# CHAPTER 6

## Policies: Turning Mistakes into Experience

*In the current global wave of debt, emerging market and developing economies have already accumulated a record amount of debt. This debt buildup has been accompanied by mounting vulnerabilities. For now, prospects for continued low global interest rates appear to mitigate some of the concerns about these vulnerabilities. Yet the study of global and national debt episodes offers several cautionary lessons. For a country's debt to be benign, it needs to be well-spent to finance output-enhancing purposes and its composition needs to be managed to help ensure resilience in the face of economic and financial disruptions. Once debt distress materializes, prompt resolution is critical to avoid a prolonged period of weak activity. These lessons point to several policy priorities: sound and transparent debt management; robust macroeconomic policy frameworks and financial regulation and supervision that support sustainable debt accumulation in public and private sectors; and business environments and institutions conducive to strong corporate governance.*

## Introduction

Another wave of debt accumulation has been underway in emerging market and developing economies (EMDEs) since 2010. As documented in Chapter 4, this wave of global debt, the fourth during the past 50 years, has already been larger, faster, and more broad based than the three previous episodes. The preceding three global waves ended with financial crises in many EMDEs. This raises the question of whether the current wave will end in a similar way.

Several factors are likely to shape the trajectory of the current wave of debt, including prospects for global interest rates and economic growth. Although EMDEs are not in full control of some of these factors, they would benefit from utilizing the lessons from their own experiences with debt accumulation to avoid the mistakes of the past.

Against this backdrop, this chapter addresses the following questions:

- What forces will shape the evolution of the current debt wave?
- What are the lessons to be drawn from previous episodes of debt accumulation?

- What policies can lower the likelihood and cost of future debt crises?

In the course of answering these questions, the chapter makes three contributions to an already-rich policy debate.

- *Prospects for the current wave.* The chapter discusses the likely evolution of the current wave of debt accumulation from the perspective of EMDEs. It also considers the recent debate about the merits of debt accumulation in the current era of low interest rates.[1] Previous work has mostly focused on the consequences of debt accumulation for advanced economies, as reviewed in Chapter 2.

- *Lessons from the global and national episodes of debt accumulation.* The chapter offers a compilation of salient lessons about the consequences of debt buildup based on the analysis of the global and national episodes of debt accumulation presented in the earlier chapters.

- *Policy prescriptions.* The chapter offers a comprehensive set of policy prescriptions that can help lower the likelihood of debt-related financial crises and mitigate their effects when they materialize.

The chapter presents the following findings.

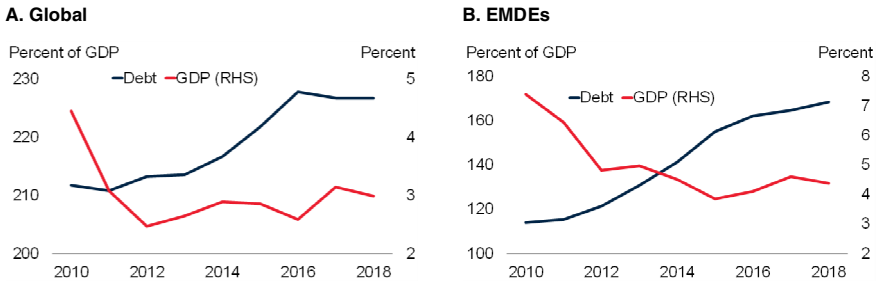
**Striking the right balance.** In the current debt wave, many EMDEs have both accumulated a record amount of debt and experienced a persistent growth slowdown (Figure 6.1). Some of these economies now also share a wide range of external and domestic vulnerabilities that have historically been associated with a higher likelihood of financial crises. In addition, EMDEs are confronted by a wide range of risks in an increasingly fragile global context. As a result, despite currently record-low global interest rates, stronger policy frameworks in some EMDEs, and a strengthened international safety net, the latest wave of debt accumulation could follow the historical pattern and result in financial crises. The study of past waves shows the critical importance of policy choices in reducing the likelihood of the current debt wave ending in crisis and, if crises were to take place, mitigating their impact.

**Lessons from experience.** Debt accumulation is unlikely to be benign unless it is well-spent to finance truly output-enhancing purposes and it is resilient

[1] Blanchard (2019); Blanchard and Summers (2019); Furman and Summers (2019); and Krugman (2019) argue for increased borrowing, whereas Auerbach, Gale, and Krupkin (2019); CRFB (2019); Mazza (2019); and Riedl (2019) caution against debt accumulation.

## FIGURE 6.1 Debt accumulation and growth in the current wave

*Despite a rapid debt buildup since 2010, global growth has been anemic and EMDE growth has slowed.*




Source: World Bank.
Note: Total debt (in percent of GDP) and real GDP growth (GDP-weighted at 2010 prices and exchange rates).
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(in terms of maturity, currency and creditor composition) to economic and financial market disruptions. This requires not only prudent government debt management but also robust financial system regulation and supervision and sound corporate governance. It is critical to respond effectively to external shocks especially when there are domestic vulnerabilities. Private debt can quickly turn into public debt during periods of financial stress. Once debt distress materializes, prompt resolution is critical to avoid a prolonged period of weak economic activity.

**Policy options.** Although specific policy priorities depend on country circumstances, there are four broad strands of policy options that can help contain the risks associated with debt accumulation. *First*, governments need to put in place mechanisms and institutions that help them strike the proper balance between the benefits and costs of additional debt. These include sound debt management and high debt transparency. International creditors can support sustainable borrowing by implementing prudent lending standards (including in terms of transparency), helping build capacity, appropriately distributing risk, and ensuring the productive use of debt. *Second*, the benefits of stability-oriented and resilient fiscal and monetary policy frameworks and exchange rate regimes cannot be overstated. *Third,* financial sector policies need to be designed to foster responsible private sector borrowing. This includes robust supervisory and regulatory systems as well as corporate and bank bankruptcy frameworks that allow prompt debt resolution to limit the damage from debt distress. *Fourth,* it is essential to have strong corporate governance practices and effective bankruptcy and insolvency regimes.

The remainder of this chapter is organized as follows. The next section discusses the factors that may determine the likely evolution of the current wave of debt accumulation in light of the challenges confronting EMDEs. The subsequent section draws lessons from the analysis of global and national waves of debt accumulation. This yields the policy options discussed in the following section. The chapter concludes with a summary and suggests topics for future research.

## The current wave: What next?

The recent buildup of debt has been both large at the country level and broad based across countries. Although current levels of government or private debt are, on average, still below or near those in the median rapid debt accumulation episode, increases in government or private debt since 2010 have already exceeded those of the typical historical episode in about one-quarter of EMDEs (Figure 6.2). In some EMDEs, private debt has risen more than twice as much (30 percentage points of GDP) as in the typical previous episode. In several of these economies, elevated private debt has been accompanied by other vulnerabilities that have been identified as correlates of the probability of financial crisis, including elevated foreign currency-denominated debt, external debt, or short-term external debt.

The current wave of debt, not yet a decade old, has already included the euro area debt crisis and several EMDE currency crises. Capital flows to EMDEs have been volatile since 2010, with episodes of substantial outflows in 2013, 2015, and 2018. During these episodes, many EMDEs experienced large jumps in bond spreads and significant currency depreciation against the U.S. dollar. In 2018, the risks associated with elevated debt were illustrated by the experiences of Argentina and Turkey, which suffered sharp increases in borrowing costs and slowdowns in growth.

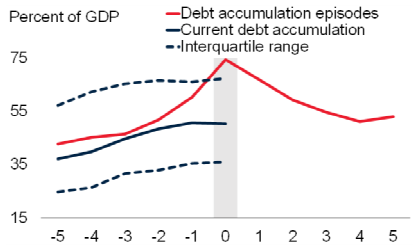
Although EMDEs have gone through periods of volatility during the current wave of debt, they have not experienced widespread financial crises. The key question is whether the current wave of debt accumulation will at some point end in financial crises in many EMDEs, as all its predecessors eventually did, or whether such crises will be avoided perhaps because EMDEs have learned and applied their lessons from the past.

A wide range of factors will determine the evolution of the current wave and its consequences for EMDEs. The remainder of this sub-section discusses the implications of low interest rates and weak growth prospects for debt accumulation in EMDEs. It then examines how vulnerabilities have mounted in these economies during the current debt wave. Next, it discusses

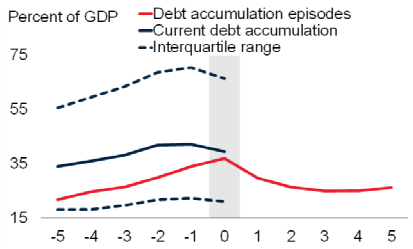
## FIGURE 6.2 Current EMDE debt accumulation in historical context

*Although current levels of EMDE government or private debt are, on average, still below or near those in the median rapid debt accumulation episode, increases in government or private debt since 2010 have already exceeded those of the typical historical episode in about one-quarter of EMDEs.*

**A. Current levels of government debt versus previous rapid debt accumulation episodes**




**B. Current levels of private debt versus previous rapid debt accumulation episodes**




Source: World Bank.
Note: Median levels of debt during debt accumulation episodes, as defined in Annex 1. t=0 indicates the peak of debt accumulation episodes that were completed before 2018. For current debt accumulation, t=0 indicates 2018.
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factors that could lead to a sudden increase in borrowing cost for EMDEs. It concludes with a discussion of improvements in EMDE policy frameworks that could mitigate the risks associated with rapid debt accumulation.

### Prolonged period of low interest rates

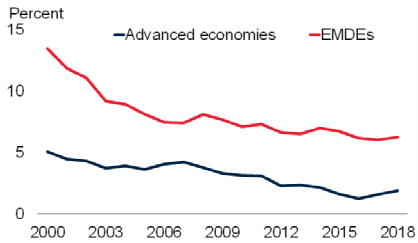
Low borrowing costs incentivize countries to accumulate debt. For instance, an easing of U.S. financial conditions, a bellwether for global financial conditions, has typically accompanied an increase in capital flows to EMDEs (Feyen et al. 2015). But increased borrowing can also raise vulnerability to a future rebound in interest rates. Historically, rising global interest rates have been a key trigger for financial crises, as documented in previous chapters. EMDE borrowing costs tend to rise sharply during these episodes, and higher debt servicing costs can cause debt dynamics to deteriorate rapidly.

The current environment of low interest rates and persistently low inflation in advanced economies alleviates some risks associated with the latest wave of debt. Policy interest rates in many advanced economies are near historical lows after major central banks recently reverted to an easing stance after winding down tightening cycles in 2018. Moreover, monetary policy in advanced economies is likely to be accommodative for the foreseeable future as growth prospects and inflation expectations remain subdued (Figure 6.3). This is reflected in low policy interest rate expectations in 2020-22. In

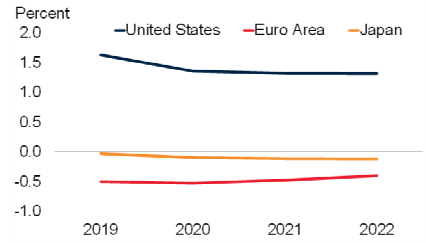
## FIGURE 6.3 Interest rates and inflation

*The current environment of low interest rates, and expectations that interest rates will remain low mitigate immediate concerns about rapid debt accumulation.*

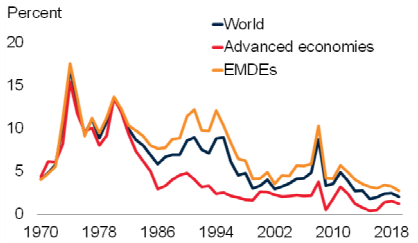
**A. Long-term interest rates**



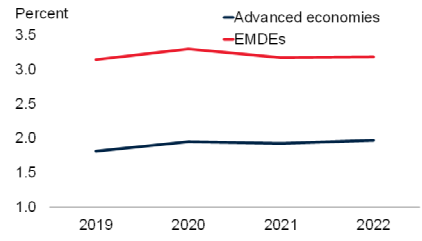

**B. Policy rate expectations in major advanced economies**




**C. Headline inflation**




**D. Long-term inflation expectations**




Source: Bloomberg; Consensus Economics; Ha, Kose, and Ohnsorge (2019); World Bank.
A. Average long-term nominal government bond yields (with maturity of 10 years) computed with current U.S. dollar GDP as a weight, based on up to 36 advanced economies and 84 EMDEs.
B. Market-implied policy rates. Expected rates based on overnight index swap (OIS) forward rates.
C. Median annual average inflation.
D. Long-term consensus inflation expectations.
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EMDEs, many of which face slowing demand growth, subdued prices for their commodity exports, and disinflationary pressures, policymakers may also cut policy rates further in the near term.

Structural headwinds also seem likely to keep real interest rates low in the longer term. Estimates of the neutral interest rate, the rate consistent with stable inflation and an economy operating at full capacity, have declined markedly across advanced economies over the past decades (Holston, Laubach, and Williams 2017). The structural factors responsible for this decline are likely to persist. These include slowing labor force growth, a product of population aging and declining birth rates; slowing productivity growth since the most recent peak in the late 1990s; and muted prospects for a productivity revival (Eggertsson, Mehrotra, and Robbins 2019; Fernald

2016; Gordon 2012). An increased demand for safe assets, driven in part by the quantitative easing by central banks in major advanced economies and decreased appetite for capital investments also seem likely to continue weighing on interest rates (Del Negro et al. 2017; Rachel and Summers 2019; Williams 2018).

Low global interest rates have encouraged an aggressive search for yield, bouts of large capital flows to EMDEs, and a sharp narrowing of bond spreads. Around one-quarter of sovereign and corporate bonds issued in advanced economies—and some bonds issued by Poland and Hungary—currently trade at negative yields.[2] Negative yields on advanced economy debt already helped compress debt service burdens for EMDE borrowers and nudged debt toward a declining path in the future.[3] Thus, interest payments on EMDE government debt fell from an average of 2.6 percent of GDP in 2000-07, to 1.6 percent of GDP in 2010-18, despite the increase in debt over that period. At current long-term interest rates and nominal GDP growth, debt-to-GDP ratios appear to be on stable or falling trajectory in almost half of EMDEs (Figure 6.4).

The debate on the implications of low interest rates for additional debt accumulation has focused on advanced economies, as discussed in Chapter 2.[4] Some have argued that advanced economies, especially those that issue reserve currencies, should take advantage of low interest rates to borrow more to finance priority expenditures. Others have cautioned that high debt weighs on long-term growth, by increasing the risk of crises, limiting the scope for countercyclical fiscal stimulus, and dampening private investment.

For EMDEs, there are additional concerns about debt sustainability even during times of low global interest rates. First, financing costs may be low

[2] In the two EMDEs with recent negative yielding sovereign bond issuances (Hungary and Poland), government, household and corporate debt have risen only moderately (by at most 7 percentage points of GDP) over the past decade. Spreads on emerging market debt both for corporate and sovereign bonds reached all-time lows in 2017, boosting borrowing. Average spreads on corporate bonds have fallen from pre-crisis levels for all EMDEs, including LICs, as well as for lower rated corporate bonds.

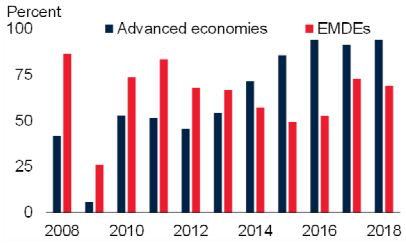
[3] Debt is defined to be on a declining path if the primary balance is larger than the debt-stabilizing primary balance at current growth and interest rates (Kose et al. 2017).

[4] Blanchard (2019); Blanchard and Summers (2019); Blanchard and Tashiro (2019); Blanchard and Ubide (2019); Eichengreen et al. (2019); Furman and Summers (2019); Krugman (2019); and Rachel and Summers (2019) discuss reasons for additional government spending financed by borrowing in advanced economies, and the United States in particular, whereas Alcidi and Gros (2019); Auerbach, Gale, and Krupkin (2019); CRFB (2019); Eichengreen (2019); Mazza (2019); Riedl (2019); Rogoff (2019); and Wyplosz (2019) caution against adding to debt, citing in particular the example of the United States.

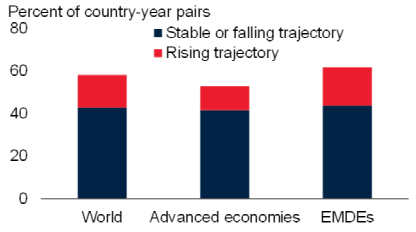
## FIGURE 6.4 Debt trajectories

*Growth still exceeds long-term interest rates in more than half of EMDEs. Historically, growth has exceeded long-term interest rates most of the time, but in many cases borrowing was sufficiently large to set debt on a rising trajectory nevertheless.*

**A. Share of economies with interest rates below growth**




**B. Share of economies with interest rates below growth, 1990-2018**




Source: Haver Analytics; Kose et al. (2017); World Bank.

A. Share of country-year pairs in each group when long-term nominal interest rates (represented by 10-year local currency government bond yields) are below nominal GDP growth in up to 34 advanced economies and 83 EMDEs.

B. Share of countries where long-term nominal interest rates (represented by 10-year local currency government bond yields) are below nominal GDP growth. Sample of up to 36 advanced economies and 84 EMDEs over 1990-2018. The remainder to 100 is the share of countries in which long-term nominal interest rates exceeded nominal GDP growth.

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relative to GDP growth, but they may not be low enough to offset the sheer magnitude of borrowing. Second, both interest rates and growth rates are highly volatile in EMDEs.

- *Interest rate-growth differential versus magnitude of borrowing.* During 1990-2018, the interest rate-growth differential was negative in more than half (58 percent) of country-year pairs.[5] However, even in about one-quarter of these instances, the differential was not large enough to offset the increase in debt from primary balances and maintain the government debt ratio on a stable or declining path. As a result, during 1990-2018, primary balances, long-term interest rates, and nominal GDP growth were such that debt was on a steadily rising trajectory in 43 percent of country-year pairs among 34 advanced economies and 50 percent of country-year pairs among 83 EMDEs.

- *Stability of interest rate-growth differential.* When borrowing costs rise, they rise more steeply in the average EMDE than in the average

[5] Over the period 1990-2018, 53 percent of country-year pairs among 34 advanced economies and 62 percent of country-year pairs among 83 EMDEs had interest rates lower than growth. Over a longer, 200-year, horizon for a smaller sample of 55 mostly advanced economies, average interest rates have also been lower than average growth rates more often than not, but marginal borrowing costs rose steeply during crises (Mauro and Zhou 2019).

advanced economy; when growth declines, it declines more sharply in the average EMDE than in the average advanced economy. On average in those months during 1990-2018 when long-term interest rates increased, they rose by 0.3 percentage point in the average EMDEs, two-thirds more than the average advanced-economy. Similarly, when real GDP growth slowed from one year to the next during 1990-2018, it slowed by 3.2 percentage points in the average EMDE, compared with 2.5 percentage points in the average advanced economy.[6]

For these two reasons, in particular, low or falling global interest rates provide no sure protection against financial crises for EMDEs. Indeed, half of all crises during episodes of rapid debt accumulation occurred in years when U.S. long-term (10-year) interest rates were falling and one-eighth occurred in years when U.S. long-term real interest rates were below 1 percent (as they have been since 2016).

## Weak growth prospects

In addition to interest rates and fiscal positions, economic growth is another major determinant of debt sustainability. An important reason for rapid debt accumulation has been the sharp growth slowdown over the course of the fourth wave of debt. EMDE growth slowed after 2010 to a trough of 4.1 percent in 2016 before a modest recovery took hold (Kose and Ohnsorge 2019). The growth slowdown during 2011-16 was broad-based (affecting more than three-fifths of EMDEs) and protracted. Amid this broad-based growth weakness, EMDEs have struggled to fully unwind fiscal and monetary stimulus implemented during the global financial crisis. This eroded EMDE fiscal positions and resulted in additional borrowing to maintain current spending levels.

During the current wave of debt, potential growth in EMDEs has also declined, because of slower productivity growth as well as demographic change (Figure 6.5; Ruch 2019). Productivity growth has declined as investment growth has slowed, gains from factor reallocation have faded (including the migration of labor from agriculture to manufacturing and services), and growth in global value chains has moderated. Slower investment growth has tempered capital accumulation. Demographic trends have also become less favorable to growth, since the share of working age populations in EMDEs peaked around 2010.

[6] When nominal GDP growth slowed in EMDEs, it slowed by more than 6 percentage points on average during 1990-2018, compared with less than 3 percentage points in advanced economies.

Current trends in these fundamental drivers of potential growth suggest that it is likely to slow further over the next decade, to a pace about 0.5 percentage points lower than in 2013-17 (World Bank 2018a). For commodity-exporting EMDEs—almost two-thirds of EMDEs—growth prospects will be further dimmed by the expected slowdown in commodity demand growth as major commodity-consuming emerging markets slow and mature (World Bank 2018a). The past decade has been marked by repeated growth disappointments. If these persist into the next decade, they could lead to growing concerns about debt sustainability, even in a world of low interest rates.

Moreover, during the current wave of debt, there have been signs that government debt has been used for "less efficient spending" rather than on productive investment in physical or human capital that could boost potential growth in EMDEs. Public investment in EMDEs fell from an average of 2.1 percent of GDP in 2002-09 to 0.9 percent of GDP in 2010-18 (IMF 2019c). Among commodity exporters, declining tax revenues following the commodity price plunge of 2014-16 widened fiscal deficits and raised debt despite lower investment (World Bank 2018a). Meanwhile, house prices have risen sharply in EMDEs, suggesting that some of the rise in private debt has financed residential construction, which does not yield export earnings.

## Mounting vulnerabilities

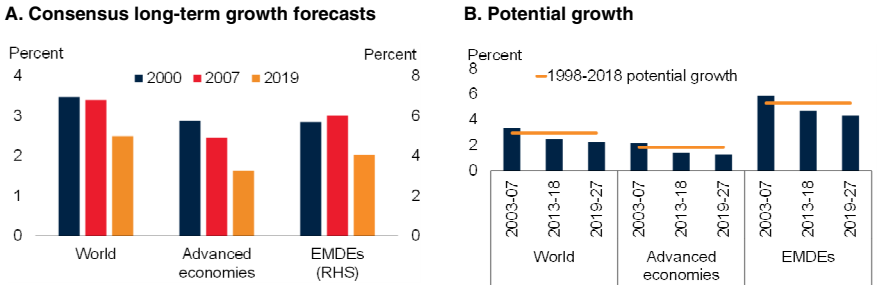
The previous three debt waves highlighted the risks associated with a sharp buildup of debt. Financial crises typically occurred when external shocks hit EMDEs with domestic vulnerabilities. As discussed below, many EMDEs have improved their monetary and fiscal policy frameworks over the past two decades. However, elevated debt levels during the current wave of debt accumulation have been accompanied by rising fiscal, corporate, and external vulnerabilities (Figures 6.6, 6.7). These include lower international reserves, and larger shares of EMDEs with current account and fiscal deficits.

- Although still above their 1980s and 1990s averages, international reserves relative to external debt have fallen since 2010 in more than two-thirds of EMDEs, and in one-quarter it has more than halved.

- Current account deficits in EMDEs averaged 4.5 percent of GDP in 2018, compared with 3.1 percent of GDP in 2010. In 2018, 55 percent of EMDEs had weaker current account balances than in 2010; 76 percent ran current account deficits (compared with 69 percent in

## FIGURE 6.5 Long-term growth prospects

*Long-term growth prospects have slowed substantially from pre-crisis rates. Potential growth is expected to decline in the next decade.*




Source: Consensus Economics; Haver Analytics; Penn World Tables; UN Population Prospects; World Bank.
A. Bars show long-term (10-year ahead) average annual growth forecasts surveyed in respective years. Sample includes 38 countries—20 advanced economies (AEs) and 18 EMDEs—for which Consensus forecasts are consistently available from 1998-2018. Aggregate growth rates calculated using constant 2010 U.S. dollar GDP weights.
B. Period average of annual GDP-weighted averages. Estimates based on production function approach. Sample includes 50 EMDEs and 30 advanced economies (AEs).
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2010); and 44 percent had current account deficits in excess of 5 percent of GDP.

- An average cyclically-adjusted primary fiscal deficit of 0.6 percent of GDP in 2007 in EMDEs had widened to 0.9 percent of GDP by 2018. About one-half of EMDEs had a larger deficit in 2018 than in 2010. Commodity-exporting EMDEs experienced larger deteriorations in fiscal balances, on average, and were running the larger deficits than commodity importers.

As documented in Chapter 4, there has been a significant change in the composition of debt in EMDEs. This shift could generate new vulnerabilities. For example, increasing issuance of foreign-currency-denominated corporate debt has contributed to rising currency exposures and heightened the risks of financial distress in the corporate sector and the banking system in the event of a sharp U.S. dollar appreciation. In some EMDEs, the share of nonresident-held bonds in local currency bond markets has grown to more than 30 percent. In LICs, debt has been increasingly financed by non-concessional and private sources. As a result, interest payments have been absorbing a growing share of government revenues (Ruch 2019).

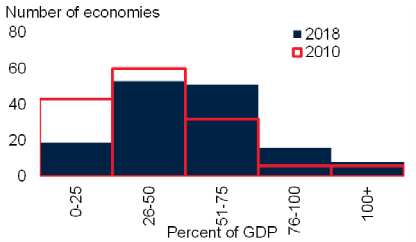
### What could make debt expensive?

Debt sustainability in EMDEs could be threatened by an increase in borrowing cost that could be driven by various factors.

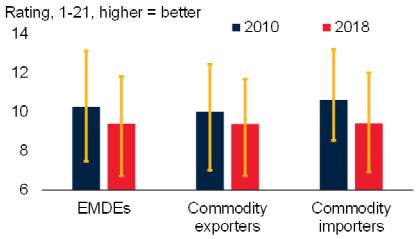
## FIGURE 6.6 Sovereign and corporate vulnerabilities in EMDEs

*There was a broad-based increase in government debt in EMDEs between 2010 and 2018. Corporate debt has risen even more rapidly.*

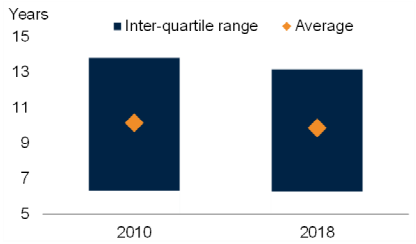
**A. Government debt**



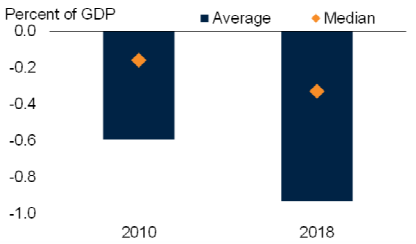

**B. Sovereign credit ratings**



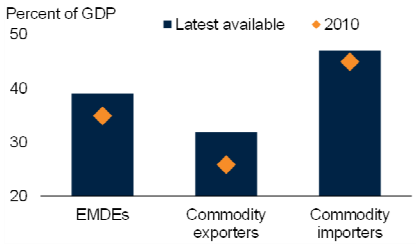

**C. Maturity of government debt**



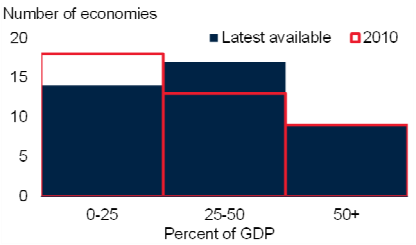

**D. Cyclically-adjusted primary fiscal balance**




**E. Nonfinancial corporate debt**




**F. Nonfinancial corporate debt**



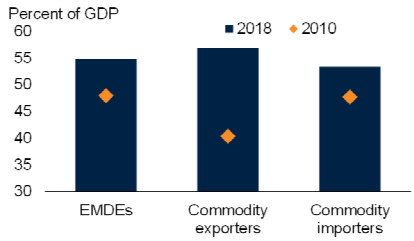

Source: Institute of International Finance; International Monetary Fund; Kose et al. (2017); World Bank.
A. Sample includes 147 EMDEs.
B Unweighted averages of foreign currency sovereign credit ratings for 49 EMDE commodity exporters and 40 EMDE commodity importers. Whiskers denote interquartile ranges.
C. Unweighted averages of the average maturity of government debt based on 39 EMDEs.
D. Based on data for 151 EMDEs.
E.F. Sample includes 40 EMDEs. Latest available datapoint is 2019Q2 for Argentina, Brazil, Chile, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Poland, Russia, Saudi Arabia, South Africa, Thailand, and Turkey; and 2017 for the rest.
E. Unweighted average of nonfinancial corporate debt in 21 EMDE commodity exporters and 19 EMDE commodity importers.

Click here to download charts and data.

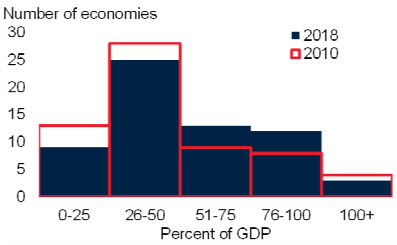
## FIGURE 6.7 External vulnerabilities in EMDEs

*Since 2010, external debt has risen in most EMDEs relative to GDP and current account balances have weakened in commodity exporters. Most EMDEs appear to have adequate foreign reserve coverage to meet balance of payments needs, but significant heterogeneity exists.*

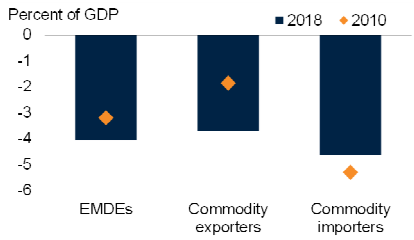
**A. External debt**



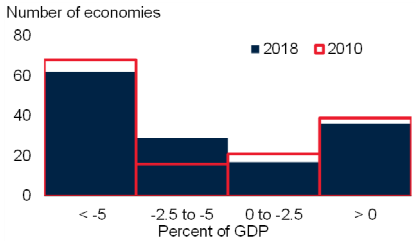

**B. Distribution of external debt**



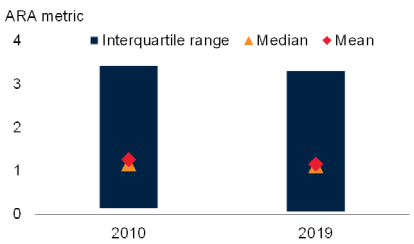

**C. Current account balance**



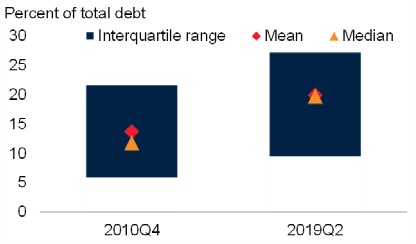

**D. Current account balance**




**E. Foreign reserves adequacy**




**F. Non-resident holdings of local-currency-denominated debt**




Source: Ha, Kose, and Ohnsorge (2019); International Monetary Fund; World Bank.

A. Unweighted average of total external debt-to-GDP ratios for 31 EMDE commodity exporters and 30 EMDE commodity importers.

B. Sample includes 61 EMDEs.

C. Unweighted average of current account balance-to-GDP ratios for 88 EMDE commodity exporters and 56 EMDE commodity importers.

D. Sample includes 144 EMDEs.

E. Sample includes 48 EMDEs. Dark blue bars show minimum and maximum values. Assessing Reserve Adequacy (ARA) metric is based on IMF (2011) which determines the appropriate reserve cover on a risk-weighted basis covering short-term debt, medium- and long-term debt, and equity liabilities. Risk weights are based on observed outflows during periods of exchange rate pressure. Values above 1 suggest that countries are fully able to meet balance of payments needs using reserves.

F. Sample includes 22 EMDEs.

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**Normalization of monetary policy in advanced economies**. Although it seems unlikely in the foreseeable future, a return to monetary policy normalization in advanced economies could raise borrowing costs (Ruch 2019). If there was a rapid increase in policy interest rates, as happened in the first global wave of debt accumulation, it could be accompanied by large currency depreciations in EMDEs that would sharply increase debt service burdens for foreign currency-denominated debt (Arteta et al. 2016). It would also be likely to trigger a turn in investor sentiment that would especially affect those EMDEs with large foreign participation in local bond markets, which in some economies now exceeds 30 percent of government bonds.

**Disruptions in advanced economy financial markets.** The end of the third wave of debt was marked by disruptions in advanced-economy financial markets. As documented in Chapter 4, in the third wave debt accumulation in advanced economies outpaced that in EMDEs. In contrast, advanced-economy debt ratios have been broadly stable in the fourth wave, as pronounced private deleveraging offset government debt increases in advanced economies, while in EMDEs the share of private debt has remained broadly stable.

However, as in the third wave, a decade of tightening banking regulation has encouraged the emergence of maturity mismatches and credit risks among institutions in the non-bank financial system (IMF 2019a). Financial stress in non-bank financial institutions could quickly propagate to the rest of the financial system, owing to the interconnectedness between nonbanks and banks. Growing linkages between non-bank financial systems in advanced economies and EMDEs have increased both the likelihood and the potential magnitude of spillovers from distress in advanced-economy non-banks to EMDE bond markets and broader financial systems.

For example, leveraged loans—defined as loans to firms that are highly indebted, have high debt service costs relative to earnings, and are typically below investment grade—have become an increasingly important part of corporate debt in both advanced economies and EMDEs (BIS 2019). The outstanding stock of leveraged loans has doubled since the global financial crisis (BIS 2018).

Since most leveraged loans are denominated in U.S. dollars, tend to be at variable rates, and are often short term, they are highly vulnerable to rising financing costs. More than half of leveraged loans are packaged into collateralized loan obligations (CLOs), a form of asset-backed security with notable similarities to the collateralized debt obligations (CDOs) based on

mortgage loans that played a key role in the global financial crisis.[7] In search for yield, non-bank financial institutions such as pension funds and insurance companies have sought to invest in riskier and less liquid assets in order to meet their nominal return targets. Foreign portfolio investors and global mutual funds have also become more active in EMDE bond markets (IMF 2019a). This includes increasing their issuances of leveraged loans, which have risen significantly in every EMDE region, but especially in EAP.

**Commodity price shocks.** Many commodity-exporting EMDEs rely heavily on revenues from the resource sector to fund government expenditures and service sovereign debt (Correa and Sapriza 2014). As a result, commodity price shocks have periodically disrupted government finances and been a source of financial instability in EMDEs, culminating in some cases in sovereign debt default or other financial crises (Figure 6.8).[8] Indeed, prior to World War II, commodity price booms often culminated in sovereign defaults in EMDEs (Reinhart and Rogoff 2014). The relationship weakened during the post-war period, but commodity price booms and associated terms of trade movements have remained a major predictor of financial and sovereign debt crises (Caballero 2003). In LICs, especially, commodity price shocks have often been associated with financial sector fragility and banking crises (Eberhart and Presbitero 2018; Kinda, Mlachila, and Ouedraogo 2016).

**Trade tensions.** International trade has been a key engine of growth in EMDEs over the past two decades. An escalation of trade tensions could depress output in the short term as well as the medium term (Barattieri, Cacciatore, and Ghironi 2018).[9] By increasing investor uncertainty and triggering U.S. dollar appreciation, escalating trade tensions could also cause a significant tightening in global financial conditions (Dizioli and van Roye 2018). Heightened uncertainty could encourage capital flight into safe advanced-economy assets, potentially precipitating sudden stops in EMDEs. U.S. dollar appreciations would increase the real value of sovereign and corporate debt denominated in foreign currency and could trigger a retreat of

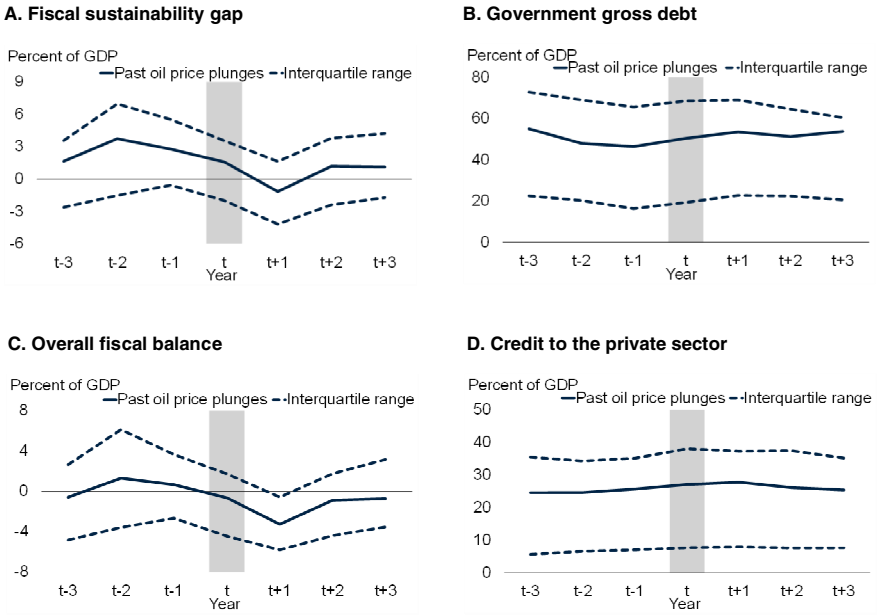
[7] Both are based on an underlying pool of low-quality loans, structured in tranches of differing seniority based on exposure to credit losses, and are vulnerable to sudden increases in both the magnitude and correlation of losses. However, CLOs are less complex than CDOs, are not commonly used as collateral in repo transactions, and their impact on banks' direct exposures is better understood.

[8] Even in advanced economies, commodity price swings have sometimes triggered financial crises. For example, the financial crisis of 1837 in the United Kingdom was preceded by a sharp increase in commodity prices (Bordo, Dueker, and Wheelock 2003).

[9] In addition, EMDEs rely in part on the proceeds from trade taxation to meet spending needs and sovereign debt obligations (van Wijnbergen 1987).

## FIGURE 6.8 Debt dynamics in EMDE oil exporters around oil price plunges

*Oil price plunges are historically accompanied by deteriorating fiscal debt sustainability in oil exporters, reflecting shrinking oil revenues and weaker growth, but fiscal positions tend to recover quickly after the initial shock.*




Source: International Monetary Fund; World Bank (2017a).
Note: Year t refers to the year of oil price plunges. Past oil price plunges include collapses in global oil prices in 1991, 1998, 2001, and 2008 (World Bank 2015b). Simple averages of 35 EMDE oil exporters in all episodes.
C. Samples are restricted to episodes where data on sustainability gaps are available.
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EMDE lending by global banks (Bruno and Shin 2013). To the extent that EMDEs' trade is invoiced in U.S. dollars, bilateral depreciation could raise the price of tradeable goods and restrict inventory financing, disrupting global value chains (Boz, Gopinath, and Plagborg-Moller 2017; Bruno, Kim, and Shin 2018).

**Corporate debt in China.** The large corporate debt buildup in China since 2010 has been primarily to domestic creditors. Its counterpart in the financial system could eventually reveal nonperforming loans and result in a growth slowdown in China (Figure 6.9). Concerns also remain about overcapacity in some industries resulting from the debt-fueled rapid investment growth of the past decade (Maliszewski et al. 2016; Yu and Shen

2019; Wang, Wan and Song 2018). Although it has recently declined, high corporate leverage, particularly in state-owned enterprises, has been associated with declining corporate profitability and financial performance (Molnar and Lu 2019; World Bank 2018d). In view of the size of China's economy, adverse spillovers to other EMDEs would be likely to be significant, including through portfolio reallocation among asset classes (Ahmed et al. 2019; World Bank 2016c).

**Debt in low-income countries.** LICs have accumulated debt rapidly and increasingly from non-concessional and less transparent sources of finance (Essl et al. 2019). These developments have increased LICs' vulnerability to financing shocks and to the revelation of previously undisclosed debt obligations (Bova et al. 2016; Horn, Reinhart, and Trebesch 2019; Lee and Bachmair 2019). Transparency about contingent liabilities in LICs, such as those stemming from state-owned enterprise debt and public-private partnership (PPP) transactions, as well as government asset holdings is also limited. These data limitations are especially acute for debt owed to commercial and non-Paris Club creditors. Poor data coverage can give rise to sudden increases in disclosed debt, for example when debt of loss-making state-owned enterprises migrates to the books of the central government.[10]

**Climate events.** For some EMDEs, risks related to climate change are substantial. Climate-related risks are particularly pronounced for economies where physical capital and infrastructure is located in high risk areas, and smaller EMDEs that rely heavily on climate-sensitive industries (such as agriculture and tourism) but have limited scope for economic diversification. The experience of several economies in LAC, in particular, shows that debt crises can be triggered by natural disasters. Furthermore, the move to a low-carbon economy could have a material effect for energy-exporting EMDEs. A shift away from the use of carbon-intensive fuels could leave the assets of fossil fuel companies, including state-owned companies, stranded by rules to curb climate change (Carney 2015). This could have critical implications for debt sustainability both at the firm and the country level.

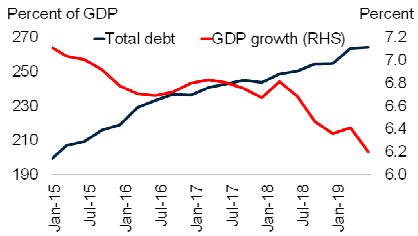
To the extent that natural disasters are becoming more frequent and persistent as a result of climate change, they are likely to increase macroeconomic volatility and reduce long-term growth prospects, posing a

[10] For example, in Mozambique and the Republic of Congo, the revelation of unreported debt led to large upward revisions to official debt figures, which resulted in debt distress (IMF 2018c). Only a third of the 59 countries eligible for International Development Association borrowing report private sector external debt statistics (World Bank and IMF 2018c).

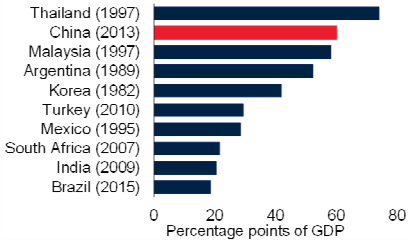
## FIGURE 6.9 Debt accumulation in China

*Since the global financial crisis, debt in China has increased rapidly, while GDP growth has slowed. The increase in the debt ratio over the five years leading up to 2016 was the second largest in EMDE history. Debt is primarily owed to the private sector and domestically held.*

**A. GDP growth and total debt**




**B. Selected economies: Peak five-year change in total debt**




Source: Haver Analytics; International Monetary Fund; World Bank
A. GDP growth is year-on-year percent change.
B. Largest change in debt in percentage points of GDP over any 5-year interval. Data as of December 2019.
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growing risk to debt sustainability in vulnerable EMDEs (Nakatani 2019). EMDEs tend to adopt pro-cyclical policies in the aftermath of natural disasters, which may further deepen the macroeconomic costs of these events (Noy and Nualsri 2011). Political unrest after climate shocks or additional investment needed for climate adaptation may lift government borrowing cost, further increasing the likelihood of debt distress (Klomp 2015). Finally, extreme weather events can lead to a significant deterioration of fiscal and trade balances which in turn may trigger financial distress and debt crises (Acevedo 2016; Lee, Zhang, and Nguyen 2018; Lis and Nickel 2010).

**Domestic vulnerabilities**. Elevated debt increases an economy's vulnerability to domestic financing and political shocks even in an environment of benign global financing conditions. Domestic financing shocks can trigger sharp increases in borrowing costs. These may include the sudden emergence of contingent government liabilities, including in state-owned enterprises or public-private partnerships. Policy surprises or sudden bouts of policy uncertainty can also fuel investor concerns about debt repayment causing a spike in borrowing costs.

Economies with unstable political regimes are more prone to financial crises and increased volatility in borrowing costs (Cuadra and Sapriza 2008; Yu 2016). Political instability and unrest often precede debt crises, particularly when a rapid buildup of government debt necessitates policy adjustments

that have important distributional consequences (Andreasen, Sandleris, and Van der Ghote 2019). Conversely, political stability tends to be associated with a lower likelihood of sovereign default and quicker resolution of debt crises (Trebesch 2018; Van Rijckeghem and Weder 2009).

## Better policy frameworks

Since the 1990s, policy frameworks in many EMDEs have become more resilient. The number of EMDEs with inflation-targeting monetary policy regimes and the number with fiscal rules have risen considerably since the late 1990s, macroprudential tools have been used more proactively and bankruptcy rights protections have been strengthened.

**Monetary and exchange rate policy frameworks**. The number of EMDE with inflation targeting monetary policy regimes and flexible exchange rates has risen from only three and 11, respectively, in 1999 to close to 30 in each case in 2018 (Figure 6.10). Many EMDEs also improved the transparency of their central banks over this period, helping to anchor inflation expectations. With improvements in domestic monetary policy frameworks and the global decline in inflation, EMDEs have been able to bring inflation down from double-digits in the 1990s to about 3 percent in 2019 (Ha, Kose and Ohnsorge 2019).

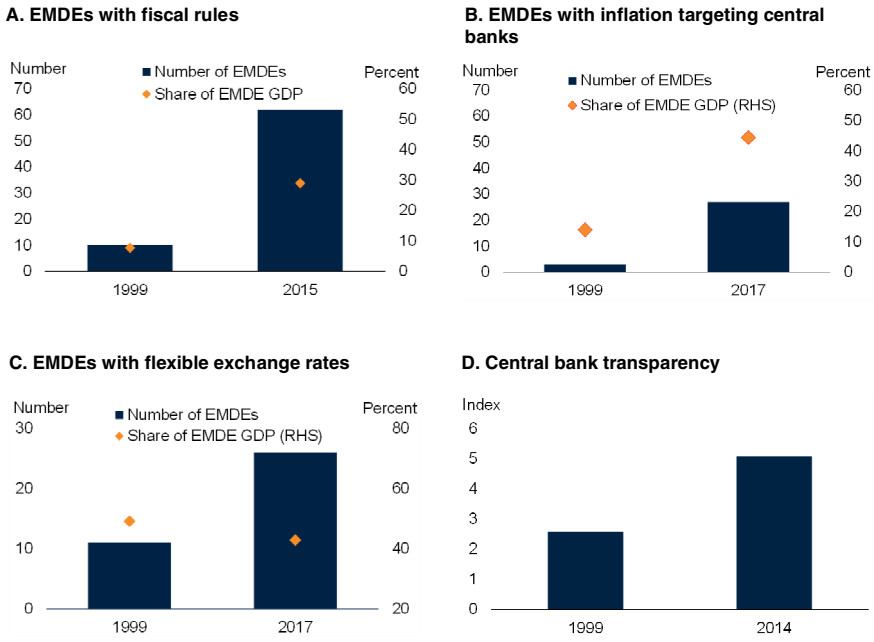
**Fiscal policy frameworks.** Fiscal rules have been adopted in more than 60 EMDEs. While the effectiveness of these rules-based policy frameworks has varied, they facilitated effective countercyclical responses by some of these economies during the last global recession, and could help buttress against future shocks (Alfaro and Kanczuk 2016).

**Macroprudential policies.** Since the global financial crisis, 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 (Figure 6.11; Cerutti, Claessens, and Laeven 2017). EMDEs have made efforts to contain risks from volatile capital flows through policies aimed at financial institutions, particularly restrictions on foreign currency exposures, reserve requirements on foreign funding, and liquidity-related measures (Ruch 2019). The overall effectiveness of these policies has depended on how they have interacted with macroeconomic and sector-specific policy measures (Bruno, Shim, and Shin 2017; Claessens 2015).

**Structural policies.** Since the 2009 global recession, some EMDEs have undertaken reforms to strengthen business climates (although reform

## FIGURE 6.10 Monetary, exchange rate, and fiscal policy frameworks

*Since the 1990s, many EMDEs have introduced fiscal rules and inflation-targeting monetary policy regimes, as well as greater exchange rate flexibility and central bank transparency.*




Source: Dincer and Eichengreen (2014); Ha, Kose, and Ohnsorge (2019); Huidrom et al. (2019); International Monetary Fund; Kose et al. (2017); World Bank.

A. An economy is considered to be implementing a fiscal rule if it has one or more fiscal rules on expenditure, revenue, budget balance, or debt.

B. Inflation targeting as classified in the International Monetary Fund's Annual Report of Exchange Arrangements and Exchange Restrictions.

C. An economy is considered to have a flexible exchange rate if it is classified as "Floating" or "Free Floating" in the International Monetary Fund's Annual Report of Exchange Arrangements and Exchange Restrictions.

D. Dincer and Eichengreen Transparency Index (2014). The index ranges from 0 (least independent and transparent) to 15 (most independent and transparent).

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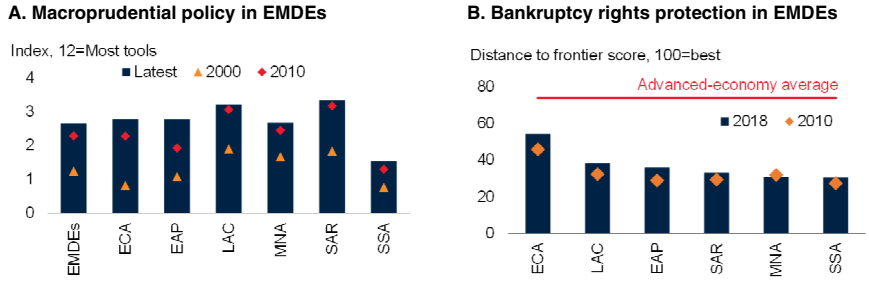
momentum slowed after 2010) and reduce trade costs, which can strengthen long-term growth prospects. Recent reforms in bankruptcy procedures include the introduction of new bankruptcy laws in Egypt and India, the strengthening of secured creditors' rights in India, and the establishment of new restructuring mechanisms in Poland. Nevertheless, EMDE bankruptcy protection laws still lag international best practices, with creditors often experiencing long, costly, and weakly enforced debt recovery processes.

**Stronger global financial regulation.** Since the global recession, there have been reforms to improve access to finance while strengthening financial

## FIGURE 6.11 Macroprudential policies and bankruptcy procedures

*EMDEs have used macroprudential policy more proactively since the global financial crisis and have improved provisions protecting bankruptcy rights.*




Source: Cerutti, Claessens, and Laeven (2017); World Bank.
A. Sample includes 123 EMDEs. Unweighted average of the Macroprudential Policy Index of Cerutti, Claessens, and Laeven (2017). The Macroprudential Policy Index measures the number of tools used by authorities and is based on a simple sum of up to 12 including, but not limited to, countercyclical capital buffers and loan-to-value ratios.
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 22, 22, 32, 19, 8, and 46 economies, respectively. Advanced economies include 36 economies. Based on World Bank Doing Business reports for 2010, and 2019.
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supervision. Since 2009, several EMDEs that are FSB members have established national financial stability councils or committees along FSB guidelines (Brazil, China, India, Mexico, Russia, Turkey), and given their central banks new mandates to conduct macroprudential supervision (Indonesia, Russia, South Africa; FSB 2018a, 2019b). Most of these EMDEs have made progress in implementing reforms, especially to meet Basel III capital and liquidity requirements and implement over-the-counter derivatives reforms (FSB 2018a). EMDEs that are also members of the Basel Committee on Banking Supervision, including Brazil, China, Russia, and South Africa, have put in place risk-based capital rules, liquidity coverage ratio regulations, and capital conservation buffers (BCBS 2019).

The crisis led to a rethinking of the role, benefits, and costs of financial and capital account liberalization, especially in light of the role played by cross-border capital flows in financial crises (Reinhart and Rogoff 2008; Ruch 2019). A consensus has emerged that capital flow management measures can play a legitimate role in promoting macroeconomic and financial stability (Koh and Yu 2019). Along these lines, Brail has reined in large capital flows, and China and India have continue their gradual pace of capital account opening.

Financial sector reforms developed at the global level since the crisis have also increased resilience (Arteta and Kasyanenko 2019; BIS 2018). The G20

global financial regulatory reform agenda has led to major financial reforms, including the international adoption of the Basel III capital and liquidity standards (FSB 2018b). Global financial safety nets have been expanded significantly, with the volume of resources available in country-specific, regional, and multilateral financial safety nets tripling between 2007 and 2016 including through the creation of regional financing arrangements, expanded IMF resources and international reserve holdings (IMF 2018b).[11] There are also now an estimated 160 bilateral swap lines between central banks around the world (Bahaj and Reis 2018).

## Striking the right balance

EMDEs need to navigate a difficult terrain during the debt wave that is still underway. They face weaker growth prospects driven by multiple structural factors. Yet, they have pressing investment needs to achieve development goals and improve people's living standards. A key current challenge for EMDEs is to find the right balance between taking advantage of the present low interest rate environment and avoiding the risks posed by excessive debt accumulation.

On the upside, the current financial environment appears to alleviate some risks associated with debt accumulation. In particular, global interest rates remain at very low levels, and they are expected to remain low for the foreseeable future. In addition, some EMDEs have better fiscal, monetary and financial sector policy frameworks now in previous debt waves. A number of major reforms have been undertaken to make the global financial safety net more secure.

However, the study of the past three global waves of debt suggests reasons for caution. Despite currently low real interest rates, stronger policy frameworks and a more secure global safety net, the current wave of debt accumulation could follow the historical pattern and once again lead to financial crises.

In a highly uncertain global environment, EMDEs face a wide range of risks, including the possibility of disruptions in advanced-economy financial markets, steep declines in commodity prices, trade tensions, and a sudden deterioration in China's corporate debt market. Materialization of any of

[11] The global financial safety net has four layers: 1) self-insurance against external shocks using foreign reserves or fiscal space at the national level, 2) bilateral swap lines between countries, 3) regional financing arrangements, and 4) the global financial backstop provided by the IMF (Brueggemann et al. 2018).

these risks could lead to a sharp rise in global interest rates, a spike in risk premia or a sharp deterioration in growth prospects and, in turn, trigger debt distress in EMDEs. In addition to their record debt buildup during the current wave, EMDEs have accumulated other vulnerabilities that could increase the risks and costs of debt distress.

As a result, low or falling global interest rates provide no sure protection against financial crises. Indeed, historically, half of all crises during episodes of rapid debt accumulation occurred in years when U.S. long-term (10-year) interest rates were falling and one-eighth of episodes occurred in years when U.S. long-term real interest rates were below 1 percent (as they have been since 2016).

The study of the past three waves of debt indicates the critical role of policy choices in reducing the likelihood of the current debt wave ending in crises and, if crises were to take place, in mitigating their impact. For EMDEs with sound fiscal positions and policy frameworks that provide strong assurance of long-term sustainability, low interest rates may offer an opportunity to undertake debt-financed productive spending to boost growth prospects if the cyclical position is appropriate. However, for economies with constrained fiscal positions or highly leveraged corporate sectors, the lessons from previous waves of debt call for caution.

## Seven major lessons

The analysis of the waves of global and national debt accumulation episodes yields several important lessons for EMDEs.

**Accumulate debt with care.** Borrowing, when well-spent and sustainable, could support growth. Waves of broad-based debt accumulation have typically coincided with global upturns amid accommodative monetary policy and financial market development. However, about half of rapid debt accumulation episodes at the country level were associated with financial crises. Episodes of rapid government debt accumulation were more likely than episodes of rapid private debt to be associated with crisis, and were costlier than crises following rapid buildups of private debt.

**Use debt efficiently.** The present combination of weak global growth and low interest rates makes government debt accumulation an appealing option for EMDEs to boost growth-friendly spending (World Bank 2019a). However, it is critical that the debt be used for productive purposes to boost potential growth as painfully learned especially from the experience of the first wave. Crises were common in countries that borrowed heavily to finance

state-led industrialization or real estate markets (e.g., Argentina and Brazil in the first wave and Thailand in the second).

**Maintain a resilient debt composition.** A debt composition tilted toward foreign currency-denominated, short-term, or nonresident-held debt makes countries more vulnerable to shifts in market sentiment, currency depreciation, or spikes in global interest rates and risk premia. Crises have been more likely when the share of short-term external debt was higher (Rodrik and Velasco 2000). The first and second waves showed how a high share of foreign currency-denominated debt meant that currency depreciations led to an increase in both debt servicing costs and debt ratios.

**Regulation and supervision of the financial sector matter.** Inadequate regulatory and supervisory regimes can encourage excessively risky lending and debt buildup. This was the case in the Asian financial crisis during the second wave and in several economies in ECA countries during the third wave. Conversely, a robust regulatory system can temper the incentive to take excessive risks resulting from the public safety net for the financial system (moral hazard).

**Beware of external shocks (especially when there are domestic vulnerabilities).** Crises typically occurred when external shocks hit countries that had substantial domestic vulnerabilities, including reliance on external and short-term debt in conjunction with a fixed exchange rate and low levels of reserves (Bordo, Meissner, and Stuckler 2010; Claessens et al. 2014; Mishkin 1999). Countries with higher international reserve levels were significantly more resilient to these types of shocks (Gourinchas and Obstfeld 2012). In addition to external shocks, domestic political shocks contributed to crises by increasing policy uncertainty and weakening investor sentiment.

**Private debt can rapidly turn into government debt.** Large private sector losses, including losses threatening bank solvency, and the materialization of contingent liabilities, including those of state-owned enterprises, can lead governments to provide substantial financial support (Mbaye, Moreno-Badia, and Chae 2018a). This occurred in the EAP region in the second wave, and in ECA in the third wave, with governments providing substantial support to banks. While the provision of government support can save a banking system from collapse, it can also lead to a steep jump in public debt (Bova et al. 2016; Claessens et al. 2014; World Bank 2015). Fiscal space can shrink rapidly as a result even though fiscal deficits may have been moderate.

**Develop effective mechanisms to recognize losses and restructure debt.** Having mechanisms in place to promptly recognize and restructure debt can

improve the prospects for recovery from crisis, particularly public debt crises (Haldane et al. 2005; Kroszner 2003) or banking crises (Rutledge et al. 2012). The protracted resolution after the Latin American crises of the 1970s and 1980s and the SSA debt distress in the 1980s and 1990s were associated with a period of very low, or even negative, per capita income growth. Growth only rebounded after the Brady plan and the HIPC and MDRI debt initiatives resolved debt distress and reduced debt overhangs.

## Policy implications

As documented above, policy frameworks in many EMDEs have improved since the first two waves of debt. These improvements played a critical role in mitigating the adverse impact of the global financial crisis on these economies at the end of the third wave of debt accumulation. However, there is still considerable scope for further improvement. Specific policy priorities ultimately depend on country circumstances but there are four broad strands of policies that can help contain the risks associated with the recent debt accumulation.

### Policies for managing debt

Governments need to put in place mechanisms and institutions that help them strike the proper balance between the benefits and costs of additional debt. These include sound debt management, high debt transparency, and thorough monitoring of contingent liabilities. While these policies mostly apply to borrowers, creditors also need to implement measures to mitigate risks associated with excessive debt accumulation.

**Sound debt management** can help reduce borrowing costs, enhance debt sustainability, and limit fiscal risks.[12] Debt managers are increasingly adopting proactive policies to build buffers and make the composition of debt more resilient, but further progress is needed (World Bank 2013). Prudent debt management favors debt contracted on terms that preserve macroeconomic and financial resilience—preferably at longer maturities, at fixed (and favorable) interest rates, and in local currency. A debt composition that is less vulnerable to market disruptions reduces the likelihood that a decline in market sentiment, sharp depreciations, or interest rate spikes will erode debt sustainability. A well-developed and liquid domestic bond market can reduce the need for foreign-currency denominated lending and help

[12] 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 (World Bank and IMF 2001, 2009a, 2009b; 2014; Abbas, Pienkowski, and Rogoff 2019).

ensure stability in government financing (Arvai and Heenan 2008; World Bank and IMF 2001).

**Transparent balance sheets** are a prerequisite for sound debt management. History shows that public debt spikes can result from the revelation of previously undisclosed liabilities such as those revealed in Mozambique during the fourth wave (Jaramillo, Mulas-Granados, and Jalles 2017; Weber 2012). Greater fiscal transparency is associated with lower borrowing costs, improvements in government effectiveness and lower government debt (Kemoe and Zhan 2018; Montes, Bastos, and de Oliveira 2019). Improvements in data collection practices for LIC debt would help policymakers undertake better-informed borrowing decisions, and have been associated with lower borrowing costs (Cady and Pellechio 2006; World Bank and IMF 2018c). Principles and guidelines for debt transparency have been created, both by international financial institutions, including the IMF's fiscal transparency code, and by the private sector (IIF 2019b; IMF 2019d).

**Monitoring and mitigation of contingent government liabilities** are integral for sound public debt management. Recent survey evidence suggests that most public debt managers *monitor* risks of contingent liabilities but that only a minority uses risk *mitigation* tools, such as reserve accounts (40 percent of respondents) or risk exposure limits on contingent liabilities (30 percent of respondents; Lee and Bachmair 2019).

**Creditors, including international financial institutions**, play an important role in mitigating the risks associated with debt accumulation. They need to ensure that their own lending practices are prudent. More broadly, while country authorities have the primary responsibility to transparently report their debt data, international financial institutions work to support such transparency and sustainable lending practices in several ways. The IMF and the World Bank collect and disseminate debt statistics that are used by a wide range of stakeholders; produce reports of public debt data at the country level via joint debt sustainability analyses (DSAs); support countries' efforts to produce medium-term debt management strategies (MTDSs); publish information on countries' borrowing capacity; and directly liaise with other multilateral, bilateral, and private creditors (World Bank and IMF 2003, 2009a, 2009b). All of these efforts promote prudent decision making by borrowers and lenders.

## Macroeconomic policies

Notwithstanding substantial improvements since the 1990s, macroeconomic policy frameworks can be strengthened further in many EMDEs (World

Bank 2019a). Monetary policy frameworks and exchange rate regimes can be strengthened to increase central bank credibility. Fiscal frameworks can ensure that borrowing remains within sustainable limits and borrowed funds are used well.

**Monetary and exchange rate policies.** The benefits of stability-oriented and resilient monetary policy frameworks cannot be overstated. During episodes of financial stress, when EMDE currencies tend to depreciate sharply, strong monetary policy frameworks will be helpful not least because the exchange rate pass-through to inflation tends to be smaller in countries with more credible, transparent, and independent central banks; inflation-targeting monetary policy regimes; and better-anchored inflation expectations (Kose et al. 2019). With less pass-through from depreciation to inflation, central banks in EMDEs will be more scope to support activity. Flexible exchange rates can provide an effective mechanism for macroeconomic adjustment and help avoid currency overvaluations, buildup of large currency mismatches on balance sheets—a common precursor of crises. A flexible exchange rate regime requires, however, that monetary policy pursue a credible policy of inflation control to provide an effective nominal anchor to the economy. Such a policy framework needs to be complemented by strong institutional arrangements.

**Fiscal rules** can help prevent fiscal slippages, ensure that revenue windfalls during times of strong growth are prudently managed, and contain and manage risks from contingent liabilities (Cebotari 2008; Currie and Velandia 2002; Romer and Romer 2019; Ülgentürk 2017). Strong fiscal frameworks have also been associated with lower inflation and inflation volatility, supporting the central bank in delivering its mandate (Ha, Kose, and Ohnsorge 2019). EMDEs have made important strides in the adoption and design of fiscal rules (Schaechter et al. 2012).[13] However, fiscal rules may be effective only once a certain degree of broader government effectiveness is achieved and sound budgetary institutions are in place.[14]

**Alternatives to debt accumulation** are available to expand fiscal resources for priority spending. Public spending can be reallocated to uses that are more

[13] Schaechter et al. (2012) create a fiscal rule index that captures both the number and characteristics of fiscal rules in operation in advanced economies and EMDEs and show how EMDEs have played catch-up to advanced economies since 2000. Ardanaz et al. (2019) find that well-designed fiscal rules can help safeguard public investment during downturns.

[14] Calderón, Duncan, and Schmidt-Hebbel (2016) estimate that fiscal and monetary policy procyclicality is greater in countries with weak institutions. Bergman and Hutchison (2015, 2018) show that fiscal rules are effective only when government effectiveness exceeds a minimum threshold. World Bank (2015) discusses the circumstances and features that can make fiscal rules more effective.

likely to boost future growth, including education and health spending as well as to climate-smart infrastructure investment to strengthen economic resilience. Government revenue bases can be broadened by removing special exemptions and strengthening tax administration (Gaspar, Ralyea, and Ture 2019; IMF 2019c; World Bank 2017d). Governments can also take action to foster private sector-led growth. Reform agendas to improve business climates and institutions have resulted in significant gains in investment and productivity in EMDEs (World Bank 2018a). In turn, increased private sector growth could expand the revenue base and, ultimately, strengthen government revenues.

### Financial sector policies

Robust financial sector regulation and supervision can help prevent risks from building up. Financial market deepening can help mobilize domestic savings that may provide more stable sources of financing than capital inflows.

**Improved financial system regulation and supervision,** by acting on systemic exposures and ensuring adequate capital buffers, can help prevent risks from building up. Robust prudential regulation and supervision can help pre-empt the buildup of systemic financial weaknesses. Macroprudential policies can help moderate lending to households and corporates. The use of living wills for banks and robust bank bankruptcy regimes can help with the orderly winding down of insolvent institutions, including through the bail-in of creditors. Credibility and predictability of bank resolution can help prevent spillovers from the failure of one financial institution to others by reassuring creditors about the continued functioning of the financial system as a whole (Hoshi 2011).

**Financial market deepening** can help expand the pool of stable long-term domestic savings available for domestic investment. This requires an enabling environment of robust institutions, protection of creditor rights, sound regulatory quality, and macroeconomic stability (Sahay et al. 2008; Laeven 2014). At the same time, however, excessively rapid growth in financial markets can increase financial stability risks. A careful balance between measures to promote financial market deepening and supervision and regulation is therefore critical.

### Strengthening institutions

Well-enforced frameworks for sound corporate governance can help ensure that funds borrowed by private corporates are well used. Sound bankruptcy

frameworks can help prevent debt overhangs from weighing on investment for prolonged periods.

**The promotion of good corporate governance** can mitigate risks arising from the corporate sector. Stronger corporate governance can tilt firms' financing towards equity rather than debt (Mande, Park, and Son 2012); increase hedging of foreign currency positions to protect against external shocks (Lel 2012); and encourage more efficient firm operation (Henry 2010). Other measures can also help contain risks from corporate credit growth, such as increased stress testing of listed corporates' balance sheets.

**Effective bankruptcy and insolvency regimes** can both help in the resolution of private debt crises and have benefits outside of crises (Leroy and Grandolini 2016). Several EMDEs have recently reformed bankruptcy procedures, but in general, EMDE bankruptcy protection laws lag international best practices.[15] Strengthening bankruptcy protection can boost investment and facilitate responsible corporate risk-taking, helping to relieve the costs of debt overhang. Well-functioning legal, regulatory, and institutional frameworks are crucial for commercial banks and companies to resolve non-performing loans, and facilitate business exit and reorganization (Menezes 2014). A robust insolvency regime can improve financial inclusion and increase access to credit, by reducing the cost of lending.

## Conclusion

This Chapter distilled seven lessons from past episodes of debt accumulation and debt-related crises. Debt accumulation is more likely to be benign when debt is well-used for growth-enhancing purposes and when its composition is carefully managed to maintain resilience to financial market disruptions. This requires not only prudent government debt management but also robust financial system regulation and supervision as well as sound corporate governance. Once debt distress materializes, prompt resolution is critical to avoid a prolonged period of low growth.

These lessons are particularly pertinent at the current juncture as EMDEs enjoy easy financing conditions and have accumulate substantial debt. Although continuing, historically low global interest rates mitigate concerns about financing shocks, the record high debt accumulated in the past decade increases EMDEs' vulnerabilities to such shocks. The next financing shock,

[15] These include a new bankruptcy law in Egypt, a strengthening of secured creditors' rights in India, and the establishment of new restructuring mechanisms in Poland.

when it erupts, will test the ability of EMDEs and their creditors to make the conclusion of this wave of debt different from its predecessors.

Against this backdrop, this study suggests three main messages.

- **Unprecedented debt buildup.** The post-crisis wave of global debt buildup has been unprecedented in its size, speed, and reach in emerging market and developing economies. Similar waves in the past half-century led to widespread financial crises in these economies. Accordingly, policymakers must remain vigilant about the risks posed by record-high debt levels.

- **Precarious safety of low interest rates.** Continued low global interest rates provide no sure protection against financial crises. The historical record suggests that borrowing costs could increase sharply—or growth could slow steeply—for a wide range of reasons, including heightened risk aversion and rising country risk premia. A sudden increase in borrowing costs and associated financial pressures would take place against the challenging backdrop of weak growth prospects, mounting vulnerabilities, and elevated global risks.

- **Policies matter.** Robust macroeconomic, financial, and structural policies can help countries strike the right balance between the costs and the benefits of debt accumulation. Such policies are also critical to help reduce the likelihood of financial crises and alleviate their impact, if they erupt. Although some emerging and developing economies have better policy frameworks now than during previous debt waves, there remains significant room for improvement.

The evolution of global and national debt accumulation episodes is studied here using an eclectic approach including event studies, econometric methods, and case studies. The study shows that there has already been a significant stock of knowledge about the implications of debt accumulation, it also points to several avenues for future research.

**The role of debt transparency.** Given growing concern about debt transparency in the current wave, further investigation of its importance in previous crises would be a timely contribution. This would include an in-depth assessment of debt crises triggered by problems related to debt transparency, such as the revelation of hidden debt or the realization of contingent liabilities, including from state owned enterprises, public-private partnerships, subnational borrowing, collateralized lending or other explicit and implicit lending guarantees.

**The role of non-Paris Club lenders.** Future research could usefully investigate the role of non-Paris club creditors in more detail. Recent literature has sought to uncover the role played by China as a lender to other EMDEs, particularly in the MNA as well as SSA (Reinhart et al. 2019). Further research could build on this and consider how the evolution of debt instruments and the nature of creditors could affect debt sustainability.

**LIC debt dynamics.** Although the pace of debt buildup in LICs in the fourth wave has been slower than in the first wave, LICs face particular challenges posed by weak debt management and lack of transparency. Future research could examine more closely the role of debt transparency and debt management in weak institutional environments and identify policy solutions most relevant to these countries.

**The role of political processes.** To address apparent political cycles in borrowing, future research could aim to identify institutional arrangements that prevent, or build resilience against, politically-driven unproductive debt buildups. Such arrangements would weigh the incentives of borrowing governments and creditors against the need for borrowing to achieve sustainable and equitable growth.

**Institutional frameworks.** A large literature explores the role of various vulnerabilities, including debt composition, in financial crises. However, there is limited analysis of the role of institutional weakness. Future research could examine in greater depth how specific institutional frameworks, such as fiscal rules, inflation targeting, or robust financial supervision and regulation, can reduce the frequency and impact of crises.

**Benefits of debt.** Whereas much of the literature on the cost of debt has examined the experience of EMDEs, most of the literature on the benefits of debt has examined only advanced economies. Less is therefore known about the benefits of debt in environments with limited financial market development, short-lived governments, poor public expenditure management, and fragile investor confidence.

**Debt, productivity, and investment growth.** The exceptionally fast and broad-based debt buildup in EMDEs since the global financial crisis has coincided with a period of slowing investment and productivity growth. This raises concerns about the productive use of the funds raised through debt accumulation. At the firm or sectoral level, future research could further explore the link between debt accumulation and productivity growth; at the aggregate level, it could examine more closely the link between debt accumulation and public investment.