.

**Capital Flows:** Capital flows to EMEs are obtained from IIF in billion US Dollars in annual base. 3-month moving averages are constructed for portfolio and bond flows by using EPFR database.

**Original Sin:** To calculate the original sin indicator we follow Hausmann and Panizza (2003). Required data is collected from BIS Debt Securities Statistics. As Hausmann and Panizza (2003) mentioned, this measure captures the possibility of hedging exchange rate risk and it provides aggregate measure of currency mismatch.

$$\text{Original Sin} = \max(1 - (\text{securities issued in currency } i) / \times (\text{securities issued by country } i), 0)$$

Selected countries are Argentina, Brazil, China, Chile, Colombia, Czech Republic, Hungary, Hong Kong India, Indonesia, Israel, S.

Korea, Malaysia, Mexico, Philippines, Poland, Russia, S. Africa, Singapore, Thailand and Turkey.

**Average Business Confidence Level:** Average business confidence level is the average of standardized values of business confidence indices. Selected countries are Brazil, Chile, China Colombia, Czech Republic, Hungary, Malaysia, Mexico, Philippines, Poland, S. Africa, Singapore, Russia, and Turkey.

**Macroprudential Policies:** We use the data set of Cerutti et al. (2015). Macroprudential index covers several instruments: General Countercyclical Capital Buffer/Requirement (CTC); Leverage Ratio for banks (LEV); Time-Varying/Dynamic Loan-Loss Provisioning (DP); Loan-to-Value Ratio (LTV); Debt-to-Income Ratio (DTI); Limits on Domestic Currency Loans (CG); Limits on Foreign Currency Loans (FC); Reserve Requirement Ratios (RR); and Levy/Tax on Financial Institutions (TAX); Capital Surcharges on SIFIs (SIFI); Limits on Interbank Exposures (INTER); and Concentration Limits (CONC).

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