

Policy Challenges for Emerging and Developing Economies

Lessons from the Past Decade

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WORLD BANK GROUP

Prospects Group

March 2020

Abstract

The 2009 global recession demonstrated, once again, the importance of crisis prevention as well as the critical need for preserving policy room so that emerging market and developing economies (EMDEs) can act when their economies are hit by shocks. And now, with the global growth outlook still weak and vulnerabilities rising, these lessons underscore the need for comprehensive policies to improve EMDEs' resilience to shocks and lift long-term growth prospects. On the macroeconomic front, priorities include shoring up fiscal positions, keeping adequate foreign reserves, and strengthening policy frameworks. Financial

sector policies to adapt to a changing global financial environment include strengthening home-host supervisor coordination and establishing prudential authorities with the appropriate tools and mandates to mitigate systemic risks. Structural policy priorities include investment in human capital and infrastructure to offset the decline in potential growth that is expected to continue over the next decade. Renewed reform momentum is needed to create the environment that generates private sector-led, productivity-driven growth supported by measures to improve governance and business climates.

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Policy Challenges for Emerging and Developing Economies: Lessons from the Past Decade

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JEL Classification: E02; H50; H60; N00.

Keywords: Macroeconomic policy; Fiscal policy; Monetary policy; Structural reform; Potential growth; Governance.

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1. Introduction

EMDEs weathered the global recession of 2009 relatively well for three reasons. First, EMDEs were generally not as exposed to the financial sector fragilities that triggered the crisis in advanced economies. Second, many EMDEs had used the 2000s to reduce vulnerabilities and rebuild policy room to respond effectively when the crisis hit. Third, at the onset of the crisis, advanced economies and some large EMDEs provided unprecedented and coordinated monetary and fiscal policy stimulus, which helped shield global economic growth.

Nevertheless, the global recession slowed per capita growth in EMDEs to 0.4 percent in 2009 from an average over much of the preceding decade of close to 5 percent. The rebound in 2010-11 was initially strong but per capita growth never returned to its rates from before the global recession. Commodity exporters faced further headwinds when global commodity prices slid to multi-year lows in 2011-16 and forced commodity-exporting EMDEs to engage in procyclical fiscal tightening. Energy-exporting EMDEs were particularly hard hit by the collapse in oil prices in 2014-16.

Amid slowing growth, most EMDEs were not able to fully unwind the policy stimulus put in place in response to the crisis—fiscal deficits in the average EMDE were about as wide in 2018 as they were in 2010, and external, fiscal, and corporate vulnerabilities have increased since 2007. Several EMDEs are highly indebted, have elevated levels of foreign-currency denominated debt, or rely on portfolio or bank flows to finance large current account deficits.

Since the global recession, structural factors have eroded potential growth. Around 2010, the share of the working-age population in EMDEs stabilized after more than four decades of rapid increases. This coincided with a prolonged period of weak investment. As a result, potential growth in EMDEs slowed by 1.2 percentage points after 2003-07, to 4.7 percent in 2013-18.

The years prior and during the global recession provided an initial encouragement to adopt business-friendly reforms, when most EMDEs improved their scores in the World Bank's Doing Business survey. From DB2008 to DB2010, the number of business-friendly reforms undertaken by EMDEs increased from 170 per year to 243.¹ However, momentum for business climate reforms other than improving financial regulation stalled in DB2010, setbacks in governance appear to have returned EMDE governance indicators to their 1990s levels, and a rethink appears to be taking hold about the appropriate degree of openness to international capital flows.

EMDE growth prospects have dimmed since the global recession due to elevated debt vulnerabilities, slower momentum in structural reforms, diminished policy room to

¹ This refers to reforms of laws, rules, and regulations relating to several activities: starting a business, paying taxes, registering property, obtaining construction permits, access to credit, getting electricity, minority investor protection, enforcing contracts, resolving insolvencies, and trade across borders. The number of reforms is calculated using the business reforms by year and by country, as listed in the World Bank's Doing Business publications. "DB" in front of year indicates Doing Business publication year.

maneuver, and weakening potential growth. Meanwhile, their risks have risen, including those related to trade tensions, weakening commitments to multilateralism, slowing growth among major economies, financial market disruptions, and geopolitical tensions. Shifting demographics, weakening productivity growth, and slowing capital accumulation also raise the possibility of further downgrades to potential growth. Against this backdrop, this paper addresses the following questions. First, what macroeconomic policies can be implemented to build resilience? Second, what financial sector policies can be employed to maintain financial stability? Finally, how have structural reforms evolved and what policies are needed to boost growth?

There is a broad literature offering policy recommendations for EMDEs and analysis of the likely effects of possible reforms and other policy actions. This paper adds to the literature in several ways. First, the paper assesses both the progress and impact of structural reforms in EMDEs since the global recession. Most studies focus on quantifying the impact these reforms would have on output (Bailiu and Hajzler 2016; Égert 2018) and the evolution of specific aspects of structural reforms (World Bank 2019).² Second, compared to existing studies that focused on individual structural reforms, this paper brings together the policy priorities most relevant at the current juncture, alongside a review of the related literature analyzing the likely impact of their implementation, with a focus on possible complementarities and tradeoffs.³

This paper reports the following findings. First, it documents the extent to which current macroeconomic policies undermine the resilience of EMDEs to shocks. Over 60 percent of EMDEs have primary fiscal deficits that are too large to stabilize or reduce their debt levels based on current economic conditions. This paper points to several policy implications of this outcome. EMDEs with unsustainable fiscal positions can prioritize raising revenues and improving spending efficiency, while maintaining growth-enhancing expenditure. Measures to enhance tax revenues include broadening the tax base, improving tax collection systems, reducing loopholes, and empowering tax administrators with greater technical skills. To improve spending efficiency and the mix of expenditures,

² A large literature offers policy recommendations for EMDEs and analysis of the likely effects of possible reforms and other policy actions. These include reforms to enhance human capital accumulation in such areas as health, education, and gender rights (see, for example, World Bank 2018c, 2018d, 2019a, 2019c, forthcoming b). It also includes policies to improve infrastructure, promote the adoption of new technologies, tackle climate change, and enhance institutional quality and business environments. See, for example, OECD (2018); Rozenberg and Fay (2019); and World Bank (2017b, 2017d, 2019d).

³ On fiscal policy, recent work has looked at the impact of stimulus policies on advanced economies and EMDEs (see Hagedorn, Manovskii, and Mitman 2019; Huidrom et al. 2016; Huidrom et al. 2019; Huidrom, Kose, and Ohnsorge 2018; Ramey 2019) and at the question of whether fiscal rules can improve policy implementation (Bergman and Hutchinson 2015, 2018; Calderón, Duncan, and Schmidt-Hebbel 2016). On monetary policy, the benefits of low inflation and how a transparent and independent central bank can assist in the anchoring of inflation expectations were studied in Ha, Kose, and Ohnsorge (2019). On financial sector policy, work by the International Monetary Fund (IMF), Financial Stability Board (FSB), and Bank for International Settlements (BIS)—undertaken partly at the request of the Group of 20 (G20) countries—has provided the foundation for a more effective Global Financial Safety Net, contributed to higher standards for macroprudential policy, helped with an overhaul of regulatory and supervisory architecture, and led to new thinking on the role of capital flow management measures (BIS 2019; Gadanez and Jayaram 2015; IMF 2011, 2012, 2013a, 2014, 2017, 2018a, and 2018b; IMF-FSB-BIS 2016).

policymakers can enhance the institutions and mechanisms used to determine investment projects and procurement, and to monitor spending, including on government administration and social services. Separately, in several EMDEs, international reserves are currently below levels that would be consistent with reserve adequacy. These EMDEs could focus on rebuilding foreign exchange reserves and restraining foreign currency borrowing.

Second, to improve longer-term resilience, EMDEs need to strengthen fiscal and monetary policy frameworks by adopting transparent and rules-based approaches. Fiscal rules can help countries maintain sustainable finances and accumulate resources when the economy is doing well. Better fiscal frameworks also assist monetary policy by restraining pro-cyclical spending that could contribute to demand pressures. A transparent and independent central bank will be better placed to maintain price stability, thereby helping to create a macroeconomic environment that is conducive to strong growth.

Third, pro-active financial sector supervision and regulation can mitigate risks, especially in countries with financial markets that are developing rapidly and becoming more integrated globally. In EMDEs without a prudential authority or prudential powers, creating or empowering these institutions is a priority. In EMDEs with the appropriate institutions, flexible and well-targeted tools are needed to manage balance-sheet mismatches, foreign currency risk, and asset price misalignment with fundamentals. In EMDEs facing destabilizing capital flows, capital flow management measures—in conjunction with sound macroeconomic policies, exchange rate policy, and sufficient levels of financial and institutional development—can reduce the risk of financial instability (IMF 2012). In regions where EMDE-headquartered banks have gained prominence, efforts to strengthen home-host supervisor coordination may pay dividends during the next episode of financial stress.

Fourth, to reverse the trend slowdown in productivity growth, ambitious and comprehensive structural reforms are needed. While EMDEs were able to make some progress in improving their business climates in the three years prior and during the global recession, in many areas momentum was not maintained. Meanwhile, governance in EMDEs has failed to improve since the 1990s and some EMDEs have taken steps to rein in openness to international capital flows. Reform priorities include building institutions that support economic growth and resilience; enhancing productivity and encouraging investment; building human capital; investing in growth-enhancing public infrastructure; helping to address, as well as adapting to, climate change; improving governance; strengthening competition; and reducing regulatory burdens.

This paper proceeds as follows. First, it examines macroeconomic policies that build resilience. This is timely because EMDEs are more vulnerable today than before the global recession. Next, it explores financial sector policies that address existing and emerging financial stability challenges. Finally, it highlights reforms that address structural impediments to stronger, balanced and sustainable growth in EMDEs.

2. Macroeconomic policies to build resilience

As global economic growth slows, EMDE policymakers must strive to make their economies more resilient to shocks. Efforts are needed to strengthen fiscal and monetary

policy frameworks and calibrate international reserves, particularly in economies that have experienced rapid increases in debt and have become more exposed to debt-rollover risks, currency volatility, or spikes in interest rates. Countercyclical macroeconomic policies and financial stability can lean against pro-cyclical fluctuations in capital flows. EMDE policymakers must also prepare for spillovers from disorderly market adjustments and policy shocks in advanced economies.

2.1 Shore up fiscal positions

Since 2007, government debt in the average EMDE has increased by 10 percentage points of GDP, reaching 54 percent of GDP at end-2018 (Figure 1). The increase was broad-based, with debt rising in three-quarters of EMDEs and all regions experiencing higher average debt. The largest increases in average government debt occurred in Europe and Central Asia (ECA) (from a low base), the Middle East and North Africa (MNA), and Latin America and the Caribbean (LAC). Debt rose by more than 20 percentage points of GDP in one-third of EMDEs. The rapid accumulation of debt was due to a significant shift in fiscal policy from 2007: fiscal deficits widened substantially in the post-crisis period and reached a peak in 2016, particularly in commodity-exporting countries that suffered from falling commodity prices. As a result, many EMDEs have deficits well in excess of debt-stabilizing levels, particularly those in South Asia (SAR), LAC, and Sub-Saharan Africa (SSA). This has also been reflected in credit rating downgrades for many EMDEs.

Large fiscal deficits and elevated levels of government debt may constrain the ability of policymakers to respond to a downturn. There is also evidence that government stimulus tends to be less effective when debt is elevated (Brinca et al. 2016; Hagedorn, Manovskii, and Mitman 2019; Huidrom et al. 2016, 2019; Huidrom, Kose, and Ohnsorge 2018). Policymakers need to take steps to improve fiscal positions and sustainability to ensure they are able to take effective action in response to the next downturn.

For those EMDEs that need to achieve more sustainable fiscal positions, policies need to be geared towards minimizing the negative short-term consequences of fiscal consolidation for economic activity; current economic conditions permitting. This requires safeguarding critical poverty-reducing expenditures, implementing growth-enhancing spending, and implementing tax reforms that promote investment and revenue mobilization (Ramey 2019; World Bank 2019a; Gaspar, Obstfeld and Sahay 2016).

In many EMDEs, weaknesses in revenue collection and mobilization are an important part of the problem. Revenues in EMDEs averaged 29 percent of GDP in 2018, 10 percentage points of GDP below those of advanced economies. They were particularly low in Low-Income Countries (LICs), SSA and SAR. Part of this reflects large informal economies where labor market participants are poor and collecting taxes is difficult, requiring complementary policies that address the challenges of informality but do not undermine its advantages with regard to flexibility and employment. The informal sector accounts for about one third of GDP in EMDEs and is largest in SSA, LAC, and ECA, while informal employment is most common in SSA and SAR (World Bank 2019b). In EMDEs with the most pervasive informal sectors, government revenue is 5-10 percentage points of GDP lower than in those with the least pervasive informal sectors (World Bank 2019b).

In EMDEs with large informal sectors, tax compliance can be improved by simplifying tax codes, using technology to improve tax enforcement, and shifting toward electronic payment methods.⁴ Designing taxes that capture informal activity—for example, through value-added taxes (VAT)—could improve revenue collection and incentivize formalization, as firms that remain informal will be unable to claim VAT refunds (Loayza 2018). Other methods of encouraging informal firms to register their activities for taxation include improving tax morale through more effective provision of public goods and services, addressing perceptions of fraud and corruption, ensuring that taxes are collected impartially, and having a progressive tax system (Sung, Awasthi, and Lee 2017). Other revenue-focused measures include improving tax collection systems, reducing loopholes, and empowering tax administrators with the technical skills needed to enforce tax compliance and minimize tax avoidance (Akitoby et al. 2018). Revenue collection can also be bolstered through international co-operation aligning international and domestic policies on tax: countering illicit financial flows, tax evasion and avoidance, and profit-shifting to low-tax jurisdictions (United Nations 2019).

On the spending side, policymakers can undertake measures to improve efficiency, shift spending toward growth-enhancing investment from unproductive current spending, and improve governance to contain and eliminate fraud and corruption. To improve spending efficiency, EMDE governments need to build credible and transparent medium-term expenditure frameworks that align with the strategic goals of the government (World Bank 2012). Such frameworks can provide clarity on the purpose of expenditures and make government departments accountable for their spending. Further steps could focus on enhancing institutions and mechanisms used to determine the selection, procurement, and monitoring of investment projects and other outlays (IMF 2015a).

2.2 Strengthen fiscal frameworks

A policy priority is to strengthen fiscal frameworks, including to adopt transparent and rule-based approaches to setting policy and managing debt. Provided there is broad-based public support, fiscal rules can help prevent fiscal slippages and ensure that revenue windfalls are saved during times of strong growth. As extreme weather events become more frequent, frameworks may help prepare for fiscal pressures when disasters occur and help shift public investment towards climate-resilient infrastructure (Pigato 2019). In addition, stronger fiscal frameworks are associated with lower inflation and inflation volatility, so that they can support the central bank in delivering its mandate (Ha, Kose, and Ohnsorge 2019). EMDEs have made important strides in the adoption and comprehensiveness of fiscal rules, catching up to advanced economies in many respects (Schaechter et al. 2012).⁵ However, fiscal rules appear to be effective in dampening procyclicality of fiscal policy only when a minimum quality of institutions, especially

⁴ See, for example, Awasthi and Engelschalk (2018); Morales and Medina (2017); Rocha, Ulyssea, and Rachter (2018); and Ulyssea (2018).

⁵ Schaechter et al. (2012) create an overall fiscal rule index that captures both the number and characteristics of fiscal rules in operation in advanced economies and EMDEs. They show how EMDEs have made progress in catching up to advanced economies since 2000. That said, about half of LICs implement some form of fiscal rule. However, due to weak institutional environments, these rules do not seem to improve the countercyclicality of fiscal policy (Bergman and Hutchinson 2018).

efficiency of government bureaucracy, is achieved (Calderón, Duncan, and Schmidt-Hebbel 2016; Bergman and Hutchinson 2015, 2018).

Any fiscal policy framework should be open and transparent, thereby empowering citizens to hold governments accountable for implementing policy in a sustainable manner to address their needs. Such an approach can be achieved in part by implementing the IMF’s Fiscal Transparency Code that was extended to natural resource management by the IMF (2019a). Fiscal policy formulation and implementation can be further improved through independent review processes, including public expenditure reviews, undertaken by a domestic agency or by international organizations.

Government has an important redistributive role to play in society. Tax policy can be used to both redistribute income (through tax credits, tax exemptions, income thresholds, and progressive tax schedules) and change incentives (Joyce and Xu 2019; Piketty, Saez, and Stantcheva 2014). On the spending side, government can improve the targeting of social spending to ensure that constrained fiscal resources benefit vulnerable groups.

2.3 Strengthen debt management

As public debt levels rise, governments need to ensure sound debt management. Public debt management is the process used to establish and execute a framework to manage government debt—ideally over a medium-term horizon—which raises an appropriate amount of debt at the lowest possible cost, provides for payment obligations, and is consistent with predefined risk preferences (World Bank and IMF 2009a, 2014). In a recent survey, about 40 percent of low- and middle-income countries did not have debt management strategies in place and 56 percent did not have the legal framework in place to support their development (Cabral 2015).⁶ This is despite the fact that improvements in debt management helped lower debt ratios in EMDEs during the 2000s (Anderson, Silva, and Velandia-Rubiano 2011; Frankel, Vegh, and Vuletin, 2013).

Recognizing the need for better debt management, the World Bank and IMF have developed guidelines, best practices, and frameworks to assist countries in implementing debt management strategies.⁷ Economic crises have often been associated with poorly structured debt portfolios—whether through maturity, currency, or interest rate composition—or large contingent liabilities that were only revealed once they materialized (Jaramillo, Mulas-Granados, Jalles 2017; Weber 2012; World Bank and IMF 2014). One element of sound debt management is improved debt transparency, which has been associated with lower borrowing costs, increased foreign holdings, and lower government debt (Kemoe and Zhan 2018; Montes, Bastos, and de Oliveira 2019).

Sound debt management is supported by a well-developed and liquid domestic bond market that can reduce the need for foreign lending and ensure stability in government financing (Árvai and Heenan 2008; World Bank and IMF 2001). Investment in infrastructure to lower the cost and increase the efficiency of a local bond market can

⁶ Debt management strategies are only effective, however, if there is an adequate legal framework in place, debt is comprehensively and efficiently recorded, and overall fiscal policy is set in a sustainable and growth-enhancing manner (World Bank and IMF 2009a).

⁷ See World Bank and IMF (2001, 2003, 2009a, 2009b, and 2014) and World Bank (2007a, 2007b, 2008).

promote local (currency) bond market development. Similarly, establishing the correct legal and regulatory framework can ensure that such a market operates effectively. A debt management framework has the complementary benefit of also supporting the establishment of a secondary market for government securities.

Among LICs, weaknesses in debt transparency, notably in monitoring and reporting, are widespread, notwithstanding some recent improvements (Essl et al. 2019). This has reflected several factors. First, institutional arrangements are weak. Only four of 17 LICs met minimum requirements for debt reporting and evaluation (Essl et al. 2019). About half of LICs implement some form of fiscal rule. However, these rule do not seem to improve the countercyclicality of fiscal policy due to weak institutional environments in many LICs (Bergman and Hutchinson 2018). Second, LIC governments and state-owned entities have shifted towards non-traditional creditors. Several LIC sovereigns have accessed international financial markets for the first since the global recession (Ethiopia, Mozambique, Rwanda, Senegal, Tanzania, Tajikistan) often at terms that expose them to the risk of changing investor sentiment and rising borrowing cost. Non-Paris club creditors are playing a greater role in lending to LICs. China, for example, accounted for most of the doubling in cross-border claims on SSA economies between 2013 and 2017 (Cerutti, Koch, and Pradhan 2018; Dollar 2016). Debt to non-Paris Club creditors is not always officially reported on, and available documentation can be opaque, which can lead to “hidden” debt (Horn, Reinhart, and Trebesch 2019).

2.4 Maintain adequate international reserves

Global international reserve assets have grown substantially since the 1998 Asian financial crisis (Figure 2). In 1998, total global reserves were valued at US\$1.92 trillion and covered 48 months of imports. By 2018, total reserves were US\$12.69 trillion and covered nearly 100 months of imports. The rise in reserves, however, has not been distributed evenly among countries. Economies in East Asia and the Pacific (EAP), ECA, LAC, and MNA have, on average, been able to increase reserves to more adequate levels since 2000. However, EAP, and especially SAR, have seen reserve levels decline since the crisis, and economies in SAR and SSA have not managed to improve reserve levels since 2000. Almost half of EMDEs appear not to have sufficient reserves to meet their balance of payments needs in 2019, according to the IMF’s reserves assessment metric.⁸

Adequate foreign exchange reserves can mitigate currency volatility, reducing risks stemming from currency mismatches and volatile capital outflows (IMF 2011, 2015b). Following the taper tantrum of 2013, countries with larger reserve buffers saw less depreciation (BIS 2019). The reserve level that is sufficient to act as insurance against shocks depends on a country’s depth and liquidity of domestic financial markets, access to external buffers (such as central bank swap lines of IMF loans), and potential drains on the balance of payments (such as losses of export income, broad money, short-term

⁸ The Assessing Reserve Adequacy (ARA) metric is based on IMF (2011) and determines appropriate reserve cover on a risk-weighted basis covering short-term debt; medium and long-term debt and equity liabilities; broad money; and export earnings. Risk weights are based on observed outflows during periods of exchange rate pressure.

external debt, and other external liabilities).⁹ Commodity-intensive economies often require additional buffers in light of their exposure to sudden changes in their terms of trade, and, especially in the case of agricultural producers, weather-related supply shocks.

Reserve accumulation also comes with potential costs, however, and therefore requires appropriate cost-benefit analysis. In countries where reserves are inadequate, policymakers could establish a medium to long-term plan to build reserves that does not disrupt foreign exchange markets, the sustainability of government budgets, or the economy. Reserve accumulation also requires the sterilization of those reserves—and the availability of monetary policy instruments to implement it—to avoid an inadvertent expansion of the domestic money supply that could cause an undue pickup in inflation. In countries with flexible exchange rate arrangements, policymakers can consider reserve accumulation during periods of currency overvaluation or when the currency is close to fair value, rather than when it is undervalued. Reserve accumulation (or drawdown) can also help LICs that are heavily dependent on foreign aid to mitigate the effects of Dutch disease-type currency overvaluation and aid volatility (Dabla-Norris, Kim, and Shirono 2011; Moldovan, Yang, and Zanna 2019).

2.5 Strengthen monetary policy frameworks

With improvements in inflation-targeting frameworks and inflation falling globally, EMDEs have been able to bring average annual inflation down from double-digit rates in the 1990s to an estimated 3.1 percent in 2019 (Figure 3). In 1999, only three EMDEs were inflation targeters and 11 had freely floating exchange rates. By 2018, both numbers were close to thirty. EMDEs also significantly improved their central bank transparency over this period, helping to anchor inflation expectations. Despite this progress, some EMDEs still struggle with double-digit inflation. In 2019, close to a third of EMDEs have inflation rates above 5 percent, despite a benign global environment, and 12 percent have double-digit inflation. Many have not embraced best practices in their monetary policy frameworks and central bank transparency.

High inflation can be costly to an economy. It is associated with lower growth and financial crises, disproportionately hurts the poor, raises borrowing costs, disincentivizes saving, and erodes household and government balance sheets (Ha, Kose, and Ohnsorge 2019; Mishkin 2008). In turn, a history of stable inflation is generally associated with lower financing costs and better debt tolerance in EMDEs; that is, countries with low inflation may be able to accumulate more debt in a sustainable manner (Reinhart, Rogoff, and Savastano 2003). Embracing a strong, transparent, and independent monetary policy regime can help countries achieve lower and more stable inflation and inflation expectations.

During episodes of financial stress, when EMDE currencies tend to depreciate sharply, strong monetary policy frameworks can be helpful.¹⁰ During these episodes, exchange rate pass-through can spur inflation which constrains EMDE central banks' ability to support

⁹ For models on optimal reserves see IMF (2015b) and Jeanne and Ranciere (2006, 2011).

¹⁰ It is, however, no guarantee for success in the context of shifting global financial conditions, and may need to be complemented with macroprudential tools (Cavallino and Sandri 2018; Gopinath 2017; Rey 2015).

activity. But the pass-through tends to be smaller in countries with more credible, transparent, and independent central banks; with inflation-targeting monetary policy regimes; and with better-anchored inflation expectations (Kose et al. 2019).¹¹ LICs, in particular, can benefit by moving toward coherent and transparent frameworks that reduce interest rate and inflation volatility, promote financial market development, and enhance the transmission of monetary policy to the economy beyond the bank lending channel (Ha et al. 2019).

3. Financial sector policies for stability and growth

Since the global financial crisis, the global financial architecture has improved, the resilience of major banking systems has strengthened, and new monetary and macroprudential tools have been developed and widely employed. Yet, EMDEs face a number of challenges, new and old, related to the financial sector, the architecture of financial regulation and supervision, and macroprudential policy. These include the deterioration of bank balance sheets, the legacy of post-recession credit booms in some countries, the rise in EMDE-headquartered and regional banks, the need for home-host supervisor coordination, the rise in nonbank intermediaries, and the management of volatile capital flows.

The post-recession rebound in EMDE growth, shifts in investor risk appetite, and low borrowing costs have fueled credit to nonfinancial corporations and, in many EMDEs, outright credit booms (Ohnsorge and Yu 2016). Credit extended to the private sector by banks in EMDEs increased by 10.5 percentage points of GDP between 2007 and 2016, with especially rapid increases in EAP and MNA (Figure 4).

There has also been a shift toward riskier borrowing by nonfinancial corporations, at least in some EMDEs.¹² While much of the credit growth was domestic, capital inflows (especially, portfolio flows which can be fickle) also contributed to rising nonfinancial sector debt. On average, portfolio flows accounted for 17 percent of capital flows to EMDEs in 2010-17, up from 8 percent in 2002-07. In some EMDEs, the share of nonresident holdings in local currency bond markets has grown to more than 30 percent (Czech Republic, Ghana, Indonesia, Mexico, Peru, Poland, South Africa), which exposes these countries to the risk of changing global risk sentiment even if it mitigates currency risk (Agur et al. 2018).

While these credit booms had largely subsided by 2016, they have left a legacy of elevated private sector debt in a number of EMDEs. This, coupled with disappointing economic growth, has contributed to a deterioration in the health of banks' balance sheets. Banks' profitability has declined, with returns on assets and equity recently reaching their lowest levels since 2010. EMDE banks' asset quality has also deteriorated, with the share of non-performing loans rising in nearly two-thirds of EMDEs between 2007 and 2017, although remaining at still-manageable levels in most EMDEs.

¹¹ Bordo and Siklos (2019) find that EMDEs were able to maintain the levels of central bank transparency and independence they had prior to the crisis, but institutional resilience declined.

¹² See Alfaro et al. (2019); Beltran, Graud, and Rosenblum (2017); and Feyen et al. (2017).

Rapid credit growth in EMDEs partly reflects financial deepening, which is typically associated with long-run economic growth.¹³ However, while bank assets in EMDEs increased by over 10 percentage points of GDP, on average, between 2007 and 2016, they remain only half the advanced-economy average (relative to GDP). There is also substantial regional variation: SSA, in particular, has made little progress in financial development, thus measured, since 2000. This disparity in financial development is also reflected in the number of unbanked adults: 63 percent of adults in EMDEs owned an account at a financial institution or mobile money provider in 2017, compared to 94 percent in high-income countries (Demirgüç-Kunt et al. 2018). While many EMDEs, particularly LICs, have a long way to go to attain adequate access to credit for households and businesses, rapid growth in credit can also lead to financial crises, suggesting that progress is best made gradually and coupled with improvements in financial sector supervision and regulation.

The composition of foreign lenders to EMDEs has changed considerably since the global recession. Changes to the global regulatory framework and financial pressures from the crisis curtailed cross-border lending by international banks. As banks headquartered in the European Union and the United States downsized their EMDE operations, especially in ECA, LAC, and SSA, banks headquartered in these respective regions or in other EMDEs stepped in to fill the void (Cerutti and Zhou 2017, 2018; World Bank 2018a). Chinese banks accounted for two-thirds of EMDE-to-EMDE lending between 2013 and 2017, and for most of the doubling in cross-border claims on SSA economies between 2013 and 2017 (Cerutti, Koch, and Pradhan 2018; Dollar 2016).

EMDE policymakers have a menu of options to strengthen financial sector resilience, spanning the regulatory framework, macroprudential policies, measures to regulate capital flows, and policies to help strengthen corporate balance sheets.

3.1 Regulatory and supervisory framework

The design of financial regulation and supervision frameworks and the implementation of oversight policies determine the successful attainment of policy objectives for the financial sector. These objectives include efficient access to, and allocation of, credit in the economy; appropriate risk-taking; adequate competition in the financial sector; financial stability; and the alignment of private incentives with broader public policy objectives. The global financial crisis revealed significant deficiencies in regulation and supervision, and highlighted the importance of getting the basics right through strong, timely, and anticipatory supervisory action and market discipline (Palmer and Cerutti 2009; World Bank 2013). In many EMDEs, especially in LICs, this calls for improved supervisory and regulatory capacity (World Bank forthcoming b).

A number of policy options can achieve this outcome. First, incentivizing competition by allowing well-capitalized banks, including foreign banks, to enter the market can promote efficiency and risk sharing, and encourage knowledge transfer. Countries with better institutions are more likely to reap the risk-sharing and development benefits of international banking (World Bank 2018a). Second, the regulatory authorities can design reporting systems to promote transparency and reduce counterparty risk (World Bank

¹³ See Aizenman, Jinjarak, and Park (2015); King and Levine (1993); and Levine, Loayza, and Beck (2000).

2013). Third, regulation can ensure that new technologies (such as mobile banking that reaches formerly unbanked groups) expand financial inclusion to promote development and reduce poverty (World Bank 2014a).

The global financial crisis led to a substantial overhaul of the global regulatory and supervisory environment, designed, in particular, to ensure that banks become better capitalized and less leveraged. The Basel III regulations, approved in late 2010, require banks, especially global systemically important banks (G-SIB), to increase the level and quality of their capital, limit reliance on short-term wholesale funding, and improve liquidity (BIS 2018).¹⁴ These regulatory reforms have made banks more resilient to financial distress, but they may have also reduced the cross-border activities of global banks and pushed riskier lending outside the banking sector. As of 2019, most FSB jurisdictions are already compliant with the Basel III rules on capital requirements, liquidity coverage and for G-SIBs. However, compliance with rules on large exposures, leverage, and net stable funding ratios remains incomplete, and many economies have yet to draft and approve required regulations (BCBS 2019).

The increased regionalization and rise of EMDE-headquartered banks pose regulatory challenges. While these banks are generally more familiar with the environment for banking in EMDEs and create more competition in the financial sector of the host country, they are also headquartered in less-regulated and institutionally weaker countries (World Bank 2018a). As a result, they can accentuate the propagation of shocks between home and host countries. To address such issues, policymakers may benefit from establishing regionally focused regulatory and supervisory frameworks to increase coordination and information sharing. Complementary policy efforts can also assist in mitigating financial sector risks, such as developing financial markets, including capital markets, to improve risk-sharing and lessen reliance on capital flows (Levine 2006).

3.2 Macroprudential policies

Macroprudential policies can provide flexible and well-targeted tools for EMDEs to mitigate systemic risk on bank, corporate, and household balance sheet.¹⁵ To implement macroprudential policies effectively, EMDE policymakers need an efficient and well-designed supervision framework and toolkit, an understanding of how macroprudential policies affect the economy, and the capacity to effectively monitor developments in banks and financial markets.

Since 2007, over two-thirds of EMDEs have tightened macroprudential rules—such as standards for bank capital, liquidity buffers, and loan-loss-provisioning—to contain risks from rapid private sector credit growth or house price growth.¹⁶ Macroprudential regulations have been especially widely used in EAP and ECA (Figure 5; Cerutti, Claessens, and Laeven 2017). EMDEs have tended to focus on policies aimed at financial

¹⁴ FSB jurisdictions that agreed to phase in Basel III provisions comprise 24 economies, including 10 EMDEs (Argentina, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, and Turkey).

¹⁵ See IMF (2013a, 2017), IMF-FSB-BIS (2016), and Lim et al. (2011).

¹⁶ See Budnik and Kleibl (2018), Kuttner and Shim (2016), Vandenbussche et al. (2015), and Zhang and Zoli (2016).

institutions, particularly restrictions on foreign currency exposures, reserve requirements on foreign funding, and liquidity-related measures, in efforts to address exposures to volatile capital flows.¹⁷ In 2017, three-quarters of EMDEs applied limits on financial institutions' foreign exchange positions, close to half applied liquidity coverage ratios or liquid asset ratios, while 44 percent and 32 percent implemented capital conservation buffers and limits on leverage ratios, respectively. Such tools can be especially useful for EMDEs that are heavily reliant on foreign capital to fund productive investments.

62 percent and 16 percent of EMDEs have placed some sort of restriction on loans (mainly loan-to-value ratios) to the household and corporate sectors, respectively. Measures targeted at household and corporate foreign currency borrowing have been limited, with less than 16 percent of EMDEs imposing foreign currency borrowing restrictions on households or corporates.

The overall effectiveness of these policies depends on how they interact with macroeconomic and sector-specific policy measures (Bruno, Shim, and Shin 2017; Claessens 2014) and may be weaker in more open economies (Akinci and Olmstead-Rumsey 2018; Cerutti, Claessens, and Laeven 2017), and for larger firms that face fewer borrowing constraints (Ayyagari, Beck, and Martinez Peria 2017). Foreign currency limits in EMDEs have been associated with lower credit growth, especially for corporate credit, but also with a shift toward non-bank or cross-border financing, which is often less regulated or falls outside the mandate of prudential authorities.¹⁸ Moreover, there may be tradeoffs between macroprudential risk management and rapid financial development (Krishnamurti and Lee 2014).

Having a clear and coherent financial sector oversight framework with an empowered macroprudential authority improves a country's ability to manage systemic risk. By 2017, 64 EMDEs had a designated macroprudential authority and 60 had some form of power to implement macroprudential measures. Better coordination of systemic risk management, crisis preparedness and resolution has been found to help financial stability, particularly in countries with rapid financial deepening.¹⁹ Depending on country characteristics, this could be achieved by housing micro- and macroprudential authority "under one roof".²⁰

3.3 Capital flow management measures (CFMs)

Capital inflows to EMDEs come with benefits and costs. They offer EMDEs access to

¹⁷ EMDEs often apply macroprudential instruments (e.g., reserve requirements) as a complementary measure to manage credit cycles when open capital accounts make conventional monetary policy less effective (World Bank 2014b).

¹⁸ See Aysan, Fendoglu and Kilinc (2015); Cerutti, Claessens, and Laeven (2017); and IMF-FSB-BIS (2016).

¹⁹ See Brunnermeier et al. (2009), Cecchetti (2008), Claessens et al. (2010), Dijkman (2015), and Melecky and Podpiera (2010, 2015).

²⁰ There is an alternative view that a separation of powers between monetary and prudential policies is more appropriate to avoid conflicts between monetary policy objectives and financial stability; reputational risk, as the effectiveness of monetary or financial stability may be undermined by the failures of the other; excessive power in one institution; and moral hazard when the lender of last resort and supervisor are one and the same (Cecchetti 2008; Gerlach et al. 2009; Masciandaro 2009).

savings in foreign currency that can be used to fund productive investment. However, they can also contribute to credit and asset price booms, which can disrupt and damage the economy, especially if there is a sudden stop in inflows. CFMs can be used as part of a combination of policies to address issues relating to cross-border capital flows (Ghosh, Ostry, and Qureshi 2017; Heathcote and Perri 2016). However, these policies can have unintended consequences and should not be used to avoid addressing other, possibly more fundamental, macroeconomic policy imbalances or to unduly delay necessary exchange rate adjustment (Ostry 2015; Keller 2018; Forbes 2007). In the years following the global recession, EMDEs faced a surge of inflows. More recently, significant capital outflows occurred in the second half of 2015 and in mid-2018.

Generally, EMDEs have relied primarily on macroeconomic policies to manage capital flow reversals. Adjustments to external shocks have been facilitated by exchange rate flexibility—especially in EMDEs where currencies were initially overvalued—foreign exchange market interventions, and monetary and fiscal policy adjustments.

However, several EMDEs introduced new CFMs on inflows during 2009-12 as unprecedentedly low interest rates in major advanced economies increased pro-cyclical capital inflows (Figure 6; Forbes et al. 2016). Most of these measures were either removed (Russia) or eased (Brazil, Indonesia, Peru) when the inflow surge abated (IMF 2016). In several EMDEs, CFMs were also tightened during stress episodes or when financial stability was threatened by macroeconomic rebalancing, global shocks, significant foreign currency exposures, or financial contagion risks. As these economies implemented macroeconomic adjustment programs, in some cases involving the resolution of failed financial institutions, some CFMs were subsequently eased or removed.

3.4 Policies to strengthen corporate balance sheets

Prudential policies, including the monitoring of balance sheets of large, systematically important firms, can help reduce the financial stability risks associated with elevated corporate debt. Structural policies, such as promoting equity market development and strengthening bankruptcy protection rights, can help lift investment and mitigate the medium-term consequences of excessive corporate debt.

Equity financing helps increase firms' resilience and improves their creditworthiness (World Bank 2015b). A well-developed equity market is also positively associated with growth and capital accumulation (Beck and Levine 2004; Levine and Zervos 1998). There has been some momentum in undertaking equity market reforms in EMDEs, reaching a peak in 2014 (Figure 7). However, in many EMDEs, such as small economies in SSA and oil importers in the MNA, equity market development has been held back by regulatory burdens, weaknesses in corporate governance and shareholder rights, and low domestic savings.

EMDE bankruptcy protection laws lag international best practices, as creditors often experience long, costly, and weakly enforced debt recovery processes. Strengthening bankruptcy protection can boost investment, facilitate responsible corporate risk-taking, and help to reduce the costs of debt overhangs (World Bank 2014b). Recent reforms in bankruptcy procedures in EMDEs include the introduction of a new bankruptcy law in Egypt and India, the strengthening of secured creditors' rights in India, and the setting

up of new restructuring mechanisms in Poland.

4. Structural policies to boost equitable growth

EMDEs have seen potential growth slow to 4.7 percent in the 2013-18 period, down by 1.2 percentage points compared to 2003-07 (Figure 8; World Bank 2018e). Part of the slowdown is due to lower productivity growth, attributable to several factors including slower investment growth; diminishing gains from factor reallocation as the pace of urbanization slows; and a stabilization of global value chains. Demographic trends have turned from tailwinds to headwinds as the share of the working-age population stabilized in EMDEs around 2010, following more than four decades of steady increases. At this point, all major economies face demographic trends that slow potential growth prospects: economies with rising working-age populations accounted for 19 percent of global GDP in 2013-17, sharply down from 60 percent of global GDP in 2003-07. At current trends, potential growth in EMDEs is expected to continue to slow, to 4.3 percent a year in the next decade, with 60 percent of EMDEs experiencing a slowdown. Demographic trends alone would account for almost one-half of this slowdown and would weigh most heavily on potential growth prospects in EAP and ECA.

Ambitious, credible reform agendas that improve productivity and boost human and physical capital are needed to offset the decline in potential growth over the next decade. Many EMDEs face similar barriers to reaching the efficiency frontier, including poor governance; inflexible labor markets; constraints on human capital arising from poor provision of education, training, and health-care; uncompetitive product markets; inadequate contract enforcement; and cumbersome regulations and tax frameworks. Breaking down these barriers is strongly associated with faster growth (Abiad et al. 2012; Berg, Ostry, and Zettelmeyer 2012; World Bank 2018e).

The benefits are greatest when there is an appropriate mix of policies supporting each other: the potential benefits of new road and port infrastructure to promote exports, for example, will be achieved only if customs and other border procedures are also streamlined. The timing and sequencing of reforms also matter: product and labor market reforms may be more effective when combined with monetary or fiscal policies that support demand (Bordon, Ebeke, and Shirono 2018; IMF 2019b). Some structural reforms may benefit growth but worsen income inequality, thus involving a tradeoff for policymakers that they may need to address by offsetting policies in other areas (Ostry, Berg, and Kothari 2018).

4.1 Evolution of structural reforms in EMDEs

Since the global recession, there have been reforms to strengthen business climates (which lost momentum since 2010), improve access to finance, strengthen financial supervision, reduce trade costs, and lower energy subsidies (which were mostly sustained). In contrast, governance has deteriorated in EMDEs and they have become less open to international capital flows.²¹

²¹ See IMF (2019b) for a complementary discussion of the evolution of structural reforms.

4.1.1 Business environment

For the private sector to flourish and generate productivity growth, it must operate in an environment conducive to business. This includes regulations and arrangements that make it easy to start a business, access electricity and the internet, register property, and obtain construction permits. It also includes having a tax system that provides appropriate incentives, raises revenue efficiently, and is viewed as fair. In these respects, the general business environment in the average EMDEs has improved since the global recession, with its score improving on average by 13 percentage points since DB2008 (Figure 9).²² The largest gains in business regulatory environment scores occurred during and after the global financial crisis when the number of business-friendly reforms increased from 102 in DB2008 to 147 in DB2010. The share of EMDEs undertaking at least one business-friendly reform measure increased from 57 percent in DB2008 to 73 percent in DB2010; the share of EMDEs undertaking at least three reform measures increased from 15 percent in DB2008 to 25 percent in 2010. Since DB2010, the number of economies undertaking reforms has slowed such that the average improvement in between DB2013 and DB2020 was a third smaller than the seven years prior to DB2013. The number of reforms has not surpassed its DB2010 peak, with reforms slowing significantly to a low in DB2013.

EMDEs have also seen an increase in the use of internet among the population with more individuals and businesses using the internet. The average share of the population using internet in EMDEs rose from just under 12 percent in 2006 to 45 percent in 2017. This remains below the 85 percent average in advanced economies.

4.1.2 Financial environment

The global recession placed a spotlight on gaps in financial regulation and supervision. In response, financial sector reform accelerated globally, especially among the major economies, with the adoption of Basel III and improvements in the Global Financial Safety Net. Many EMDEs also accelerated financial environment reforms, but improvements in financial aspects of business including ease of getting credit, minority investor protection, resolving insolvencies, and contract enforcement indicators have been mixed. On average, EMDEs have improved their scores related to the financial regulatory environment (including the ease of getting credit, minority investor protection, and resolving insolvencies) by 10 percentage points between DB2009 and DB2020. Scores have improved by a greater margin in the seven years between DB2013 and DB2020, than the seven prior. EMDEs have done particularly well in improving business access to credit, with the score improving by over 20 percentage points over this same period. Contract enforcement, on the other hand, has not materially changed since the global recession. Unlike in business environment reforms, the number of EMDEs undertaking financial reforms have improved more consistently over the post-recession period and the number of reforms reached a peak in DB2019.

²² An economy's score is indicated on a scale from 0 to 100, where 0 represents the lowest performance and 100 the frontier, which is constructed from the best performances across all economies and across time. The number of reforms is calculated using the business reforms by year and by country as listed in the World Bank's Doing Business publications.

4.1.3 Openness to international capital flows

EMDEs have made significant strides toward dismantling capital controls and opening up their capital accounts, starting in earnest in the 1990s. EMDEs on average have fewer open capital accounts than advanced economies, with LAC and MNA achieving the highest average openness scores among EMDE regions. The pace of capital account liberalization slowed in the 2000s, but with EMDEs on net still shifting towards more openness. After the global financial crisis hit, however, countries on net moved back to more restrictions. In 2009, 17 percent of EMDEs shifted to a more closed capital account. The shift toward less openness has continued in recent years, partly in response to volatile capital flows and shifts in the global debate about its role in macroeconomic management (Didier et al. 2015; IMF 2012; Rey 2015).

4.1.4 Governance

Getting governance right can significantly boost economic growth, and past governance reform spurts in EMDEs have generally been followed by rising productivity and investment growth. However, most EMDEs, especially those in SSA, still have low scores in regulatory quality and efficiency. Since the global recession, EMDEs experienced fewer governance reform spurts and more setbacks per year than pre-recession.²³ The 22 largest EMDEs (EM22) and LICs have not been able to improve governance scores since the 1990s, with scores for regulatory quality, government effectiveness, rule of law, and control of corruption now lower in the average EM22 and LICs than in 1998 (Figure 10).

4.1.5 Trade environment reforms

Trade remains potentially one of the most important avenues for EMDEs to unlock productivity and efficiency gains. Trade environments remain less supportive in EMDEs than in advanced economies according to measures such as the costs (including time involved) of exporting and importing, the quality of trade- and transport-related infrastructure, and proxy measures (Figure 11). However, the average EMDE's overall "trade across borders" score in the Doing Business survey improved by 11 percentage points between DB2007 and DB2020.

Some of this progress has been driven by trade-related reforms, again with increased momentum visible in the three years prior and during the global recession. Thus, the number of trade-related reforms in EMDEs increased from 24 to 37 between DB2008 and DB2010. However, these numbers imply that still only a minority of EMDEs were undertaking reforms that lowered the cost and time required to import and export. Reform momentum slowed after 2010. Since DB2017, however, there seems to have been some renewed vigor in trade reform, with the number of relevant reforms rising to 34 in that year. In contrast to these efforts to lower within-border trade-related costs, G20 economies have imposed a growing number of tariffs and non-tariff restrictions on trade (WTO 2019).

4.1.6 Energy subsidies

²³ Reform spurts are improvements in one or more of the Worldwide Governance Indicators that are sufficiently large to exceed the country-specific average by more than 2 standard deviations. Reform setbacks are similarly-sized declines in the indicators.

In 2017, about US\$300 billion was spent by governments world-wide on fossil fuel subsidies, equivalent to almost six times the funds needed to achieve universal access to electricity and clean cooking (World Bank 2018b). These subsidies disproportionately benefit higher-income households; divert government funds from health, education, and other productive activities; and aggravate carbon emissions and climate change (IMF 2013b; Rentschler and Bazilian 2017a, 2017b; World Bank 2018b). In oil-dependent economies, energy subsidies remain an important barrier to the diversification of exports and production. The significant decline in oil prices in 2014-15 prompted many oil-exporting EMDEs to reform their energy subsidies: between mid-2014 and end-2016, more than half undertook some energy subsidy reform (Stocker et al. 2018).²⁴ For GCC economies this represented a substantial change in policy stance (Krane and Hung 2016; World Bank 2017a). As a consequence, the average fiscal cost of energy subsidies among EMDEs declined from about 4.0 percent of GDP in 2014 to 1.9 percent of GDP in 2016. Some of the progress toward reducing energy subsidies was reversed in 2017-18, but subsidies nonetheless remain smaller than before the oil price decline.

4.2 Poverty and structural policies

Getting structural reforms right for long-term growth sets the foundation for improving the livelihoods of citizens and fighting extreme poverty. Better governance, more friendly business climates, lower trade barriers, and greater financial inclusion are all associated with lower extreme poverty (Figure 12).²⁵

Weak institutions have been associated with greater poverty. Average poverty rates of EMDEs in the quartile with the weakest public institutions are about four times that in the quartile with the strongest public institutions. Nearly ten times as many of the global poor live in countries with weaker institutions, than in countries with the strongest institutions.

Poverty has also been higher in countries with greater barriers to doing business, including barriers to trade. EMDEs in the quartile of the Doing Business Index with the lowest scores experience nearly eight times higher average poverty rates than those in the quartile with the highest scores. There are more than twice as many of the global poor living in countries with the lowest Doing Business rankings, compared to those in countries with the highest rankings. The poverty rate in the quartile of EMDEs with the lowest ranking in the trade across borders sub-category of the Doing Business index is more than five times that for those in the highest scores. 36 percent of the global poor live in countries with the lowest rankings, compared to only 3 percent in countries with the highest rankings.

Limited access to finance has been associated with higher poverty. The poverty rate in the quartile of EMDEs with the least access to financial institutions is six times that in the quartile with the greatest access.

²⁴ Economies that undertook reforms include Algeria, Bahrain, Cameroon, Ecuador, Gabon, Ghana, the Islamic Republic of Iran, Iraq, Kazakhstan, Kuwait, Malaysia, Nigeria, Oman, Qatar, Saudi Arabia, Sudan, Trinidad and Tobago, Turkmenistan, the United Arab Emirates, and Yemen.

²⁵ See Demenet, Razafindrakoto, and Roubaud (2016); Djankov, Geogieva, and Ramalho (2018); Dollar (2004); Lawless (2013); Paunov (2016); Rashid and Intartaglia (2017); and Tebaldi and Mohan (2010).

4.3 Productivity-enhancing reforms

Boosting productivity requires removing barriers to the reallocation of resources toward higher-productivity firms and sectors, and stimulating the creation, innovation, and development of individual firms.

A more business-friendly environment—with greater access to finance, stronger bankruptcy protection, and simpler tax and regulatory requirements—helps encourage firm creation, entrepreneurship, and productivity-enhancing investment and technology adoption. Policymakers could focus on the following reforms. First, reforms that increase product market flexibility or competition (e.g., increased openness to international trade; more effective regulation of monopolies and large firms) could raise aggregate productivity growth by encouraging a reallocation of resources away from unsuccessful and sheltered firms to more productive and competitive ones (Bernard, Jensen, and Schott 2006; IMF 2019b; Melitz 2003). Second, labor market reforms that improve the allocation of talent, such as broadening access to occupations and improving access to training and retraining, can generate considerable productivity gains (Hsieh et al. 2013). Third, reforms to level the playing field (e.g., state-owned enterprise reforms) could encourage entry of more productive firms and thus raise aggregate productivity (Brandt, van Biesebroek, and Zhang 2012).

Better institutional quality—such as control of corruption and rent-seeking, fair application of the rule of law, and political stability—is associated with higher productivity and stronger investment growth.

Despite the significant gains to productivity and growth through the adoption of new technologies, EMDEs invest far less in research and development than advanced economies; a so-called innovation paradox (Cirera and Maloney 2017). New technologies, such as industrial automation, advanced robotics, smart factories, the internet of things, and 3D printing hold the promise of spurring manufacturing productivity, by helping spread innovation; digital technologies may improve government efficiency and the delivery of government services (World Bank 2016a, 2019d). Productivity-enhancing new technologies in the agricultural sector could benefit the two-thirds of the global poor who earn their livelihoods from farming (World Bank 2019e). New technologies are more likely to be adopted successfully if policies are in place to mitigate the costs of adjustment for both workers and firms, and if market failures are addressed (Cirera and Maloney 2017; World Bank 2016a).

Openness to international trade increases the competition faced by firms, encourages them to specialize in what they do best, and thus promotes the efficient allocation of resources, helping to raise prosperity and lower poverty (World Bank 2019b, forthcoming a). In the absence of new multilateral trade agreements, regional trade arrangements could be platforms for further trade integration. Such agreements have become deeper over time, covering areas—some outside the WTO mandate—such as services, e-trade, competition policy, investment, capital mobility, and property rights (Hofmann, Osnago, and Ruta 2017). EMDEs could focus on policy measures that liberalize services trade and FDI, areas where barriers remain significant (World Bank 2017c). For example, the 2018 African Continental Free Trade Area could help foster intraregional trade and diversification, generate economies of scale, and encourage higher-value-added production. In LICs, gains

from trade can be particularly significant given high trade costs and low trade integration.

EMDEs that rely heavily on a few export products or on a few trading partners are more vulnerable to shocks, have less diverse sources of growth, and tend to suffer more from volatility in revenue streams (Hausmann, Hwang, and Rodrik 2007; Hesse 2008). Since 2007, EMDEs have made some limited progress in diversifying their exports, with energy-exporters achieving the largest improvements (Figure 11). In the current environment of relatively low commodity prices and predominantly downside risks to global growth, EMDEs need to implement reforms to encourage diversification. These include ensuring appropriate trade policies that promote diverse exports, infrastructure investment to enable private sector competition, competition regulation to avoid market concentration, and support for innovation through research and development.²⁶

EMDEs can benefit significantly from further reforms to energy subsidies. Most reforms in this area have been driven by fiscal challenges rather than environmental or socioeconomic objectives (Rentschler and Bazilian 2017a, 2017b). EMDEs can create an energy sector plan with long-term objectives that clearly define the aims and potential benefits of reforms and the cost of subsidies. A robust plan would follow consultations with stakeholders, and be communicated effectively to the public (IMF 2013b; Rentschler and Bazilian 2017a, 2017b). Such a plan would include phased price increases that are appropriately timed with specific measures to offset the impact on the poor.

4.4 Investing in human capital and infrastructure

Increasing investment in infrastructure and human capital can help unlock growth dividends and improve resilience to disruptive technologies and climate change. More effective social safety nets with better coverage can support these investments by helping workers transition to the formal economy or by providing income security in the face of shocks (ILO 2019). Implementing such reforms could more than offset the decline in global and EMDE potential growth that is expected over the next decade. Instead of potential growth of 4.3 percent a year in 2018-2027, such policy reforms could boost annual potential growth to over 5 percent.

4.4.1 Strengthen education and training

An educated workforce is more securely attached to the labor market, more productive, and better able to adjust to disruptive new technologies. For many low- and middle-income EMDEs, improving basic numeracy, literacy, and ICT-related skills remains a key priority (Figure 13). While secondary school enrollment rates are near advanced-economy levels in the average EMDE, tertiary school enrollment rates (40 percent) and secondary and tertiary school completion rates (27 and 10 percent, respectively) were less than two-thirds of advanced-economy averages in 2013-17. As countries increasingly engage in more complex and automated production processes, higher tertiary school enrollment and

²⁶ McIntyre et al. (2018) show that export diversification can help to lower output volatility in small countries and that diversification requires structural changes to an economy. Dabla-Norris, Ho, and Kyobe (2016) highlight that reducing trade barriers can help export diversification. Hesse (2008) shows that export diversification can bring stability to export earnings and mitigate risks from terms of trade shocks. Al-Marhubi (2000) shows that export diversification boosts economic growth.

investment in lifelong learning will be needed to facilitate the training and retraining required for people to meet shifting demands for skills (World Bank 2019c). Improving learning outcomes also requires better measurement and monitoring, more efficient teaching practices, and greater accountability (World Bank 2018c). In LICs, investment in early childhood education can ensure that cognitive and socio-behavioral skills are adequately developed, since addressing deficiencies later in life tends to be much more expensive (World Bank 2019a). To reap the benefits of digital technologies, LICs will require significant investment in human capital.

Reforms to strengthen competition could have synergies with reforms to improve human capital. Firms in EMDEs tend to innovate in marginal process and product improvements rather than engaging in significant technology adoption or new product imitation (Cirera and Maloney 2017). This can partly be attributed to weak managerial capabilities. Better education, especially if combined with more competition, can induce an upgrading of managerial skills that can foster more ambitious innovations.

Finally, better education serves a critical function in reducing inequality both within and between countries. As EMDEs' workforce grows—while that of advanced economies shrinks—and becomes more skilled, the global economy is expected to benefit and global income inequality is expected to fall (World Bank 2018a).

4.4.2 Improve health care

Human capital can be improved by reducing malnutrition and improving health care services. Policy interventions to improve public health, and to ensure and lengthen productive working lives, range widely. Better sanitation and access to clean water would improve public health: 9 percent of the global disease burden may be attributable to unsafe water, inadequate sanitation, and insufficient hygiene (WHO 2008). Improvements in health-care provision can be spurred by well-defined and regularly monitored performance indicators (Bradley et al. 2010). Comprehensive provision of health services has been followed by better health outcomes in countries with higher per capita incomes (Maeda et al. 2014). At the local level, programs targeted at local health service providers or groups of patients have generated considerable improvements in health care services and outcomes. For example, in Rwanda, performance-based incentive payments helped significantly improve health indicators for children (Gertler and Vermeersch 2012). In India, enhanced training of primary health care providers led to better identification and treatment of patient ailments (Das et al. 2016).

4.4.3 Close infrastructure gaps.

EMDEs have large infrastructure needs that require financing (Rozenberg and Fay 2019). In many EMDEs, access to water and sanitation remains incomplete, power outages are common, access to communication networks is limited, and rail infrastructure is underdeveloped. It is estimated that unfilled global investment needs amount to up to 3 percent of global GDP, and progress towards closing them has been slow during 2014-19, especially in the areas of water, sanitation, and education (UNCTAD 2014, 2019). EMDEs with sound fiscal positions could increase public sector investment, which would both boost short-term demand and help raise potential growth in the long-run.

EMDEs that are constrained by fiscal sustainability considerations or high debt could

focus on shifting from unproductive expenditures toward productive public investment and improving the management of public investment (World Bank 2017c). Policy and institutional frameworks play a vital role in minimizing the cost of infrastructure needs, including access to electricity, broadband infrastructure, clean water and sanitation, as well as decarbonization. Reforms that can achieve this include legal and regulatory frameworks that promote renewables, increase public transport utilization, and densify urban areas (Rozenberg and Fay 2019). In many EMDEs, government revenues remain low, indicating that in some cases the best route to increased infrastructure investment may be to increase tax revenues by expanding tax bases or improving the quality of tax administration (World Bank 2015a). To improve infrastructure investment through state-owned enterprises, governments can develop corporate governance frameworks, and provide training to boards and government officials (IFC 2018).

The size of investment needs, however, also means that the private sector may need to be involved through both public-private partnerships and policies that improve the business environment for the private sector to be able to invest and grow. Policy efforts to expand the supply of complementary inputs and capabilities and to raise the returns on investment may foster private investment in infrastructure. These policies would ensure that innovation-related investment rises, especially since these types of investment are low in EMDE firms (Cirera and Maloney 2017). Efficiently designed public guarantees and other forms of credit enhancement can also help unlock additional investment.

4.4.4 Encourage labor force participation.

Two broader trends are constraining labor force participation. First, demographic changes have seen the global share of working-age population stabilize since 2010 after more than four decades of rapid increases (World Bank 2016b). Second, in 2018, global female labor force participation was two-thirds that of men, and it was even lower in EMDEs. Labor supply can be raised by drawing a greater share of the working-age population into the labor force. This can be achieved through policies to “activate” discouraged workers or groups with historically low participation rates, such as women and younger or older workers.

In both advanced economies and EMDEs, active labor market policies and reforms to social benefits have been followed by higher labor force participation rates (Betcherman, Dar, and Olivas 2004; Card, Kluve, and Weber 2010). Less-rigid employment protection regulations and minimum wages have had mixed effects on employment and labor force participation and, at times, unintended side effects such as lower labor force participation of disadvantaged groups (Betcherman 2014).

In EMDEs, policies aimed at other objectives have sometimes brought important collateral benefits in the form of higher labor force participation. For example, in Nigeria, improved access to finance and training programs increased female labor force participation by encouraging firm startups (Brudevold-Newman et al. 2017). In Uruguay, the extension of the school day was associated with higher adult labor force participation (Alfaro, Evans, and Holland 2015). In ECA, shifting health care systems toward services targeted at the elderly has helped extend productive life times, and providing support services to women with families has helped encourage labor force participation (Bussolo, Koettl, and Sinnott 2015).

4.4.5 Increase investment to guard against climate risks

Poor people are disproportionately affected by climate change as they tend to live in riskier areas, depend on income sources such as agriculture that tend to be most vulnerable to extreme weather events, and lack the savings and access to borrowing that can help them cope with disasters (World Bank 2017d). Two-thirds of the global poor are estimated to earn their income from farming. In LICs, agriculture remains the largest economic sector. To help mitigate and adapt to climate changes, LICs need to invest in climate-resilient infrastructure, improve irrigation techniques, use fertilizers more effectively, strive to gain access to new markets, and possibly implement land use reform (World Bank 2019e). Building resilient infrastructure can save lives and money. Infrastructure disruptions cost low- and middle-income countries between \$391 and \$647 billion (about 1.2-2.0 percent of GDP) a year, with natural disasters imposing a significant part of that. Building resilient power, water, and sanitation infrastructure would only cost about 3 percent of overall investment needs with climate change magnifying the benefits in the long-run (Hallgatte, Rentschler, and Rozenberg 2019).

5. Policy priorities

Where demand is weak but fiscal positions are sound and there is monetary policy room, fiscal or monetary stimulus could help support activity. Where fiscal positions are weak, priorities may include shifting public spending toward more productive and poverty-reducing expenditures and improving revenue frameworks. Some economies in LAC and SSA have experienced rapid debt accumulation and face risks of fiscal unsustainability. Energy-exporting EMDEs, particularly in MNA, face rising vulnerabilities that require policy action. Where central banks lack independence and transparency, policymakers could prioritize implementing rule-based frameworks and building credibility through proper implementation of policy. Where corporate balance sheets face rising vulnerabilities, policymakers can implement macroprudential policies that mitigate risks.

While fiscal, monetary, and financial policies can build resilience in the shortterm, structural policies are needed to boost longer-term growth. Specific policy priorities will depend on country-specific bottlenecks to growth. The specific policies depend on the extent to which an important market failure has to be rectified and the likelihood of success in governments' efforts to address this failure (Maloney and Nayyar 2018; Rodrik 2008). Several priority areas can be considered.

Where subsidies remain elevated or undermine investment in other productive activities, governments could establish medium-term plans that unwind these subsidies and replace them with better-targeted tools to protect vulnerable groups. Where regulatory or tax burdens constrain growth, priorities may include better public sector effectiveness and governance. Where private-sector growth is anemic, improved access to finance and better business climates may be among the priorities. Where productivity is low, and informality is widespread, such as in SSA and LAC, building human capital and enhancing the productivity of workers in the informal sector may be priorities. Where the labor force is aging, priorities may include efforts to increase labor force participation, improve health systems, increase lifelong education, and promote financial development to improve the allocation of savings. In countries with large vulnerable populations, better social safety

nets may need to be prioritized. Where female labor force participation is low, policies aimed at reducing barriers to entry can be prioritized. Where climate change threatens human life and infrastructure, particularly in small island states, governments could prioritize climate-resilient infrastructure and fiscal planning.

6. Conclusion

A decade after the global recession, EMDE policymakers are at a crossroads. EMDE growth has slowed over the past decade, with downside risks becoming more prevalent. At current trends, most EMDEs will face slower potential growth in the next decade than the previous one. While some progress has been made in implementing more resilient macroeconomic policy frameworks—including through rules-based policy frameworks; increasing the flexibility of exchange rates; and strengthening prudential policies, including with macroprudential tools—most EMDEs remain some distance from best practices. At the same time, significant policy room that was used in response to the global recession has not yet been restored. There have been efforts to implement business-friendly reforms to improve efficiency and promote investment. But with governance stalling and reform momentum slowing in several areas, those efforts may not suffice to stem the decline in potential output growth.

To raise per capita incomes, eradicate poverty, and bring about shared prosperity, policy makers need to adopt ambitious and credible reform agendas that focus on all aspects of policy in an integrated way. EMDEs on unsustainable fiscal paths can prioritize actions that can help shore up fiscal positions while protecting growth-enhancing expenditures. Such actions are likely to include cutting unproductive expenditures, improving spending efficiency, and expanding tax bases. EMDEs also need to ensure that other buffers against shocks are adequate. These include foreign exchange reserves, which in many EMDEs today are not sufficient to meet balance of payments needs.

Macroeconomic resilience requires more than addressing the current stance of policy: it also requires transparent and rules-based policy frameworks that help to prevent future policy mistakes and ensure the necessary room to employ countercyclical policy. Fiscal rules can assist countries in maintaining sustainable finances and building buffers in good times. Transparent and independent central banks are less likely to be diverted from their task of maintaining low inflation by developments that may threaten other policy objectives. While some EMDEs have made significant progress in establishing such policy frameworks and institutions, many have more to do.

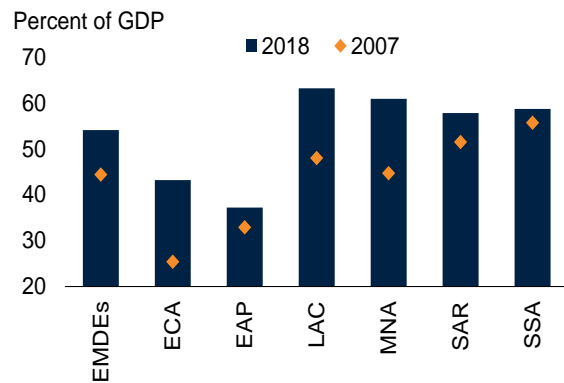
The changing global financial landscape requires increased cross-border regulatory collaboration, adequate prudential responses, and, in some circumstances, the use of capital flow management measures as part of a policy mix to address imbalances. In EMDEs without a prudential authority or prudential powers, policymakers would benefit from creating and empowering such institutions. In EMDEs with the appropriate institutions, financial sector policymakers can use flexible and well-targeted tools to mitigate foreign currency risk and asset price misalignment. In EMDEs where capital

flows have created imbalances, policymakers can look to capital flow management measures to help restore macroeconomic balance while allowing appropriate external adjustments, including to exchange rates. In regions where EMDE-headquartered banks have gained prominence, policymakers need to ensure that home-host supervisor coordination is adequate to address the risks involved.

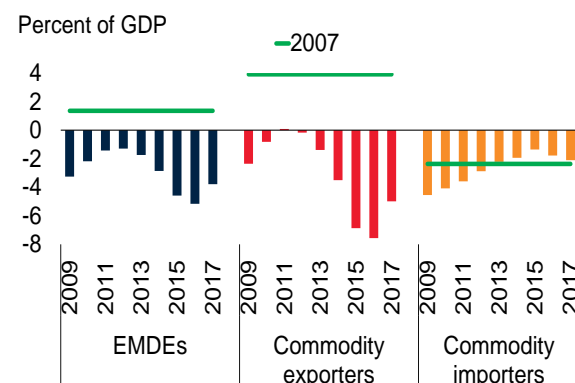
With current projections indicating slower long-term productivity growth in most EMDEs, policymakers need to undertake ambitious and comprehensive reforms to stimulate private sector-led growth. They need to aim to return to and exceed the reform momentum last seen in 2010 and reinvigorate stalling governance. This includes building institutions that promote growth and support resilience; reforms to encourage productivity and investment; measures to build human capital and promote investment in growth-enhancing public infrastructure; measures to adapt to climate change; and policies to reduce corruption, strengthen competition, and reduce unnecessary regulatory burdens.

Figure 1. Fiscal policy

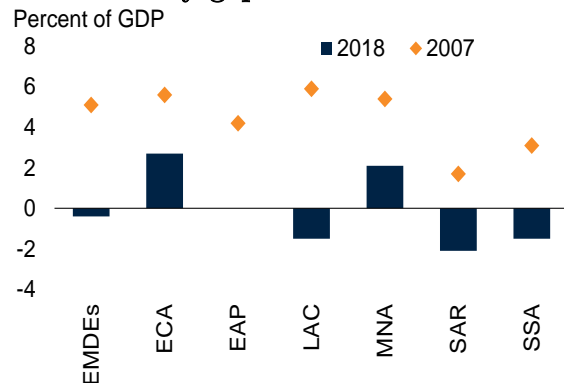
A. Government debt



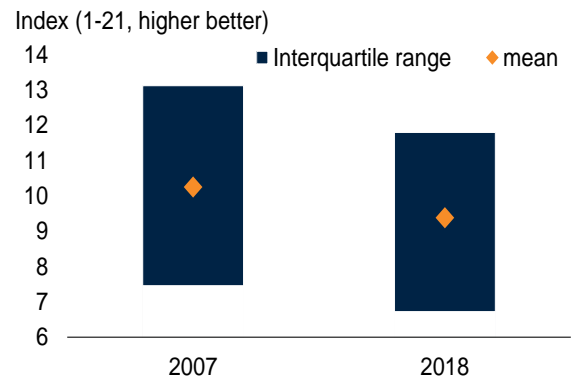
B. Fiscal balance



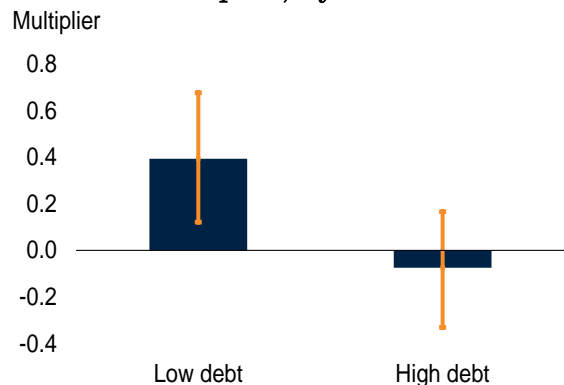
C. Primary fiscal balance sustainability gap



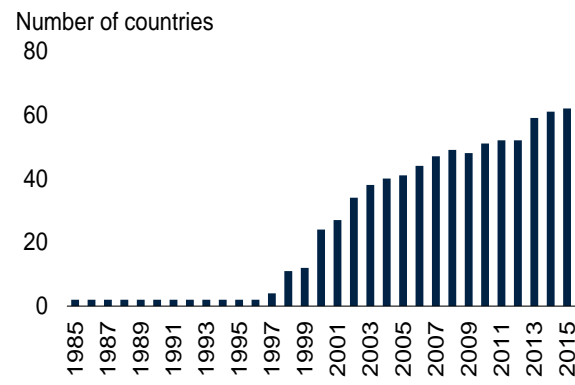
D. Sovereign ratings



E. Fiscal multiplier, by debt level



F. Fiscal rules



Source: Huidrom et al. (2019), International Monetary Fund, Kose et al. (2017), World Bank.

Note: EMDEs = Emerging market and developing economies, EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, and SSA = Sub-Saharan Africa.

A.-D. Unweighted averages.

A. Gross government debt.

C. The sustainability gap indicates the difference between the current primary fiscal balance and the debt-stabilizing primary fiscal balance at current growth rates and interest rates. A negative value indicates that government is on a rising trajectory. See Kose et al. (2017) for details.

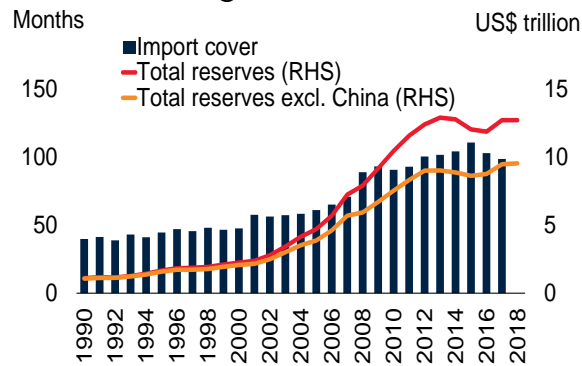
D. Based on data for 97 EMDEs.

E. Figure shows fiscal multipliers two years from expansionary measures based on estimates from the IPVAR model of Huidrom et al. (2019). An economy is considered to have low debt when government debt is below 40 percent of GDP and high debt when it exceeds 60 percent of GDP. Orange lines represent 16-84 percent confidence bands.

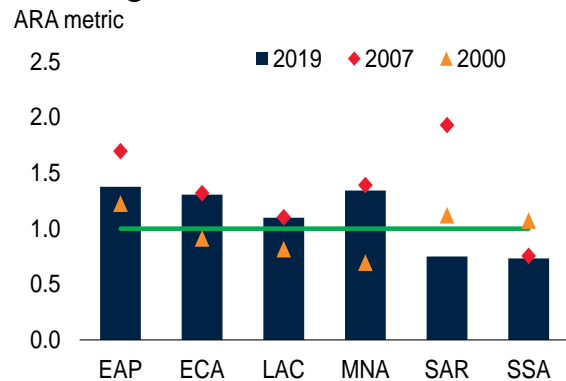
F. An economy is considered to implement a fiscal rule if it has one or more fiscal rules on expenditures, revenues, budget balance or debt.

Figure 2. International reserves

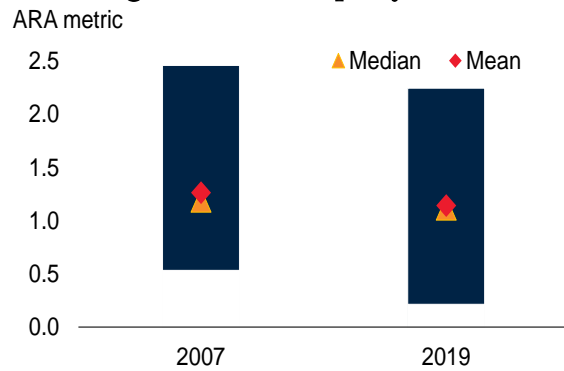
A. Global foreign reserve assets



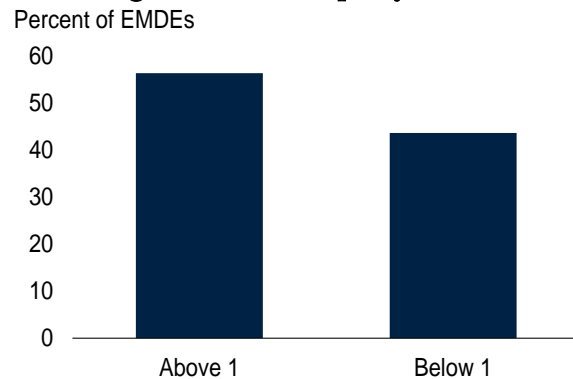
B. Foreign reserves



C. Foreign reserve adequacy



D. Foreign reserve adequacy



Source: Haver, International Monetary Fund.

Note: EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA =

Middle East and North Africa, SAR = South Asia, and SSA = Sub-Saharan Africa. Assessing Reserve Adequacy (ARA)

metric is based on IMF (2011) and determines the appropriate reserve cover on a risk-weighted basis covering short-term debt, medium and long-term debt, and equity liabilities, Broad money and export earnings. Risk weights are based on observed outflows during periods of exchange rate pressure.

B.-D. Based on data for 55 EMDEs.

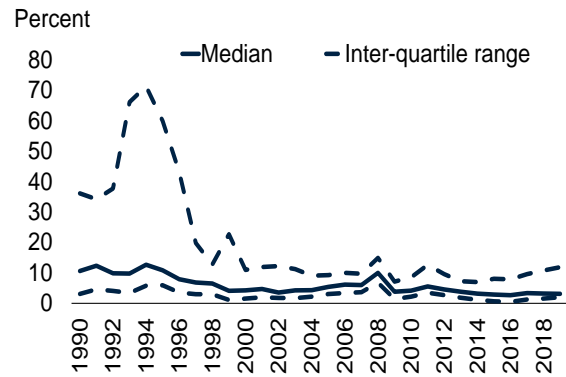
B. Unweighted averages.

C. Mean is an unweighted average. Blue vertical bars represent the 90th percentile of the distribution.

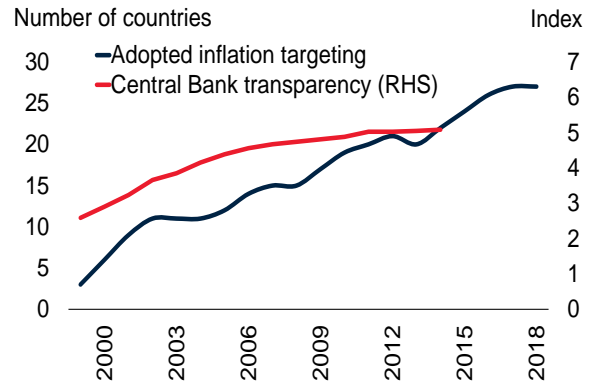
D. Data for 2019. A value below one suggests that EMDEs do not necessarily have enough reserves to meet their balance of payments requirements as defined by the IMF's ARA metric.

Figure 3. Monetary policy

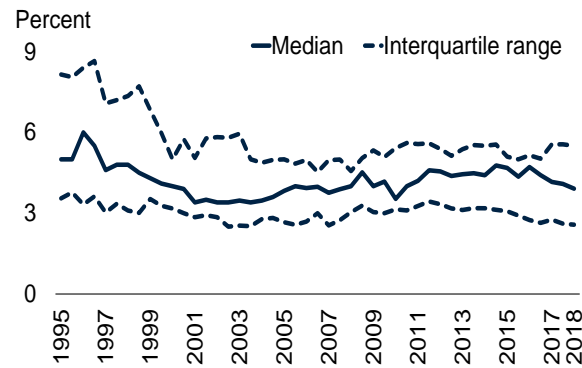
A. Inflation in EMDEs



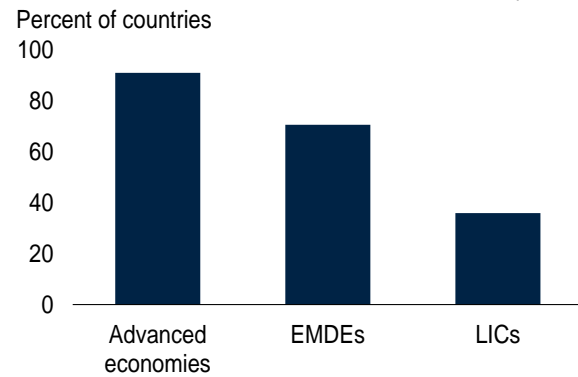
B. EMDEs with inflation targeting



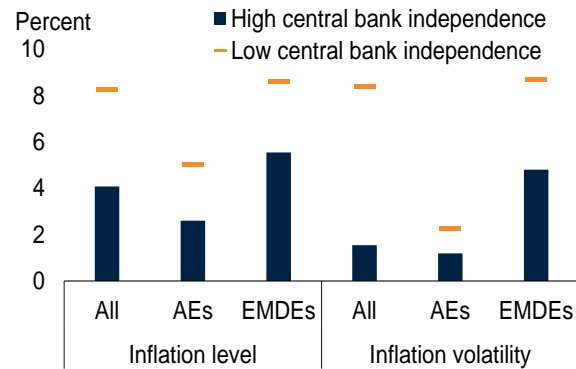
C. Inflation expectations in EMDEs



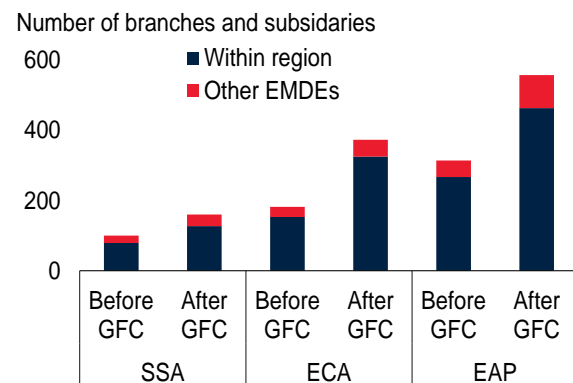
D. Countries with increasing central bank independence and transparency



E. Inflation, by central bank independence and transparency



F. Central bank independence and pass-through from exchange rate changes to inflation



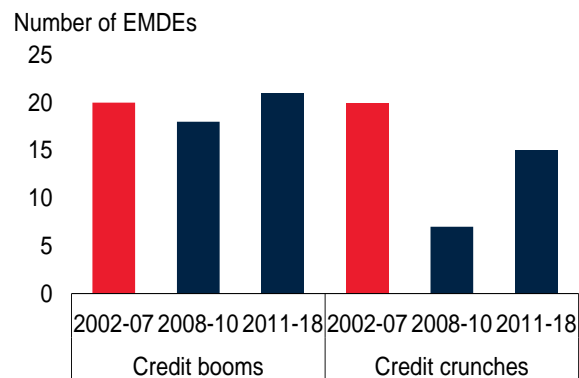
Source: Dincer and Eichengreen (2014); Ha, Kose, and Ohnsorge (2019); International Monetary Fund; World Bank.
 A. Based on data for 155 EMDEs.
 B. Dincer/Eigengreen Transparency Index. The index ranges from 0 (least independent and transparent) to 15 (most independent and transparent).
 C. Inflation expectations are long-term (five-year-ahead) expectations of annual inflation, measured at a biannual frequency. Based on a sample of 23 EMDEs during 1995H1-2018H1.
 D. Based on data from 1998 to 2014. Figures shows percent of countries with a higher index (by at least 0.1) in 2014 than 1987.

E. Columns indicate median inflation rates and inflation volatility in country-year pairs, with a central bank independence and transparency index in the top quartile of the sample. Bars denote medians for country-year pairs in the bottom quartile.

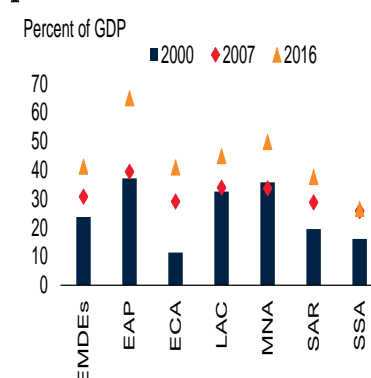
F. Pass-through is defined as the ratio between the one-year cumulative impulse response of consumer price inflation and the one-year cumulative impulse response of the exchange rate change estimated from FAVAR models for 29 advanced economies and 26 EMDEs over 1998-2017. A positive pass-through means that a currency depreciation is associated with higher inflation. Bars show the interquartile range and markers show the cross-country median. The central bank independence index is computed by Dincer and Eichengreen (2014). Low and high central bank independence are defined as below and above the sample average.

Figure 4. Financial sector developments

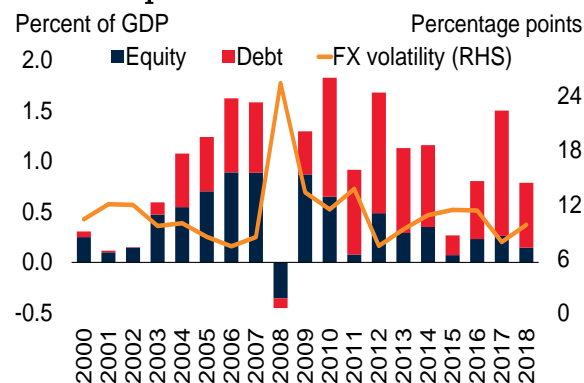
A. Number of EMDE in post-crisis booms and credit crunches



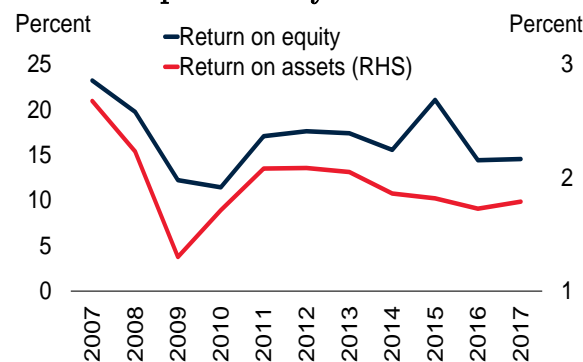
B. EMDEs: Bank credit to private sector



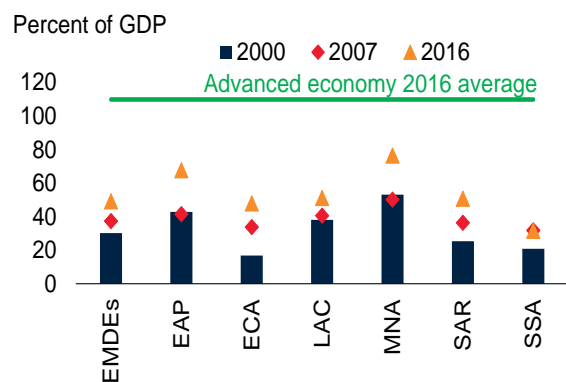
C. Net capital inflows



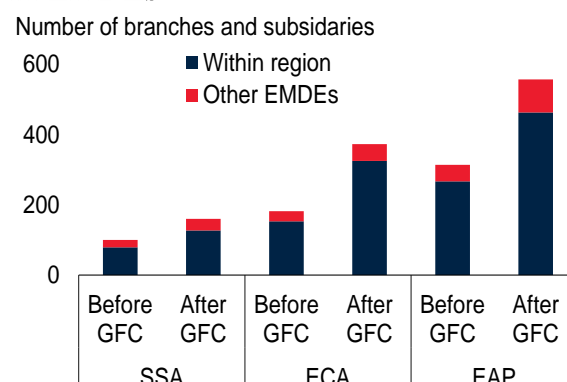
D. Banks' profitability



E. Bank assets



F. EMDE-based banks operating in EMDEs



Source: Institute of International Finance, International Monetary Fund, World Bank.

Note: EMDEs = Emerging market and developing economies, EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa, and GFC = global financial crisis, 2008/09.

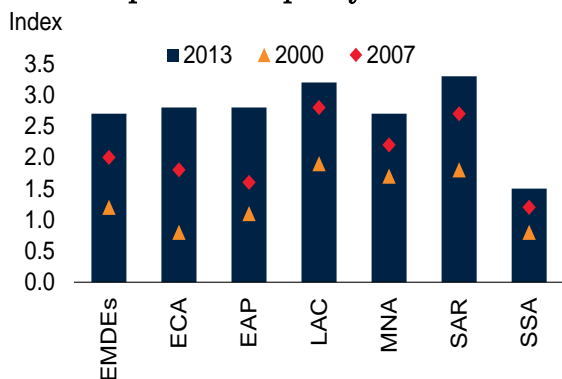
A. Credit booms (crunches) are episodes when private credit to GDP ratio exceeds (falls below) its long-term trend by 1.65 times one standard deviation of a cyclical component obtained with the HP filter. Sample includes about 140 EMDEs with private sector credit data. Weights are based on nominal GDP measured in U.S. dollars at market exchange rates.

B. Unweighted averages. Based on the private credit by deposit money banks and other financial institutions to GDP (%) from the World Bank's Financial Development and Structure Dataset.

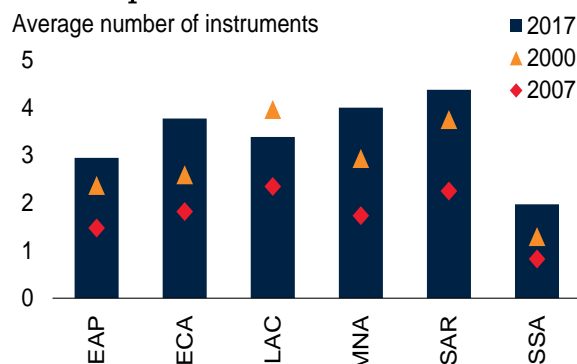
- C. FX volatility is the JPMorgan VXY Global index, a turnover-weighted index of the implied volatility of three-month at-the-money options on 23 U.S. dollar currency pairs.
- D. Data from the Financial Soundness Indicators Dataset (IMF).
- E. Unweighted averages. Based on the deposit money bank assets to GDP (%) from the World Bank's Financial Development and Structure Dataset.
- F. Based on annual bank statements. "Before GFC" indicates 2008 or 2009 depending on data availability; "After GFC" indicates 2018 or latest data available.

Figure 5. Macroprudential policy

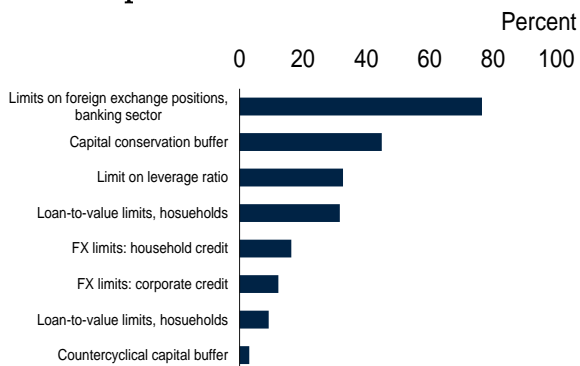
A. Macroprudential policy in EMDEs



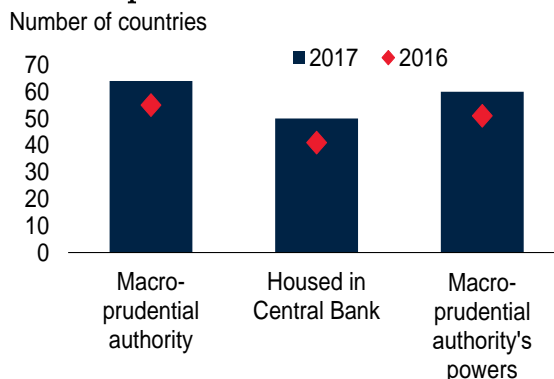
B. Macroprudential tools



C. Macroprudential tools



D. Macroprudential institutions in EMDEs



Source: Cerutti, Claessens, and Laeven (2017); IMF Annual Macroprudential Policy Survey; World Bank.

Note: EMDEs = Emerging market and developing economies, EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, and SSA = Sub-Saharan Africa.

A. Sample includes 123 EMDEs. Unweighted average of the Macroprudential Policy Index of Cerutti, Claessens, and Laeven (2017). The Macroprudential Index measures the tools used by authorities and is based on a simple sum of 12 tools, including the countercyclical capital buffer and loan-to-value ratios.

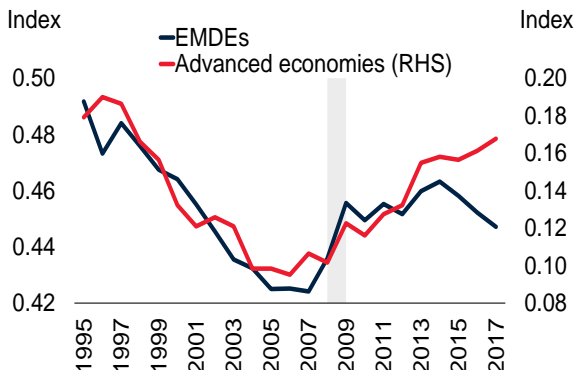
B. Macroprudential instruments include counter-cyclical capital buffer, limits on leverage ratios and credit growth, capital conservation buffer, etc.

C. Based on data for 2017 in 98 EMDEs. Broad-based tools include the counter-cyclical capital buffer, limits on leverage ratios and credit growth, capital conservation buffer, etc.

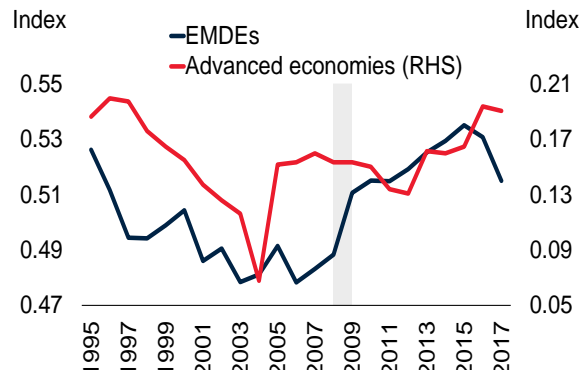
D. Number of EMDEs that have an established macroprudential authority, that is housed in the central bank and has legislative powers to implement macroprudential policy.

Figure 6. Macroprudential policy

A. Capital inflow restrictions



B. Capital outflow restrictions

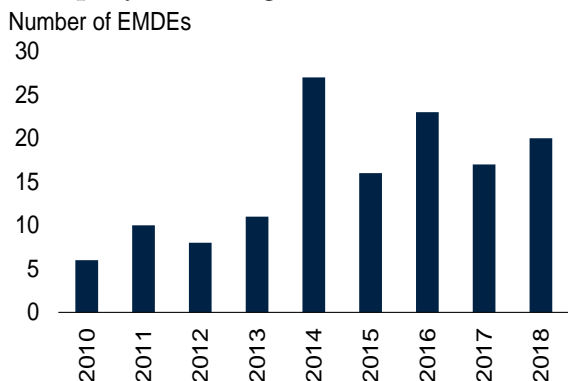


Source: Fernandez et al. (2016)

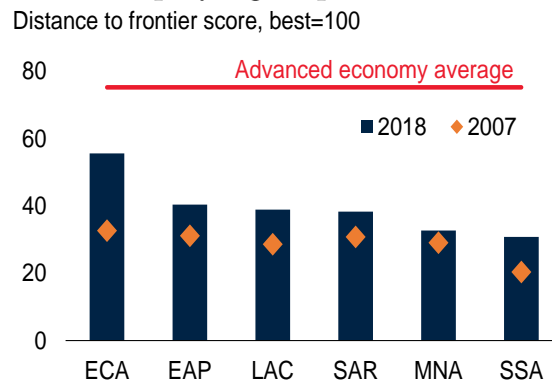
A.B. Based on a database reporting the presence (or absence) of de jure capital controls for 100 countries on an annual basis differentiating between controls on inflows and outflows. This is done for controls on ten categories of assets, including money market instruments, bonds, equities, collective investment securities, financial credits, commercial credits, derivatives, guarantees, real estate, and direct investment.

Figure 7. Policies to strengthen corporate balance sheets

A. Equity market governance reforms



B. Bankruptcy rights protection



Source: World Bank Doing Business

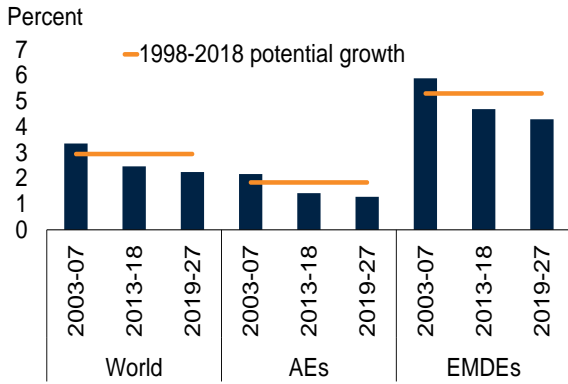
Note: EMDEs = Emerging market and developing economies, EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, and SSA = Sub-Saharan Africa.

A. Number of EMDEs with an improvement in the score for minority investor rights protection from the previous year.

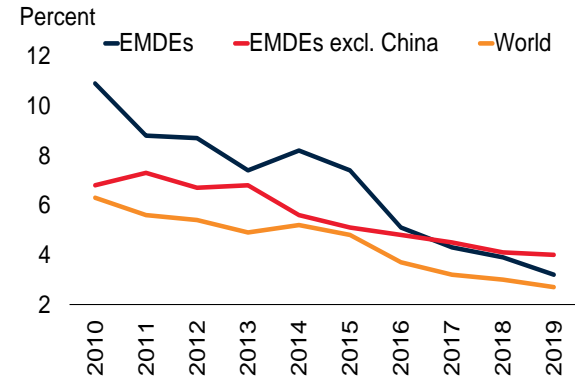
B. Distance to frontier score for strength of insolvency resolution. A higher index indicates reforms that improve the business climate. EAP, ECA, LAC, MNA, SAR, and SSA include 19, 20, 30, 18, 8, and 46 economies, respectively. Advanced economies include 34 economies. Based on World Bank Doing Business report.

Figure 8. Policies to strengthen corporate balance sheets

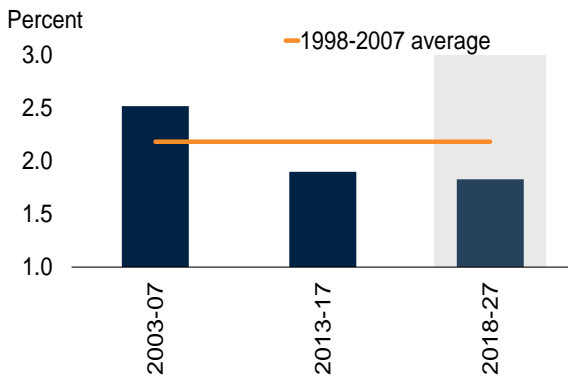
A. Potential output growth



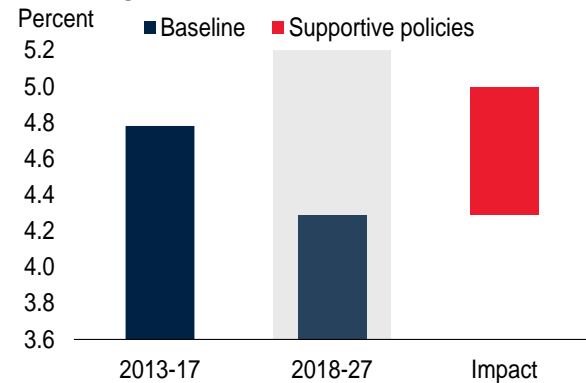
B. Long-term growth forecasts for fixed investment



C. Total factor productivity growth in EMDEs



D. Impact of supportive policies on potential output growth in EMDEs

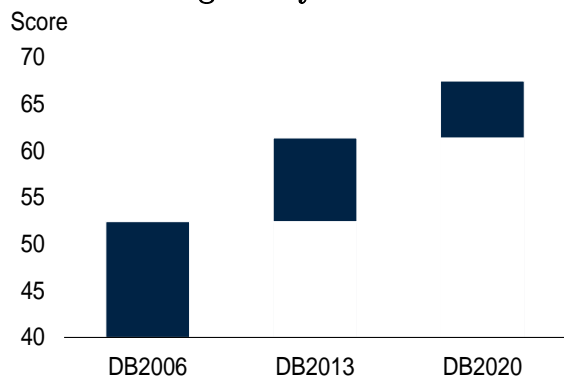


Source: Consensus Economics, Penn World Tables, UN Population Prospects, World Bank.

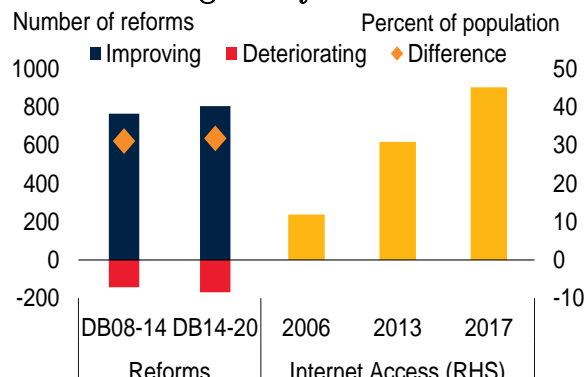
- A. Period average of annual GDP-weighted averages. Estimates based on production function approach. World sample includes 50 EMDEs and 30 advanced economies. AE = Advanced economies,
- B. 10-year-ahead forecasts surveyed in indicated year. Aggregate growth rates are calculated using constant 2010 U.S. dollar investment weights. Sample includes 23 advanced economies and 20 EMDEs.
- C. Shaded area indicates forecasts. GDP-weighted averages of production function-based potential TFP growth estimates. Sample includes 50 EMDEs.
- D. Shaded area indicates forecasts. GDP-weighted averages of production function-based potential growth estimates. Sample includes EMDEs. Supportive policies assume that each country matches over the period 2018-27 its best historical ten-year improvement in educational attainment, schooling, life expectancy, female labor force participation, and investment.

Figure 9. Business and financial sector reforms

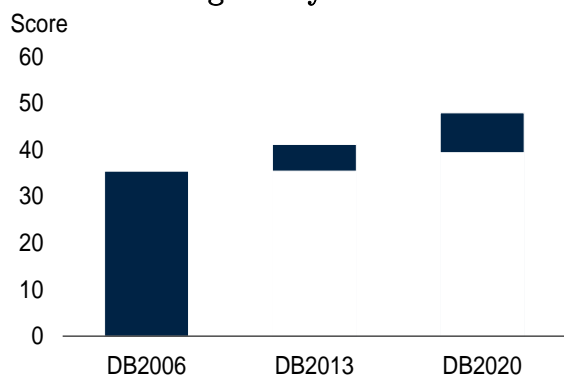
A. Business regulatory environment



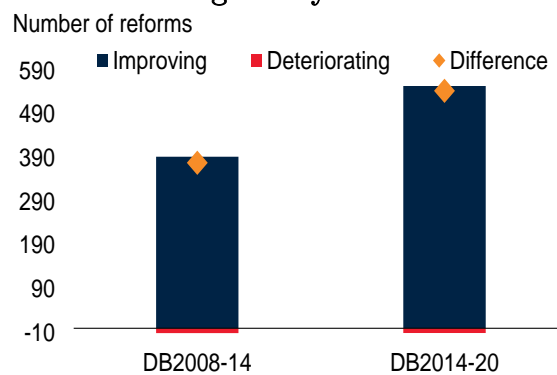
B. Business regulatory environment



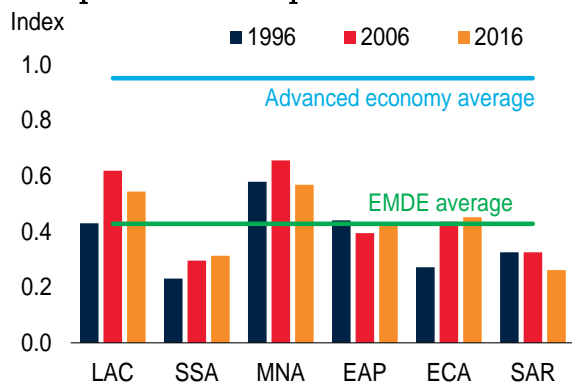
C. Financial regulatory environment



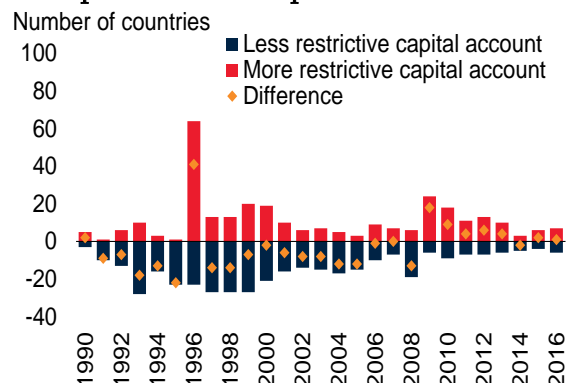
D. Financial regulatory environment



E. Capital account openness



F. Capital account openness



Source: Chinn and Ito (2006), World Bank.

Note: EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, and SSA = Sub-Saharan Africa.

A.C. The score is measured on a scale from 0 (weakest) to 100 (best/the frontier). “DB” before the year indicates the related Doing Business publication. Average performance of four indicators (A: Starting a Business, Paying Taxes, Registering Property, and Dealing with Construction Permits; C: Access to Credit, Protecting Minority Investors, Enforcing Contracts, and Resolving Insolvencies). Indicators are spliced backwards where methodological changes affected the level.

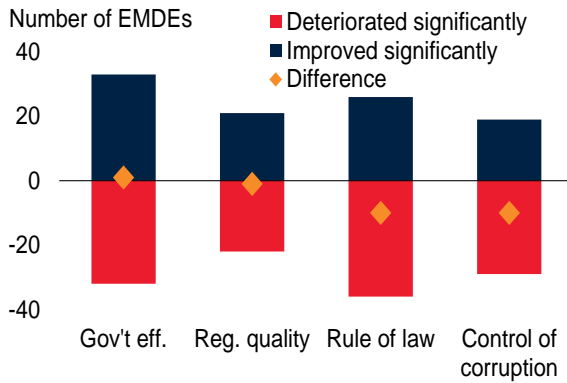
B.D. The number of reforms is calculated using the business reforms by year and by country as listed in the World Bank’s Doing Business reports. These are codified from the text list of business reforms as reported by the Doing Business survey.

B. Business regulatory reforms include those business reforms categorized under Starting a Business, Paying Taxes, Registering Property and Dealing with Construction Permits. Unweighted averages for Internet access.

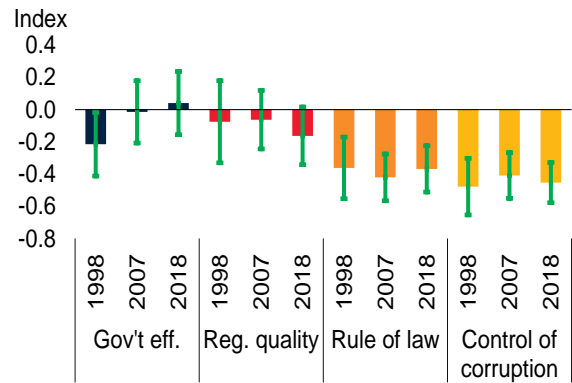
- D. Financial regulatory reforms include those business reforms categorized under Access to Credit, Minority Investor Protection, Enforcing Contracts and Resolving Insolvencies.
- E. Unweighted regional averages of the Chinn-Ito index (KAOPEN) measuring a country's degree of capital account openness. 1 represents fully open capital account. AE and EMDE averages are for 2016.
- F. Indicator variable taking on value 1 when a country experiences a year-on-year decrease in the openness index and -1 when a country experiences a year-on-year increase. Based on 145 EMDEs.

Figure 10. Governance

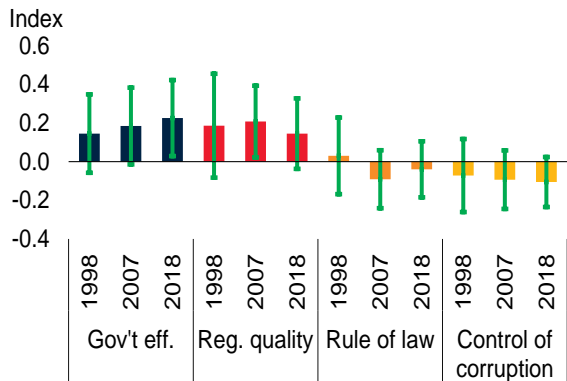
A. Change in governance indicators



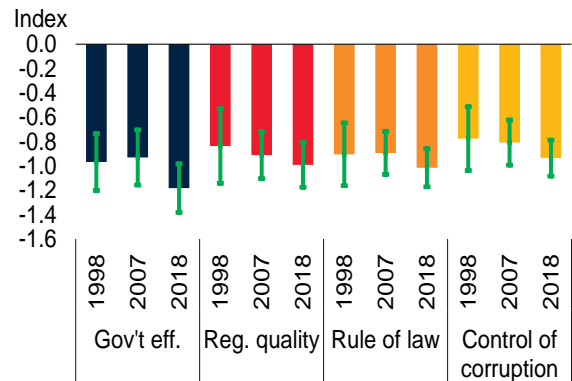
B. Seven largest EMDEs



C. 22 largest EMDEs



D. Low-income countries



Source: World Bank Worldwide Governance Indicators.

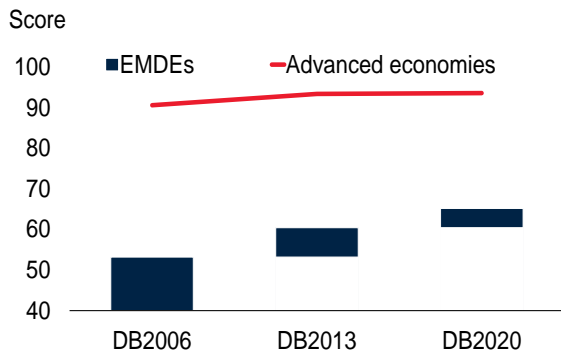
Note: Based on indicators from the Worldwide Governance Indicators measuring aspects of governance. WGI defines governance as “the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them.” The four indicators are government effectiveness, regulatory quality, rule of law, and control of corruption.

A. A country significantly improved its rating if it saw a two standard deviation improvement in one of four indicators between 1996 and 2018. The standard errors are the average between two observations.

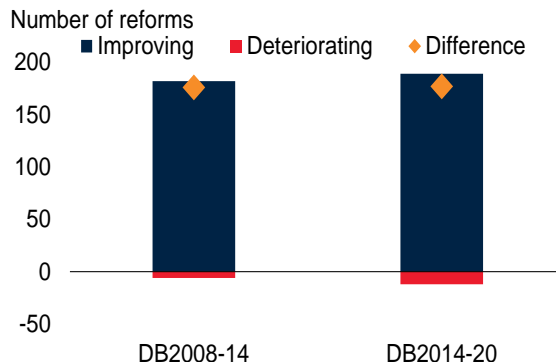
B.-D. Annual observations are unweighted averages. EM7 are the seven largest EMDEs including Brazil, China, Mexico, India, Indonesia, Turkey, and Russia. EM22 are the 22 largest EMDEs. LICs are Low-income Countries and includes data for 26 economies. Error bands are 1 standard deviation.

Figure 11. Trade and subsidies reforms

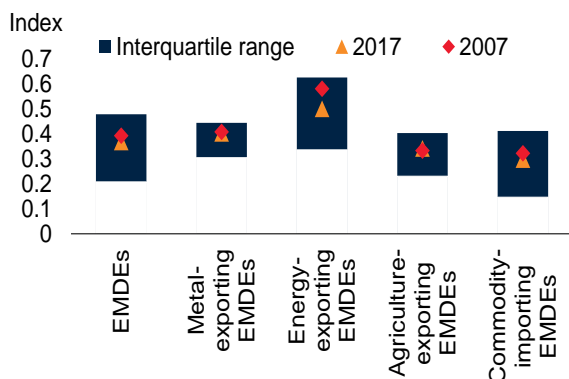
A. Trade environment



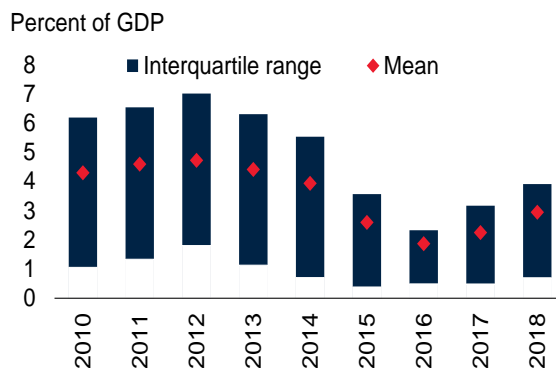
B. Trade reforms



C. Export concentration



D. Energy subsidies



Source: International Energy Agency, UNCTAD, World Bank.

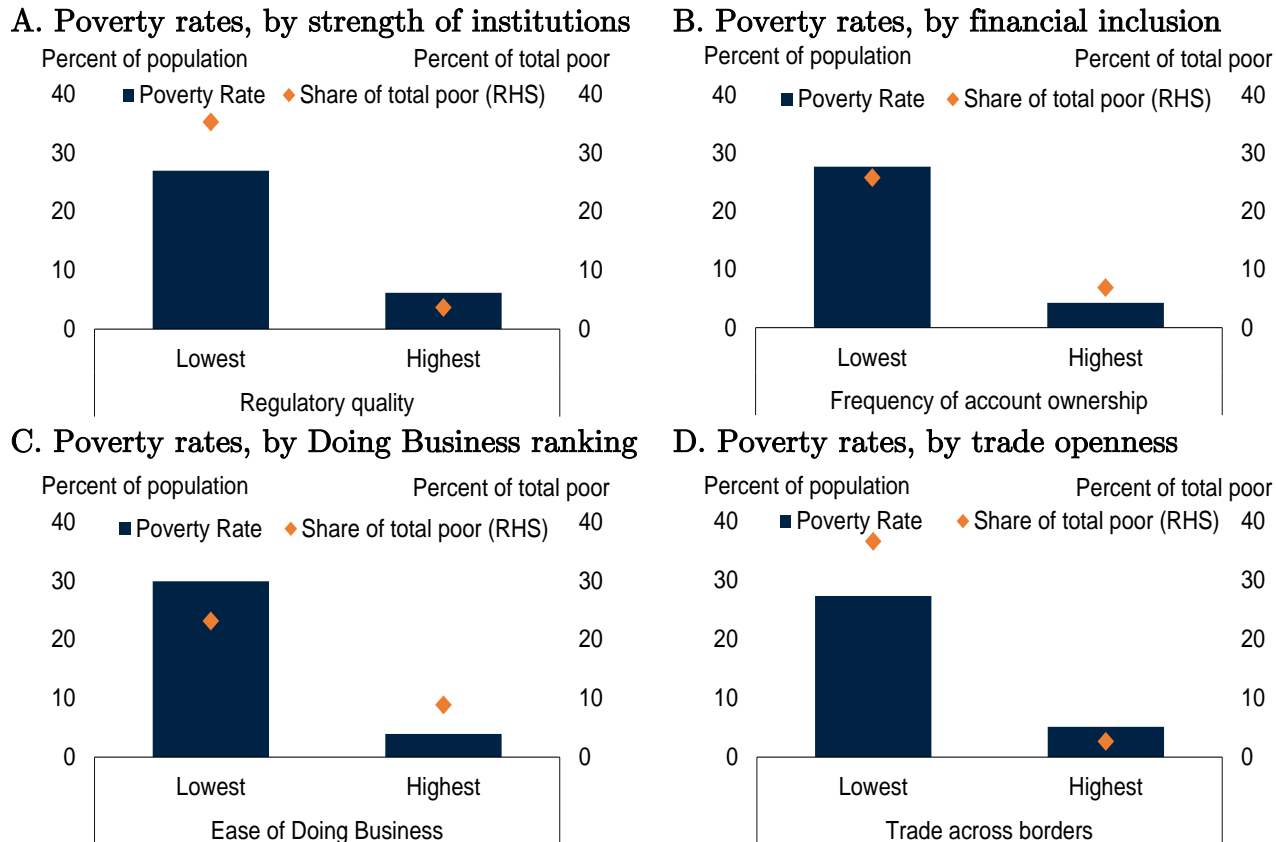
A. Scores are unweighted averages of 39 advanced economies and 148 EMDEs. The Trade Across Borders indicator is spliced backwards where methodological changes affected the level. An economy's score is indicated on a scale from 0 to 100, where 0 represents the lowest performance and 100 the frontier, which is constructed from the best performances across all economies and across time. "DB" before the year indicates the related Doing Business publication.

B. Trade reforms include those business reforms categorized under trade across borders in the Doing Business survey. The number of reforms is calculated using the business reforms by year and by country as listed in the World Bank's Doing Business publications. These are codified from the text list of business reforms as reported by the Doing Business survey.

C. Export concentration measured as the Herfindahl-Hirschmann Index (Product HHI). Observations for 2007 and 2017 are unweighted averages. EMDEs are based on data for 146 economies: 20 metal-exporting economies, 35 energy-exporting economies, 35 agriculture-exporting EMDEs, and 58 commodity-importing economies. Values closer to 1 indicate more concentration.

D. Based on data for 40 EMDEs.

Figure 12. Poverty and structural reforms



Source: World Bank

Note: The poverty rate is an unweighted average in each group. Share of population is the cumulative total. Based on poverty data for 2015.

A “Highest” indicates quartile of EMDEs with the strongest regulatory quality (based on data for year with latest poverty data). “Lowest” indicates quartile of EMDEs with the weakest regulatory quality. The back data for regulatory quality has been taken from the Worldwide Governance Indicators. The data is for 2017.

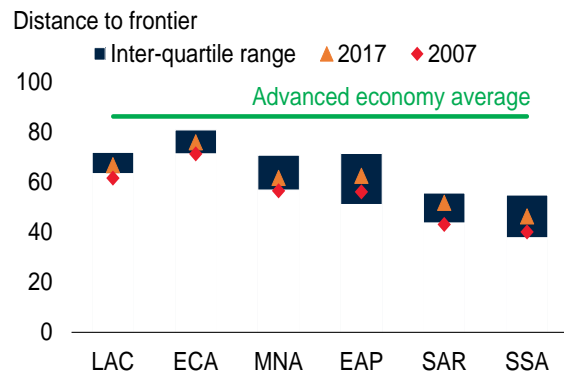
B. “Highest” indicates quartile of EMDEs with the highest share of account ownership at a financial institution (greater than 59 percent) in 2017. “Lowest” indicates quartile of EMDEs with the lowest shares (less than 21 percent). India is excluded from the “Best” category.

C. “Highest” indicates quartile of EMDEs with the highest 2019 Ease of Doing Business score (above 67.5). “Lowest” indicates quartile of EMDEs with the lowest 2019 Ease of Doing Business score (below 51.6).

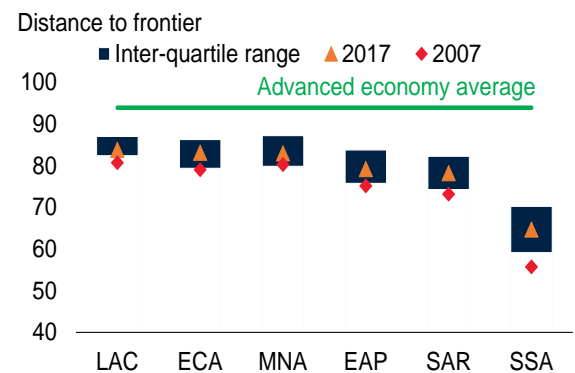
D. “Highest” indicates quartile of EMDEs with the highest 2019 Trade Across Borders score (above 78.1) in the Ease of Doing Business survey. “Lowest” indicates quartile of EMDEs with the lowest 2019 Trade Across Borders score (below 57.1).

Figure 13. Human capital and infrastructure

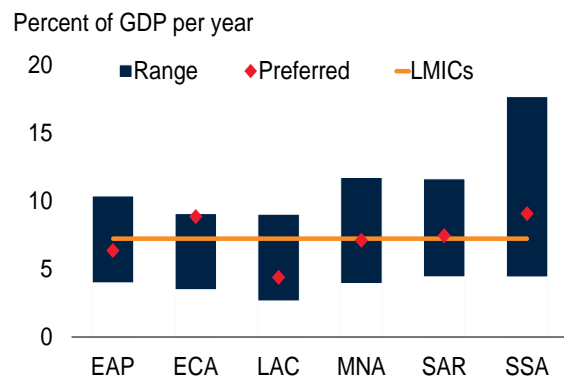
A. Years of schooling



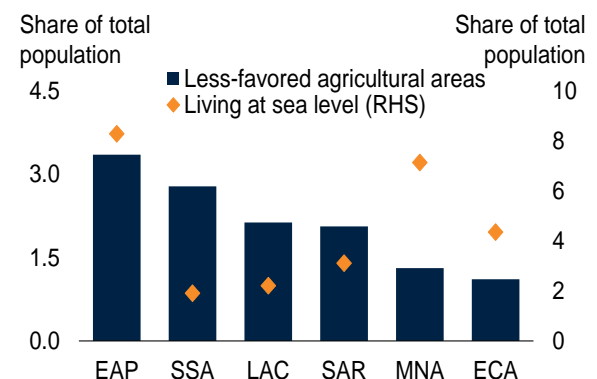
B. Life expectancy



C. Infrastructure gaps



D. Climate risk



Source: Barbier and Hochard (2018), Rozenberg and Fay (2019), United Nations Development Program.

Note: EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa, and LMICs = Low- and middle-income countries.

A. Education index from the Human Development Index. 2007 and 2017 are unweighted means in EMDEs. Inter-quartile range is for 2017 observations.

B. Life expectancy index from the Human Development Index. 2007 and 2017 are unweighted means in EMDEs. Inter-quartile range is for 2017 observations.

C. Investment needs based on goals as set out in Rozenberg and Fay (2019), including both new investment and maintenance of existing capital stock. Infrastructure investment includes investment in electricity, transport, water supply and sanitation, flood protection, and irrigation. “Preferred” is defined as the infrastructure “pathway [that] limits stranded assets, has a relatively high per capita consumption due to electric mobility, and invests mostly in renewable energy and storage.”

D. Less-favored agricultural areas are agricultural lands constrained by difficult terrain, poor soil quality, limited rainfall, or with limited access to markets. “Sea level” identifies areas where elevation is below 5 meters. Data are from 2010.

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