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Emerging and Developing Economies: Ten Years After the Global Recession

M. Ayhan Kose and Franziska Ohnsorge*

Abstract. Although emerging market and developing economies (EMDEs) weathered the global recession a decade ago relatively well, they now appear less well placed to cope with the substantial downside risks facing the global economy. In many EMDEs, the room for monetary and fiscal policies to respond to shocks has eroded; underlying growth potential has slowed; and the momentum for improving policy frameworks, institutions, and business climates seems to have slackened. The experience of the 2009 global recession highlights once again the critical role of policy room in shielding economic activity during adverse shocks. The subsequent decade of anemic growth underlines the need for sound policy frameworks, institutions, and business environments to promote sustained growth. With the global growth outlook weakening and vulnerabilities rising, the policy priority for EMDEs is now to improve resilience to shocks and to lift long-term growth prospects.

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1. Introduction

A decade ago, the global economy was reeling under the impact of the deepest global recession in the post-World War II period. In 2009, emerging market and developing economies (EMDEs) weathered the global recession relatively well. However, following a short-lived initial rebound in activity in 2010, the global economy, and especially EMDEs, have suffered a decade of weak growth despite unprecedented monetary policy accommodation and several rounds of fiscal stimulus in major economies (Figure 1).

There has been a concern that the global economy may again experience a downturn in the near future. The baseline forecast for global growth in 2019 is likely to be softer than previously projected, partly reflecting recent data showing broad-based weakness in industrial activity and world trade. Although global growth is expected to stabilize in 2020, this assumes that global financing conditions will remain benign, encouraging a modest recovery of EMDE capital inflows. It also assumes no further escalation in trade tensions between major economies and stability in commodity prices. But the growth momentum is fragile and the risks are tilted to the downside.

Are EMDEs ready to face a global downturn, if it materializes? To answer this question, our recent book examines developments of the past decade, draws lessons for EMDEs, and discusses policy options (Kose and Ohnsorge 2019). It is the first comprehensive analysis on the topic with a truly EMDE focus.

The book carries three main messages.

First, perhaps for the first time, many EMDEs were able to implement large-scale countercyclical fiscal and monetary policy during the global recession. They were in a position to stimulate activity because they could draw on sizable policy buffers accumulated during the pre-recession period of strong growth: government debt had fallen, current account and fiscal deficits narrowed, and inflation had moderated. Those EMDEs with more resilient economies and with more forceful stimulus experienced milder growth slowdowns during the global recession.

Second, on a more cautionary note, this study warns that, were a sharp global downturn to happen now, the average EMDE would be less prepared to address it than before the 2009 recession. EMDEs generally are more vulnerable to external shocks, in part because of mounting debt, weakening demand for commodity exports, and slower underlying domestic growth. Trade disputes among major economies are chipping away at an important engine of EMDE growth. At the same time, weaker fiscal positions would make it more difficult for EMDEs to support activity with expansionary fiscal policy.

Third, there are a few reasons for optimism. Since the 1997-98 Asian crisis and the 2001 U.S. recession—the two global downturns that preceded the 2009 global recession—policy frameworks in EMDEs have become more resilient. For example, the number of EMDEs with inflation-targeting monetary policy regimes and the number with fiscal rules has risen considerably since 1997. While the effectiveness of these rules-based policy

frameworks has varied, they have facilitated effective countercyclical responses by these economies during the global recession of 2009, and could be a source of strength in the face of future shocks.

These three messages underscore the need for EMDE policymakers to draw on the principal lessons of the 2009 global recession—the importance of strengthening their economies' ability to avoid or minimize the effects of adverse shocks and of having in place the policy room to act when such shocks inevitably occur. This means rebuilding fiscal space; raising foreign reserves where they are insufficient; and, in some economies, further strengthening policy frameworks. It also means putting in place financial sector policies that enable EMDEs to adapt to changing international financial conditions and mitigate systemic risks. Such policies would aim to strengthen home-host financial supervisory coordination and empower prudential authorities to act. Perhaps most importantly, it also means putting in place the structural policies needed to help offset the projected decline in potential growth over the next decade, focusing particularly on improving human capital, closing infrastructure gaps, and improving governance and institutions. These policies are also critical in reducing poverty and promoting shared prosperity.

This study builds on these themes by extending the literature on lessons from the global recession in several dimensions. First, whereas the previous literature focused on the experience of advanced economies, this study explores in depth the experience of a large group of EMDEs.[1] Second, while previous work has focused either on macroeconomic developments and policies (IMF 2018a), financial sector issues (IMF 2018b, World Bank 2019a) or structural reforms (OECD 2018), this study presents a unified review of these critical aspects from the perspective of EMDEs. Third, while the literature has covered specific aspects of financial market developments in EMDEs since the global recession (IMF 2015; World Bank 2018a), this is the first study to comprehensively document these changes.

This paper first briefly describes the main features of global recessions and recoveries to put the 2009 episode into a historical context. This is followed by a discussion of macroeconomic and financial market developments in EMDEs before, during, and after the 2009 global recession. The subsequent three sections present lessons and challenges faced by EMDEs today and policy options to meet these challenges, including World Bank Group policies that can support such efforts. The paper ends with a brief synopsis of all chapters of the book by Kose and Ohnsorge (2019).

2. Global recessions: Infrequent, but always costly

Since 1950, the global economy has experienced a global recession—defined as a contraction in global real per capita GDP—in almost every decade (1975, 1982, 1991, and 2009; Figure 2). These four episodes were characterized by highly synchronized downturns

[1] Several studies focus exclusively or predominantly on advanced economies, including IMF (2018a, 2018b); OECD (2018); and Liang, McConnell, and Swagel (2018).

in global trade, industrial production, capital flows, employment, and energy consumption (Kose, Sugawara, and Terrones 2019). They were triggered by different types of shocks and each exhibited unique features, but they were all accompanied by financial crises.[2]

The global recession of 1975 followed the shock to global oil prices triggered by the Arab oil embargo in October 1973. Although the embargo ended in March 1974, the supply shock associated with the sharp rise in oil prices quickly translated into a substantial increase in inflation and a significant decline in growth in many countries (Ha et al. 2019a). Monetary and fiscal policy easing, especially by advanced economies, helped spur a rebound of growth in 1976, but also ushered in an era of stagflation with disappointing growth but high and unstable inflation.

The global recession in 1982 was triggered by several developments, including a second oil price shock, a tightening of monetary policies in advanced economies, and the Latin American debt crisis. Oil prices rose sharply in 1979, partly owing to disruptions caused by the Iranian revolution, and this helped push inflation to new highs in several advanced economies. In response, monetary policies were tightened significantly, especially in the United States, causing sharp declines in activity and significant increases in unemployment rates in many advanced economies in 1982-83. The increase in global interest rates and a collapse of commodity prices in the early 1980s made it difficult for several Latin American countries to service their debts, resulting in debt crises in the region. Even though advanced economies were able to recover quickly, the debt crisis contributed to long-lasting growth slowdowns in many EMDEs in Latin America and the Caribbean (LAC) and in Sub-Saharan Africa (SSA).

The 1991 global recession resulted from the confluence of a wide range of shocks. The Gulf War was associated with heightened geopolitical uncertainty and a sharp increase in oil prices, which adversely affected global activity. In Central and Eastern Europe and the former USSR, the transition to a market economy was accompanied by high inflation and output contractions. In the United States, widespread weakness of lending institutions from the mid-1980s weighed on the housing market, especially during the credit crunch of 1990-91. Scandinavian countries had severe banking crises in the early 1990s, following the liberalization of financial sectors and rapid expansion in credit markets in the 1980s. In the European Union, problems with the European Monetary System's exchange rate mechanism in 1992 were accompanied by sharp declines in activity in many member countries. In Japan, the bursting of an asset price bubble resulted in a recession and a prolonged period of low growth and near-zero inflation. The broad-based financial distress in multiple large economies meant that the recovery from the 1991 recession was subdued.

The 2009 global recession followed the worst financial crisis since the Great Depression. As discussed in detail later, the crisis followed a period of loosening regulation and supervision of financial markets and institutions, asset price and credit booms in a number

[2] The events surrounding these episodes are discussed in detail in Knoop (2004), Reinhart and Rogoff (2009), and Kose and Terrones (2015). Barsky and Kilian (2004) and Hamilton (2011) present surveys of the history of oil shocks and the subsequent economic downturns.

of countries, and the rapid expansion of high-risk lending, particularly in U.S. mortgage markets. Although the epicenter of the crisis was the U.S. mortgage market, it quickly spread to other financial market segments and countries, becoming global in its reach. Banking crises in many European countries erupted in 2008 and culminated in a sovereign debt crisis in the euro area in 2011-12. The high degree of financial interconnectedness contributed to the transmission of the crisis to other advanced economies and some EMDEs. The aftermath featured prolonged asset price busts and credit crunches, a collapse in global trade, and synchronized recessions.

However, EMDEs, with the exception of those heavily exposed to the euro area debt crisis, weathered the 2009 global recession relatively well. With policy room that had been built since the Asian crisis—such as low debt, deficits, and inflation as well as high international reserves—many EMDEs were able to undertake countercyclical policy measures and used flexible exchange rates as shock absorbers. EMDEs also benefited from exceptional policy stimulus in advanced economies. The extraordinary policy stimulus provided especially by advanced economies but also many EMDEs laid the foundation for a strong global rebound in 2010. However, despite this recovery, the crisis had a long-lasting and damaging effects on global growth, which has remained lackluster during the subsequent decade.

Global recession are highly synchronized events internationally, with many economies sliding into recessions simultaneously. Remarkably, the proportion of economies in recession during successive global recessions has increased over time: it was close to 40 percent in the 1975 episode and about 61 percent in the 2009 global recession. The proportion of countries in recession typically starts rising ahead of the recession year. The 2006-07 period stands out for the historically low number of countries in recession. However, this was followed by a sharp reversal of fortune. In 2009, almost all advanced economies and roughly half of EMDEs were in recession. The degree of synchronicity in the last global recession was the highest in the past 70 years, possibly reflecting the depth of the global financial crisis and stronger international trade and financial linkages compared to prior decades.

In addition to the four global recessions, the global economy experienced low growth in 1958, 1998, 2001, and 2012. World output per capita grew at slightly less than 1 percent during these four years, the lowest growth rates the global economy registered during the past seven decades, except during global recessions and the years before and after them.

These downturns fall short of qualifying as a global recession because world real GDP per capita did not contract. For example, in 1958, global growth was weak because of slow growth or outright recessions in some major advanced economies. In 1997-98, economic activity in many EMDEs, particularly those in Asia, slowed sharply, but growth in advanced economies held up. In 2001, conversely, many advanced economies had mild slowdowns or recessions, but growth in major EMDEs, such as China and India, remained robust. In 2012, the global downturn was mainly driven by the euro area debt crisis.

Moreover, during the years of global downturns, the behavior of other global indicators

was mixed, implying that these episodes did not display the features of a global recession. For example, the main activity indicators did not suggest a broad-based weakness in the global economy in 1998. In 2001, although industrial production fell and the rate of global unemployment picked up slightly, both global trade flows and oil consumption increased. Equity prices declined substantially in 2001, and prices of commodities fell significantly in both episodes. During the global downturn of 2012, while some activity indicators did not show much weakness, global capital flows slowed, equity prices collapsed, and inflation declined.

The U.S. economy played a key role in global recessions and downturns. Although the four global recessions between 1975 and 2009 coincided with recessions in the United States, not every U.S. recession was associated with a global recession, since the United States experienced six additional recessions during 1950-2019, including recessions in 1958 and 2001 that coincided with global downturns. But it grew strongly during the 1998 global downturn and, to a lesser extent, during the 2012 global downturn.

3. Before the recession: A seemingly golden era

During 2001-07, the world economy appeared to be enjoying a golden era of growth. During this period, average output growth reached its highest pace since the early 1970s. Not only was growth buoyant, but inflation appeared to have been tamed in what was termed "the Great Moderation" (Figure 3). EMDEs were expanding rapidly as global supply chains and financial institutions expanded around the world.

A confluence of favorable circumstances fueled global trade and commodity demand. Advanced economies enjoyed a cyclical upturn after the global downturn of 2001, with output growth strengthening from 1.5 percent in 2001 to 2.6 percent in 2007. China was also growing rapidly as it integrated into global trade networks and supply chains, with its output almost doubling from the time of its World Trade Organization (WTO) accession in 2001 until 2007 (Koh and Yu 2019a).

Prolonged accommodative monetary policy in major advanced economies and rapidly growing savings in some large EMDEs helped maintain low global real interest rates and encouraged capital flows to EMDEs. Partly as a result of search for yield, gross capital inflows to EMDEs excluding foreign direct investment (FDI) swelled nearly seven-fold (from 1 percent of GDP in 2001 to 6.5 percent of GDP in 2007). FDI flows to these economies also expanded rapidly, almost doubling relative to GDP during the same period, and remittance flows to these economies rose by one-and-a-half times.

This benign external environment supported EMDE financial markets and domestic demand. EMDE equity market valuations, as measured by the MSCI index, more than quadrupled during 2002-07; EMDE bond spreads, as captured by the emerging market bond index (EMBI), and sovereign credit default swap (CDS) spreads in major EMDEs more than halved between January 2005 and June 2007. Benign financing conditions supported strong investment growth, and private consumption was supported by strong employment and income growth. Except in Europe and Central Asia (ECA), EMDE banks

were the main source of domestic private sector credit and were mostly funded by local deposits, thus limiting external funding risks (Arteta and Kasyanenko 2019). In ECA, however, EU accession was accompanied by credit booms in several economies that were funded by large EU-headquartered banks.

Rapid EMDE growth helped reduce global poverty. The number of low-income countries (LICs) declined to 49 in 2007, from 64 in 2001. Between 1990 and 2008, extreme poverty halved to 18 percent of the global population. China's rapid expansion accounted for about three-fifths of this decline while the remainder mostly reflected progress in Brazil, India, Indonesia, and Pakistan. Rapid EMDE growth reduced between-country inequality, halving the global Gini index—an indicator of income inequality—between the 1990s and 2005-07. In most EMDEs, within-country inequality also declined, albeit only marginally.

Robust economic growth allowed EMDEs to improve their fiscal and external positions and strengthen their macroeconomic and financial sector policy frameworks (Koh and Yu 2019a, b; Arteta and Kasyanenko 2019; Figure 4). On average, fiscal balances improved from a deficit of 0.8 percent of GDP in 2002 (after some deterioration during the 2001 global slowdown) to a surplus of 2.4 percent of GDP in 2007. Government debt declined steeply from 76 percent of GDP to 45 percent of GDP. Subdued inflation allowed central banks to maintain low policy rates, narrowing deficits improved fiscal positions, and rising international reserves strengthened external buffers. EMDE current account deficits narrowed from 3.5 percent of GDP in 2001 to 1.2 percent GDP in 2007. About 70 percent of EMDEs increased their international reserves by more than 10 percentage points of external debt while one-quarter of EMDEs increased them by more than 50 percentage points. Thanks to reforms in response to previous financial crises, many EMDEs entered the 2009 global recession with improved financial oversight frameworks.

4. During the recession: A highly synchronized contraction

The demise of this seemingly golden era of growth was swift, as rapid financial system growth during 2001-07 sowed the seeds for the global financial crisis and subsequent global recession. In the second half of 2007 and early 2008, with numerous defaults in the sub-prime mortgage market, the U.S. financial system teetered under increasing stress, and the failure of Lehman Brothers in September 2008 unleashed a full-blown crisis. A run on key funding markets exposed the fragility of other financial institutions, including major banks, investment dealers, and insurance companies that were involved in sub-prime mortgage lending or dependent on short-term wholesale funding.

The financial crisis was followed by a severe recession in the United States, during which output contracted by more than in any other U.S. recession since the Great Depression. Contagion quickly spread the crisis and recession to other advanced economies where consumer durables and investment spending plunged. Advanced-economy growth reversed from 2.6 percent in 2007 to -3.4 percent in 2009, leading to a global recession. Global per capita GDP contracted by 2.9 percent in 2009—more than in any previous global recession since the end of World War II.

Global trade plummeted, with global exports dropping 9.9 percent in 2009, compared to a 7.3 percent expansion in 2007 (Figure 5). Countries dependent on manufacturing exports in sectors with high income elasticities of demand, especially electronics and motor vehicles, suffered large export contractions. Commodity prices, particularly for energy and industrial metals commodities, declined sharply.

In a broad-based flight to safety, portfolio investment and foreign lending flows to EMDEs reversed sharply in 2008, rocking EMDE financial markets. Between June 2007 and December 2008, the EMBI bond spread widened nearly 600 basis points, the MSCI equity market index halved, and average CDS spreads in major EMDEs increased by 375 basis points (Figure 3). At the peak of the global recession, from September 2008 to March 2009, currencies in EMDEs with some of the most liquid financial markets (Indonesia, Mexico, Poland) weakened by more than 20 percent against the U.S. dollar.[3]

Despite these developments, EMDE output growth remained positive, although it did slow sharply, from 8.2 percent in 2007 to 5.9 percent in 2008 and 1.7 percent in 2009 (Koh and Yu 2019a). While steep, this slowdown was somewhat milder than during some previous global recessions (Figure 1). Three-fifths of EMDEs avoided output contractions entirely.

EMDEs weathered the global recession relatively well thanks to large, prompt, and global policy support. Coordinated by the G20, the largest advanced economies and EMDEs implemented unprecedented monetary and fiscal stimulus in 2009 and 2010. EMDE governments employed fiscal packages that included infrastructure investment, tax cuts, and social protection programs. EMDE central banks lowered policy interest rates, having tamed inflation before the crisis, and some EMDEs used their foreign reserves, accumulated before the crisis, to stabilize their currencies. On average in EMDEs, private sector credit relative to GDP declined only moderately and was considerably more stable than in their past episodes of financial distress (Arteta and Kasyanenko 2019). The incidence of sudden stops in capital inflows tipping countries into financial distress was about half of that prior to 2008, and centered in economies where pre-crisis credit booms had been funded by large capital inflows and where banks had a narrow deposit base, such as some economies in ECA (Feyen et al. 2014).

Although EMDEs as a whole weathered the global recession well, the effects varied across regions (Koh and Yu 2019a). Most EMDEs in ECA suffered severe output contractions, particularly those that were highly dependent on cross-border financing. Countries that were heavily reliant on commodity sectors for export receipts and fiscal revenues, such as those in LAC and the Middle East and North Africa (MNA), also fared relatively badly. EMDEs elsewhere withstood the crisis better, as they were less exposed to the financial turmoil and recession in advanced economies, and because they pursued countercyclical policies.

[3] The ECA region was the hardest hit. Exchange rates depreciated against the U.S. dollar by more than 30 percent in Belarus, Georgia, Serbia, and Russia and by more than 50 percent in Ukraine.

The experience of the seven largest EMDEs, the EM7 (Brazil, China, India, Indonesia, Mexico, Russia, and Turkey), was heterogeneous (Figure 6). The differences reflected, in part, the extent of each country's trade links to other crisis-hit countries, their pre-crisis vulnerabilities, and the speed, size, and effectiveness of policy stimulus (Koh and Yu 2019a). China and India, for example, were successful in mitigating the adverse impact of the global recession by putting in place large fiscal and monetary stimulus and using their sizeable international reserves (India) or capital controls (China) to stabilize currency markets. More broadly, EMDEs with stronger fiscal and external positions, lower inflation, sound financial sectors, better institutions, or lesser dependence on external demand and foreign finance, fared better, as did those that used countercyclical policies decisively to support activity.[4] Together with the globally coordinated expansionary policies, these characteristics helped limit the magnitude of economic and financial disruptions in many EMDEs.

During the global recession, the World Bank Group nearly doubled its annual financing commitments and provided support to large numbers of crisis-affected countries (Ye 2019). Its extensive and rapid response made effective use of traditional financing instruments alongside new crisis-specific facilities. Drawing on this experience, the WBG has since enhanced its surveillance of the global economy, rebuilt its capital, and refined its financing and operating model.

5. After the recession: The lackluster recovery

The sizable, prompt, and global monetary and fiscal stimulus in the largest advanced economies and major EMDEs initially supported a strong rebound in global trade, commodity prices, and capital markets. Capital flows returned to EMDEs although flows other than FDI initially remained below pre-crisis peaks. Stock markets rallied, and sovereign bond spreads retreated: by end-2010, the MSCI and EMBI spread had already nearly returned to pre-crisis (mid-2007) levels.

However, this rebound proved short-lived. The following decade has been marked by protracted weakness in the global economy. Since 2011, global trade growth has averaged 4.1 percent, well below pre-crisis rates (7.3 percent, 2002-07). Trade weakness has reflected a combination of factors, including weak demand growth in advanced economies, shifts in the composition of global demand, the maturation of global supply chains, and trade tensions between major economies (World Bank 2015a).

In 2011, commodity prices—starting with metals and agricultural prices and, later, oil prices—began to decline sharply from their peaks, reaching a trough in early 2016 and then recovering only moderately. The decline reflected both slowing demand growth, including in China, and ample supply after a period of rapid global investment in the resource sectors (World Bank 2015b, 2016a,b). OPEC initially tried to stabilize oil prices in the face of surging U.S. shale oil production, but abandoned this strategy in mid-2014.

[4] See also Balakrishnan et al. (2011), Berkmen et al. (2012), Blanchard et al. (2010), Cetorelli and Goldberg (2011), and Fratzscher (2012).

Oil prices then plunged to a trough in 2016, causing widespread disruption to oil-exporting countries (Baffes et al. 2015). At end-2018, energy prices were still 32 percent below their 2011 highs, industrial metals prices 20 percent below, and agricultural commodity prices 29 percent below. The decline in commodity prices—compounded by policy tightening as resource revenues collapsed, and reserves declined—dampened growth in the two-thirds of EMDEs that rely heavily on commodity exports (World Bank 2018b).

Capital flows to EMDEs have been volatile since the global recession, with repeated spikes in borrowing cost since mid-2013. Following the post-recession rebound, global capital flows have declined with episodes of sharp outflows in 2013, 2015, and 2018.[5] During these episodes, on average, the EMBI spread rose by about 50 basis points, the MSCI stock price index declined by 7.7 percent, capital inflows to EMDEs slowed sharply, and EMDE currencies depreciated against the U.S. dollar (Figure 7). While portfolio and other investment flows to EMDEs underwent bouts of reversals, FDI flows and remittances to EMDEs have remained more stable.

EMDE growth has slowed since 2010 to a trough of 4.1 percent in 2016 before a modest recovery took hold (Arteta and Kasyanenko 2019). The growth slowdown during 2011-16 was synchronous (affecting more than three-fifths of EMDEs) and protracted, with the steepest slowdowns in LAC and the mildest in South Asia (SAR). In LICs, growth slowed from 6.9 percent in 2012 to a trough of 4.8 percent in 2016. Amid this broad-based growth weakness, EMDEs have struggled to fully unwind fiscal and monetary stimulus (World Bank 2015a, 2017a, 2019a).

Most components of EMDE demand growth slowed concurrently. Investment and export growth suffered especially sharp declines, to less than half their rates prior to the global recession (World Bank 2017b, 2019a). In 2017, EMDEs saw a mild cyclical recovery, led by growth in exports and investment as global manufacturing and trade picked up, but EMDE growth has since slowed again. Much of the post-crisis slowdown appears to have been structural in nature. Estimates of potential output growth in EMDEs slowed from 5.9 percent a year in 2003-07 to 4.8 percent a year in 2013-17, reflecting the effects of weak investment on capital stocks, demographic trends turning from tailwinds to headwinds, and slower productivity growth (Ruch 2019a).

This has meant a reversal of rapid pre-crisis convergence with advanced-economy per capita incomes. In 2019, per capita income gaps with advanced economies are expected to widen in about one-third of EMDEs—and more in the Middle East and North Africa (MNA), LAC, and Sub-Saharan Africa (SSA). That said, in SSA, especially, there is wide heterogeneity. In the largest three economies (Angola, Nigeria, South Africa), per capita income growth has been negative since 2015-16. Some metal exporters and countries affected by fragility, conflict and violence have also had weak per capita growth. In contrast, some non-resource-intensive economies have had robust per capita income growth. Weak EMDE growth has also slowed the pace of decline in between-country

[5] These episodes were especially pronounced in the third quarter of 2013, third quarter of 2015, and second quarter of 2018.

inequality. Although the within-country Gini index of income inequality declined in 79 percent of EMDEs between 2005-07 and 2015-17, this often left behind those living on incomes in the bottom 40 percent of the distribution. Since about 2009 (the first year for which data are available), the average income of households in the bottom 40 percent of the income distribution has fallen relative to the economy-wide average income in almost one-half of EMDEs with available data.

A weak global economy has coincided with country-specific challenges in some large EMDEs. In China, with the unwinding of policy stimulus, efforts were also made to guide the economy away from investment- and export-driven growth toward more balanced growth. The resulting slowdown in China, from growth of 11.3 percent on average during 2002-07 to 6.3 percent in 2018, has weighed on growth in its trading partners and in commodity exporters (Huidrom et al. 2019a; World Bank 2016a). In some other major EMDEs, episodes of policy uncertainty, social tensions, geopolitical events, and civil wars caused sharp losses in confidence (Koh and Yu 2019a).

EMDE financial systems have continued to evolve. Since the global recession, new regulatory frameworks across the world have, on net, strengthened the global banking system (Arteta and Kasyanenko 2019). However, they have also encouraged a retrenchment by crisis-hit global banks from several EMDE regions—ECA and, to a lesser extent, LAC and SSA—where lending by international banks was an important source of finance (Figure 8). The exit of foreign banks has allowed a rapidly expanding footprint of EMDE-headquartered banks in some EMDE regions, particularly in SSA. It has also been associated with increased reliance by EMDEs on other types of international capital inflows, including sales of local currency-denominated bonds to foreign portfolio investors.

The global recession initially boosted structural reform efforts in EMDEs, but this momentum was short-lived and confined to a few areas. Since the global recession, there have been reforms to strengthen business climates (which, however, lost momentum after 2010), as well as reforms to improve access to finance, strengthen financial supervision, reduce trade cost and lower energy subsidies (which were mostly sustained). In contrast, governance has deteriorated to 1990s levels and EMDEs have become less open to international capital flows.

6. A clouded horizon: Prospects and risks

After a decade of lackluster growth following the global recession, EMDEs are confronted by formidable short- and long-term challenges. Global growth in 2019 is now expected to be slower than previously projected, reflecting broad-based weakness in industrial activity and world trade (Figure 9). Global growth is forecast to stabilize in 2020, with slowing expansions in some major economies countered by a modest cyclical recovery in other EMDEs.

This baseline assumes that the effects of earlier financial pressure and policy uncertainties that have weighed on some large EMDEs begin to dissipate, and that global financing conditions will remain benign, encouraging a modest recovery of EMDE capital inflows.

It also assumes no further escalation in trade tensions between major economies and broad stability in commodity prices. However, uncertainty is wide around this global growth outlook, with risks to baseline forecasts heavily tilted to the downside. Although the probability of a full-fledged global recession remains very low, it could increase materially for several reasons.

6.1 Trade tensions and other adverse policy shocks

Rising policy uncertainty in major economies has already weakened confidence and investment spending (Figure 10). An intensification of such uncertainties, including through a further sharp escalation in trade tensions between the United States and China or a disorderly exit of the United Kingdom from the European Union (EU), could have significant consequences for trade and investment.

Trade relations between the United States and several of its major trading partners, most notably China, remain fragile. A further increase in U.S. tariffs, and a subsequent retaliation by China, would result in substantial economic losses for exporters and increase costs for many other sectors, although there could be some short-run benefits from trade diversion for some countries (Freund et al. 2018). Higher tariffs on U.S. imports of automobiles and parts could disrupt global value chains (GVCs), which are tightly integrated. Perhaps most worrisome is the danger that these tensions could spill over and undermine the broader commitment to free trade, with potentially even more damaging effects. For example, estimates suggest that a global escalation of tariffs up to limits allowed under the General Agreement on Tariffs and Trade (GATT) could shave 9 percent from global trade flows—similar to the drop observed during the 2009 global recession (Kutlina-Dimitrova and Lakatos 2017).

A disorderly Brexit from the EU could severely impact the United Kingdom and, to a lesser extent, European trading partners, if it results in trade diversion and/or large disruptions and delays at border crossings. An abrupt interruption in financial relationships and cross-border financial flows could also trigger financial instability.

6.2 Renewed financial stress

A prolonged period of low global interest rates, and prospects for its continuation, have encouraged a search for yield among investors that may contribute to growing vulnerabilities. Renewed financial market stress could have increasingly pronounced and widespread effects in view of rising indebtedness. Such episodes could be triggered or amplified by several factors.

An increase in corporate default rates could lead to a rapid deterioration in financial market sentiment, a repricing of risks, and a spike in bond spreads for more vulnerable borrowers (FSB 2019a). This is especially true in light of the increased use of riskier, less transparent debt instruments such as leveraged loans, which have now risen above their pre-crisis highs, and collateralized loan obligations (CLOs) in advanced economies. A broad-based loss of investment-grade status would place both corporate and sovereign

borrowers under stress, especially in view of the low interest coverage afforded by corporate earnings in several sectors and large volumes of bond refinancing scheduled in coming years (BIS 2019).

Large currency depreciations in EMDEs could be triggered by unexpected tightening of U.S. monetary policy, sharp commodity price declines, concerns about debt sustainability, or domestic policy uncertainties. Renewed financial stress in large EMDEs could be contagious if accompanied by heightened investor risk aversion and shifts in portfolio allocations.

Government guarantees to the financial system, either explicit or implicit, coupled with large bank holdings of government debt, can create self-reinforcing feedback effects. As a result of increased bank holdings of government debt, this sovereign-bank nexus has become more pronounced in EMDEs since the 2009 global recession, as well as in some advanced economies, especially in the euro area (Feyen and Zuccardi 2019).

6.3 Geopolitical risks and conflict

The number of armed conflicts has risen significantly, to 51 during 2015-17, compared to 35 in 2000-14. The potential for further conflict is elevated by increased polarization of public opinion in some countries, increased income inequality, and heightened economic and political disputes between countries.

Renewed conflict could disrupt regional and global economic activity, as well as financial and commodity markets in the short term, while setting back potential growth and increasing refugee flows over the medium term. Conflict near important shipping bottlenecks could lead to disruptions in global trade and spikes in commodity prices.

Terrorist attacks could hinder confidence, travel, and tourism, and could increase risk aversion and transaction and insurance costs (World Bank 2016a). Cyber attacks could disrupt political processes and economic activity, especially if they impact critical information and communications infrastructure.

Growth in a number of countries would also be set back by severe weather events, which have been increasing in frequency, severity, and cost (IPCC 2018). The interplay of climate change with basic needs insecurity (related to food, water, and land), natural resource destruction, and population displacement creates fertile ground for conflict. Refugee flows from affected countries could put strain on neighboring areas and trigger a further shift toward protectionist and populist policies.

6.4 Risks of abrupt slowdown in major economies

Recessions often follow rapid increases in debt and elevated asset price valuations (Claessens, Kose, and Terrones 2012). Such buildups tend to unwind suddenly, often during or shortly after the end of a period of monetary policy tightening (Sims and Tao 2006). In the United States, three of the last four periods of monetary tightening were followed by a recession within a year and a half, with the most severe contractions

following unsustainable housing market booms (Mian and Sufi 2009).

The recent rise in U.S. private debt is less pronounced than that observed prior to previous recessions, mostly due to deleveraging by households and banks since 2009. However, U.S. corporate debt has risen significantly, increasing the likelihood that corporate bond defaults could amplify the next downturn (FSOC 2018). In the euro area, the risk of a sharper-than-expected slowdown has risen amid growth disappointments since mid-2018, decelerating global trade, and elevated policy uncertainty. Renewed financial stress in vulnerable economies would lead to slower investment, higher unemployment, and new concerns about banking sector health.

Risks to China's growth outlook are also tilted to the downside. While fiscal and monetary policy stimulus could offset the adverse effect of trade tensions with the United States, it would delay efforts to contain credit growth and the buildup of balance sheet vulnerabilities of nonfinancial corporates, local governments, and financial institutions (World Bank 2018b). The materialization of these risks could have significant adverse repercussions on activity. Although the authorities hold policy levers to mitigate such repercussions in the near term, continued fiscal and monetary stimulus could become ineffective over time while adding further leverage to private and public sectors. Providing stimulus through state-owned enterprises may eventually undermine economy-wide productivity growth. In other EMDEs, private debt levels and growth rates have been well above those during previous credit booms—two-thirds of which ended in growth slowdowns and more than one-third in financial crisis (Acharya et al. 2015).

6.5 Combination of risks leading to global downturn

These pervasiveness of vulnerabilities increases the danger of a broad-based downturn in major economies that could trigger a global downturn. The United States, the euro area and China together accounted for nearly 50 percent of global GDP and are the primary sources of spillovers to EMDEs other than China via trade, financial, commodity, and confidence channels (World Bank 2016a, Kose et al. 2017b, Huidrom et al. 2019a). After one year, a 1 percentage point growth shock in these economies could curtail global growth by 1.7 percentage points and EMDE growth (excluding China) by 1.4 percentage points.

6.6 Long-term challenges

EMDEs face a further weakening of potential growth over the next decade (Figure 11; Ruch 2019b). Their potential growth is expected to be about 1.6 percentage points weaker than before the global recession, at 4.3 percent on average in 2019-27 (World Bank 2018b). Productivity growth has declined as the growth of productivity-enhancing investment has slowed, gains in factor reallocation (including the migration of labor from agriculture to manufacturing and services) have faded, and growth in global value chains has moderated. Slower investment growth has tempered capital accumulation. Demographic trends have also turned less favorable to growth since the share of working age populations in EMDEs peaked around 2010. Many of these factors will weigh on potential growth over the next decade. Commodity exporters face the additional challenge of prospects for weaker

commodity demand growth over the next decade (Baffes et al. 2018).

Weak prospects put at risk the achievement of poverty reduction goals. The rate of poverty reduction has slowed since the 2009 global recession (World Bank 2018c). Poverty declined by 1.25 percentage points per year between 2011 and 2013, but by only 0.6 percentage points per year between 2013 and 2015. Forecasts for these trends to 2018 suggest a further slowdown to 0.5 percentage points per year. Over the longer term, weaker long-term growth prospects put at risk the achievement of the target of lowering the global extreme poverty rate to 3 percent of the population by 2030. Even if the growth rates of 2005-15 are maintained, the world will not be able to reach the 3 percent global poverty rate target set for 2030 (Figure 12).[6] This is because more than half of the global poor now reside in SSA, where per capita growth is feeble. Based on current trends, the share of global poor living in SSA will likely increase to 87 percent by 2030.[7]

7. Lessons and policy challenges

7.1 Lessons

The 2009 global recession and the long shadow it has cast over the subsequent decade offer important lessons for EMDE policymakers today (Kose and Ohnsorge 2019).

In a recession, early policy action is critical. The sizable, prompt, and coordinated policy stimulus that was implemented at the height of the global financial crisis in 2008 could not prevent the subsequent global recession, but it did help dampen its severity. EMDEs benefited from their own policy stimulus as well as that of major advanced economies. They were able to engage in such stimulus because they had accumulated policy room before the crisis.

Policy room is needed to respond to adverse shocks. The global recession has shown, once again, not only the importance of taking action to prevent crises and their repercussions but also the importance of creating and preserving policy room to enable countries to act when their economies are hit by crises and other shocks. Low inflation allowed central banks to implement monetary stimulus, ample foreign currency reserves allowed them to dampen exchange rate volatility, and sound fiscal positions (narrow deficits and low debt) permitted them to support activity with fiscal stimulus. The global recession also underscored the challenges of unwinding stimulus in an anemic post-crisis environment.

Sound policy frameworks help create policy room. The prevalence of flexible exchange rate arrangements and inflation targets served EMDEs well during the global recession by helping create policy room before the recession. In the runup to the global recession, exchange rate flexibility had helped discourage the buildup of large foreign currency

[6] For a more detailed discussions, see World Bank (2018c); Dollar, Kleineberg and Kraay (2013); Dollar and Kraay (2002); Foster and Székely (2008); Ravallion and Chen (2003); and Santos, Dabus, and Delbianco (2019).

[7] To reach the 2030 goal of global poverty rate of 3 percent, GDP per capita in SSA would need to grow by 6 percent per year, with the bottom 40 percent of the population achieving 8 percent growth, that is, there would have to be a reduction in income inequality. The last three years, 2017-2019, have seen no per capita growth in SSA. In fact, only a small and declining proportion of EMDEs have achieved such growth in any year since 2009 (World Bank 2019a).

exposures that might have exacerbated stress during the recession. During the global financial crisis and subsequent global recession, exchange rate flexibility acted as a shock absorber. The shift to inflation-targeting regimes had helped several EMDEs lower inflation in the runup to the global recession, while fiscal rules had supported the elimination of fiscal deficits in the global expansion leading up to the 2009 recession (Ha et al. 2019b).

Countercyclical policies are no substitute for vigorous reforms in support of long-term growth. Despite the initial rebound from the global recession of 2009, the subsequent decade has been one of tepid growth punctuated by bouts of financial market stress and a commodity price collapse. This has illustrated the limitations of macroeconomic stimulus in supporting demand beyond the short-term and underscores the need for reforms that can help durably improve long-term growth. The momentum of structural reforms in EMDEs increased in some areas in the immediate aftermath of the crisis, but was not maintained. The quality of governance in EMDEs even relapsed to 1990s levels.

Economic diversification supports resilience. Economies that were particularly reliant on the production of consumer durables (during the global recession), the euro area banking system (shortly after the global recession), or exports of commodities (in the long shadow of the global recession) suffered sharp or chronic declines when adverse shocks hit. These are examples of how lack of diversification tends to make economies more vulnerable to shocks. Successful diversification of economies requires investment in human capital, technology, and institutions, as well as sound regulation that can, over time, become the source of rapid productivity growth.

Sound financial systems strengthen resilience. During the global recession and subsequent euro area crisis, the most severe credit crunches occurred in economies where credit booms had been funded by large capital flows and where banks had a narrow deposit base, such as in parts of ECA. In some of these economies, deep recessions increased nonperforming loans and eroded bank capital to an extent that they substantially amplified the negative shocks, and required extensive government support of the financial system. The more resilient economies were the ones that had strong financial regulatory and supervisory regimes that encouraged robust bank capitalization, the reliance on stable funding sources, and effective risk management systems.

Robust resolution frameworks help the recovery. Since the global recession, nonperforming loans have risen in several countries. Until resolved, nonperforming loans erode bank balance sheet health and weigh on lending. Stronger corporate bankruptcy and bank resolution regimes can help resolve nonperforming loans and return financial system balance sheets to health.

Macroprudential measures and capital flow management policies can lower volatility. The global recession has shifted the debate in the economics profession to a wider recognition of the roles of macroprudential policies and capital flow management measures in preventing and containing crises. Being aimed at limiting the buildup of systematic risks, macroprudential policies can prevent the emergence of vulnerabilities that amplify

the impact of recessions. Capital flow management measures can reduce the volatility of capital flows during times of economic stress, provided they are accompanied by sound macroeconomic policies.

7.2 Policy challenges

Differences between 2009 and 2019

EMDEs would now be hard pressed to replicate the successful policy response of a decade ago, for several reasons.

EMDE now have more limited fiscal policy space. During the 2009 global recession, the G20 recognized that the "global crisis require[d] global solutions." These included robust, rapid, and coordinated macroeconomic policy stimulus (G20 2009). The fiscal response in G20 countries, measured as the cumulative change in the primary fiscal balance from 2009 to 2011, averaged 6.6 percent of GDP. This was two-and-a-half times larger than the average response to 45 other banking crises since 1990 (Laeven and Valencia 2018). The simultaneous fiscal expansion helped speed the recovery from crisis as the positive impact of fiscal stimulus in one country spilled over to its neighbors (Blagrave et al. 2017). Today, G20 economies have higher average public debt levels than prior to the 2009 global recession. In EMDEs, average government debt has risen by 10 percentage points of GDP, to 54 percent of GDP in 2018. These higher debt levels reduce policymakers' ability to respond with deficit spending, as there is less room for additional borrowing and stimulus tends to be less effective under weak fiscal positions (Huidrom et al. 2019b). Although, for now, global borrowing costs remain low, past experience suggests that they can rise steeply during financial market stress and heavily restrict EMDE governments' room for maneuver (World Bank 2019b).

EMDEs also have more limited monetary policy space. During the 2009 global recession, monetary policy in G20 countries also responded aggressively. Policy rates were lowered by 360 basis points, on average, between September 2007 and December 2009. The U.S. Federal Reserve lowered rates by over 500 basis points in less than two years and reached the effective zero lower-bound by December 2008. To respond to U.S. dollar funding shortages, bilateral swap lines were established between the Fed and 14 other central banks, including EMDE institutions, as well as among central banks in Europe. With policy rates effectively at zero in most advanced economies, and negative in some, policymakers turned to unconventional policies, including quantitative easing and forward guidance, to further stimulate activity. Today, in advanced economies, low policy rates leave little room for further conventional monetary accommodation. The initial provision of unconventional monetary policy stimulus that was effective following the 2009 global recession may be subject to diminishing returns. While many EMDEs still have monetary policy room, amid low inflation and with policy rates well above zero, they may be compelled to tighten policy regardless of output weakness if financial market stress materializes.

Commitment to multilateralism appears to have weakened. During the global recession,

the G20 made a commitment to strengthen multilateral cooperation. The group took a stand "to fight against protectionism"—by not raising existing or implementing new barriers to trade or investment—and "committed to further trade liberalization" (G20 2009). These commitments were generally upheld with little increase in protectionism in the years immediately following the crisis (Kee, Neagu, and Nicita 2013). More recently, however, commitments to multilateralism and trade liberalization have weakened, with an increasing number of new trade restrictions. New import-restrictive measures were imposed on 3.5 percent of G20 imports between May and mid-October 2018—a six-fold increase compared to the previous six-month period and the largest increase on record (WTO 2018). Further restrictions and tariffs were imposed subsequently.

More encouraging have been financial sector reforms and the expansion of country-specific, regional, and multilateral funding mechanisms included in the global financial safety net. These have increased the resilience of the global financial system (ECB 2018). Generally, banks in advanced economies are now better capitalized and less leveraged than in 2008-09 (IMF 2018b). The size of the global financial safety net tripled between 2007 and 2016 including through the creation of regional financing arrangements and the expansion of IMF resources and international reserve holdings (IMF 2017). There are also now an estimated 160 bilateral swap lines between central banks around the world (Bahaj and Reis 2018). The People's Bank of China alone maintains over 100 active swap lines with more than 40 countries, including many EMDEs, and the Chiang Mai Initiative establishes swap lines between ASEAN countries (Bahaj and Reis 2018).

Countercyclical policy in a constrained environment

A successful response to a future global downturn would require an effective and coordinated macroeconomic policy response alongside a strong commitment to preserve an open, fair, and rules-based global trading system. For advanced economies, this would include the operation of automatic fiscal stabilizers and—where fiscal room permits—increased discretionary spending in productive areas or well-targeted tax cuts, as well as clear and credible monetary policy actions and guidance that bolster market confidence. While large potential capital flows may limit monetary policy room in some EMDEs, monetary policymakers in other EMDEs may have room to implement conventional policy stimulus and, where this is insufficient, shift to unconventional policies (Cavallino and Sandri 2018; Gopinath 2017; Rey 2015). Policy makers should ensure that fiscal stimulus is timely (to mitigate demand shortfalls promptly), temporary (to be reversed as the economy recovers), and well-targeted (at households and firms with the most severe liquidity constraints) to ensure that benefits outweigh the possible negative effects of increased debt.

Macroprudential policy tools, which have expanded in use and number in the last decade, can provide a buffer in the event that systemic risks materialize (IMF-FSB-BIS 2016). Countercyclical capital buffers could help absorb asset deterioration when crisis hits. Limits on banks' foreign exchange positions and reserve requirements on foreign funding could help EMDEs avoid currency mismatches, while lower loan-to-value ratios could help

limit the build-up of leverage in balance sheets. New challenges posed by fintech may need to be navigated carefully and, in some EMDEs, the capacity of regulators and supervisors needs to be built to adjust to rapidly evolving financial market developments (World Bank 2019a).

Promoting domestic growth and resilience

Heightened downside risks to global growth highlight the need for policymakers to reinforce domestic policy room against possible negative shocks, and to shore up domestic growth prospects. In EMDEs, policymakers need to use the opportunity provided by still-benign financing conditions to rebuild fiscal and monetary policy room to confront future shocks, while safeguarding or expanding growth-enhancing investment. Amid adverse debt dynamics and narrowing fiscal space, policymakers need to strengthen domestic revenue mobilization, prioritize growth-enhancing spending, and improve debt management and transparency. Increased public sector efficiency (including reining in poorly targeted subsidies to households or state-owned enterprises) and measures to foster private sector investments will also be key to meet large infrastructure needs and achieve critical development goals.

In countries where progress has flagged, steps are needed to reinvigorate sustainable growth (Figure 13). A key area of focus should be to improve policy and regulatory environments in ways that support stronger potential growth and social cohesion. This includes efforts to draw groups that are only marginally attached to the labor market into formal employment, to encourage skills development and entrepreneurial activity, and to expand private investment (G20 2018). Greater financial inclusion of groups lacking access to finance could also help increase productivity.

Measures to strengthen financial resilience are needed to address rising financial vulnerabilities. This can include initiatives to improve credit quality, insurance regulation, loan restructuring mechanisms, adequately enforced bankruptcy laws, recognition of non-performing loans, cross-border bank resolution, buffers in bank and non-bank institutions, and the introduction of centralized clearing for derivatives transactions (IMF 2018b).

Policy priorities

Policy priorities are necessarily country-specific. That said, there are some general patterns. For example, countries facing weak demand but having ample fiscal or monetary space may want to activate macroeconomic stimulus policies. Countries with precarious fiscal sustainability may want to prioritize strengthening fiscal positions in a manner that is the least damaging to output. This would likely require a focus on spending efficiency and domestic revenue mobilization. Countries with high foreign exchange exposures may want to prioritize macro- and micro-prudential measures. Countries with large informal sectors may want to prioritize investing in education, expanding access to finance and markets, and streamlining (and effectively enforcing) business and tax regulations (World Bank 2019c). Countries with flagging potential growth as a result of demographic trends may want to prioritize reforms to benefit systems as well as strengthening education and

health systems; those with slowing potential growth as a result of weak investment or productivity may want to focus on removing policy uncertainty and strengthening business and regulatory environments. Countries under severe political pressures may be forced to postpone much-needed reforms and instead focus on narrower agendas.

Multilateral initiatives

Multilateral fora would again have an important role to play in the event of another sharp global downturn. Improving and expanding the global financial safety net would help boost confidence and bolster financial resilience (IMF 2017). Well-coordinated support from international financial institutions could help governments stimulate activity and protect vulnerable populations. Collaboration between various financial authorities could help EMDEs mitigate contagion from international financial stress. Extended foreign exchange swap lines could help ease foreign currency funding pressures on EMDE banks, lower their cost of U.S. dollar funding, and help prevent bank failures (Goldberg, Kennedy and Miu 2010). Creditors to EMDEs can intensify efforts to improve the reporting and transparency of debt, especially to non-traditional creditors.

The global community also needs to focus on new threats to sustainable and inclusive growth and financial stability. International cooperation is needed to address the fast pace of fintech development, cybersecurity risks, and the role of credit institutions outside the ambit of prudential authorities (FSB 2019b). Transformative technologies could bring higher productivity as well as new economic opportunities that raise employment and incomes. However, the transition will likely create challenges. To harness technology for broad-based faster growth and productivity, policies need to support people who face disruptions from new technologies, including job losses, and address related distributional issues (G20 2018).

8. Synopsis

The remainder of this paper presents a summary of each chapter of Kose and Ohnsorge (2019). After discussing the motivation of the chapters, each summary explains the main questions, contributions to the literature, and analytical findings.

Chapter 2: What happens during global recessions?

As Kose, Sugawara and Terrones (2019) point out, global recession has been a recurring topic of debate over the past decade, reflecting the breadth and severity of the 2007-09 global financial crisis, the halting nature of the recovery, and the more recent fears that the global economy was on the edge of another downturn. A better understanding of global recessions requires an appreciation of the growing importance of EMDEs and of cross-border trade and financial linkages. The increasing role of EMDEs means that it is no longer sufficient to monitor cyclical fluctuations in advanced economies to understand the global business cycle. This implies the need for a better understanding of the global business cycle requires going beyond the usual set of advanced economies to a much

broader group that also includes EMDEs.

Against this background, Kose, Sugawara and Terrones (2019) examine the main features of global recessions and the ensuing recoveries and expansions. Specifically, they address three questions:

- What happens during global recessions and recoveries?
- How do global recessions and recoveries vary across different groups of countries, particularly advanced economies, EMDEs, and LICs?
- What happens during global expansions and how does the current global expansion compare with previous ones?

Kose, Sugawara and Terrones (2019) begin by documenting turning points of the global business cycle, in line with Kose and Terrones (2015). These are identified by means of two methods widely used in the analysis of national business cycles: a statistical method and a judgmental method. The former defines a global recession as taking place when there is a decline in annual global real GDP per capita. The judgmental method considers whether there is strong evidence for a broad-based decline in multiple key indicators of global economic activity in any given year. Kose, Sugawara and Terrones (2019) focus on six main global activity indicators: real GDP per capita, industrial production, trade, capital flows, oil consumption, and employment. These two methods together provide an intuitively appealing characterization of the turning points of the global business cycle and translate into a concrete definition of a global recession.

Specifically, a global recession is defined as a contraction in global real GDP per capita accompanied by a broad decline in various other measures of global activity. The definition of a global recovery also closely follows the standard definition used in the context of national business cycles. The recovery phase is the period after the trough and defined here as the one- or three-year period following the trough of the cycle. The recovery is thus the earlier part of the expansion phase, which refers to the whole period between two recessions.

Kose, Sugawara and Terrones (2019) present the following findings.

First, in the seventy years since 1950, the world economy has experienced four global recessions: in 1975, 1982, 1991, and 2009. In each of these episodes, there was a contraction in annual real per capita global GDP and broad-based weakness in other key indicators of global economic activity. These episodes were highly synchronized, involving severe economic and financial disruptions in many countries around the world. The 2009 global recession was by far the deepest and most synchronized episode among the four.

Second, global recoveries usually involved a broad-based rebound in macroeconomic and financial activity. Among the four episodes, the recovery from the 1975 recession saw the

highest growth during the recovery. Thanks to large, prompt, and globally coordinated policy support, the recovery following the 2009 recession was the second strongest among the four global recessions.

Third, average per capita growth declined more in advanced economies than EMDEs during global recessions. As the epicenter of the financial crisis, advanced economies also felt the brunt of the 2009 global recession. In contrast, EMDE output growth remained positive during the recession. The EAP and SAR regions even continued expanding during global recessions. However, the other four EMDE regions, particularly those with more reliance on exports of industrial commodities, experienced per capita output declines. LICs were able to continue growing during the 2009 global recession whereas their per capita growth had plummeted in the previous episodes.

Fourth, although the post-2009 global expansion was the weakest of the four in advanced economies, EMDEs delivered a stronger recovery post-2009 than after any of the three previous global recessions. The duration of the global expansions varied from 6 to 17 years. The latest global expansion registered average per capita growth comparable with that of previous episodes.

Fifth, monetary and fiscal policies often became expansionary going into global recessions, and they typically supported the ensuing global recoveries. Following the 2009 global recession, monetary policy remained highly accommodative for most of the 2010s, with advanced economy central banks introducing a wide range of unconventional measures to ease credit. However, after the initial implementation of large, coordinated, fiscal stimulus programs during 2008-09, advanced economies withdrew fiscal support, out of concerns for the growth of public debt, and government expenditures fell after 2010. By contrast, EMDEs have generally employed expansionary fiscal and monetary policies during the current expansion, while adjusting the settings of their monetary policy instruments in response to cyclical conditions.

Kose, Sugawara and Terrones (2019) build on an extensive literature on global business cycles in four dimensions. First, it covers a longer time span of annual series (1950-2018) and a larger set of economies (181). Second, Kose, Sugawara and Terrones (2019) is the first study that presents an analysis of the phases of the global business cycle with quarterly output series of 105 countries over the period 1960:1-2019:2. Third, it expands on the set of macroeconomic and financial variables that Kose and Terrones (2015) analyzed to present a broader perspective on the evolution of the global business cycle. Fourth, it presents a detailed analysis of global expansions and puts the current global expansion in context by comparing it with previous such episodes.

Chapter 3. Macroeconomic developments

Koh and Yu (2019a) document macroeconomic developments in EMDEs before, during and after the global recession of 2009. They show that, overall, EMDEs weathered the global recession relatively well. However, EMDEs with stronger pre-crisis fundamentals—

such as adequate foreign exchange reserves, sound fiscal positions, and low inflation—suffered milder growth slowdowns, in part due to their greater capacity to engage in monetary and fiscal stimulus. Low-income countries were also resilient, as foreign aid and inflows of remittances remained relatively stable. In contrast, EMDEs that were heavily dependent on short-term capital flows—such as portfolio investment and cross-border bank lending—fared less well, especially those in ECA. A key lesson for EMDEs is the need to strengthen macroeconomic frameworks and create policy space to prepare for future global downturns.

Specifically, Koh and Yu (2019) address the following questions:

- How strong were the economic fundamentals in EMDEs prior to the global recession?
- How did EMDEs fare during the recession and in its aftermath?
- What explains the sluggish post-recession recovery in EMDEs?

Koh and Yu (2019a) document the following trends.

First, prior to the 2009 global recession, EMDEs benefitted from broad-based and rapid growth, supported by strong domestic demand and a benign external environment. On the eve of the global financial crisis, EMDEs accounted for almost one-third of global output and global exports, up from about one-quarter in 2001. EMDEs became a key source of global savings during the pre-crisis period. Gross saving in EMDEs rose by 10 percentage points of GDP between 2001 and 2007, while benign financing conditions encouraged strong investment growth. EMDEs accumulated sizeable current account surpluses, reduced fiscal deficits, lowered debt, and built foreign exchange reserves.

Second, EMDEs weathered the global recession relatively well, particularly those with strong fundamentals that allowed the use of expansionary macroeconomic policies and those that were less exposed to global trade and finance. EMDEs that had built central bank credibility, established low inflation, and secured sound fiscal positions had space to engage in monetary and fiscal stimulus and thus fared better during the crisis, as did those that had accumulated ample foreign exchange reserves that could be used to stabilize exchange rates. EMDEs that were heavily reliant on more volatile financing sources (such as portfolio investment and cross-border bank lending), especially those in ECA, suffered steeper recessions.

Third, post-crisis growth in EMDEs has been disappointing. Although still well above advanced-economy growth, EMDE growth slowed steadily after the global recession, from a peak of 6.5 percent in 2011 to a trough of 3.8 percent in 2015, continuing at a moderate 4.3 percent a year during 2017-18. This slowdown had both cyclical and structural origins. It reflected weaker growth in advanced economies; the phasing out of policy stimulus in several large EMDEs and advanced economies; a slowdown in potential growth in many

EMDEs, including China; China's shift toward a more balanced growth model; a sharp decline in commodity prices in 2012; bouts of financial stress in major EMDEs; and episodes of policy uncertainty that dampened confidence and weighed on investment.

Fourth, although growth is expected to stabilize somewhat, it will likely remain subdued in the near future—and subject to downside risks—and slow further over the longer term (World Bank 2019b). Population dynamics in EMDEs reached a turning point in 2010 when the share of the working-age population stabilized after several decades of rapid increases. Productivity growth is expected to remain lackluster as diminishing growth prospects weigh on investment. This will contribute to a potential growth slowdown of about 1.6 percentage points from pre-crisis rates, to an annual average of 4.3 percent in 2019-27 (World Bank 2018b).

Fifth, ample policy room, sound institutions, and international policy coordination helped mitigate the adverse effects of the 2009 global recession. The window of opportunity for rebuilding resilience before the next downturn materializes may be narrowing. This in turn highlights the urgent need to rebuild policy space to enhance the resilience of those EMDEs with eroded policy room.

Koh and Yu (2019a) make several contributions to a growing literature, drawing lessons from the global financial crisis and the 2009 global recession. First, Koh and Yu (2019a expand on earlier studies of the global recession by introducing an EMDE focus and extending the horizon of the discussion. Previous studies examined the initial impact of the global financial crisis on EMDEs, but did not reach far into the post-crisis period (Blanchard, Faruqee, and Das 2010; Berkmen et al. 2012; World Bank 2009). Other studies focused on the cross-border transmission of the crisis among advanced economies (Arestis and Karakitsos 2013; Blinder 2013; Imbs 2010; Mishkin 2011). A third set of studies examined the impact of the financial crisis on the real economy in advanced economies (Ball 2014; Bernanke 2018; Gertler and Gilchrist 2018; Perri and Quadrini 2018) or the lasting nature of the macroeconomic effects of the financial crisis (Chen, Mrkaic, and Nabar 2019; IMF 2018a). Second, Koh and Yu (2019a delve deeper into developments in specific EMDE regions and the largest emerging markets. Third, it draws lessons from the global recession that are relevant for today's policy challenges.

Chapter 4. Financial market developments

Across EMDEs, robust economic growth prior to the 2009 global recession was accompanied by rapid financial deepening, as documented by Arteta and Kasyanenko (2019). In the runup to the global recession, EMDE banks were the main source of domestic private sector credit and were mostly funded by local deposits. This softened the impact of the global liquidity tightening in 2008-09. After the global recession, however, several EMDEs went through credit booms fueled by supportive macroeconomic policies, large capital inflows and accommodative global financial conditions. These booms have left a legacy of elevated private debt. EMDE financial markets became more interconnected as capital flows increased and cross-border lending between EMDEs

expanded.

Against this backdrop, Arteta and Kasyanenko (2019) consider the following questions:

- How were EMDE financial markets affected by the global recession?
- How have financial markets in EMDEs evolved since the global recession?
- What implications do these changes have for financial stability and policies in EMDEs?

Arteta and Kasyanenko (2019) document the following findings.

First, during the global recession private sector deleveraging in EMDEs was milder than in previous episodes of financial distress. In 2009-10, non-financial private sector debt in EMDEs was broadly flat as a percent of GDP, compared to large decreases after past crises. The most severe credit crunches occurred in economies where pre-crisis credit booms had been funded by large capital flows and where banks had a narrow deposit base, such as some economies in ECA (Feyen et al. 2014).

Second, credit growth and capital flows resumed in many EMDEs following a brief pause after the global recession as benign international financial conditions encouraged nonfinancial corporates and governments in EMDEs to access international capital markets (Feyen et al. 2015). Several EMDEs experienced credit booms during 2011-16. Although these have largely subsided, they have left a legacy of high private sector debt that makes nonfinancial corporates more vulnerable to financing shocks (World Bank 2016c, 2018c). By end-2018, total debt in EMDEs had surged to 169 percent of GDP on average from 98 percent of GDP at end-2007. Private sector debt nearly doubled over the decade to end-2018, to 118 percent of GDP on average.

In several EMDEs, increased borrowing in international capital markets has raised foreign currency-denominated debt. On average, foreign-currency-denominated corporate debt rose by 7 percentage points of GDP between 2007 and 2018, exposing EMDE corporate sectors and banks to risks from large currency devaluations.

Third, tighter regulations and a retrenchment by crisis-hit global banks have significantly curtailed foreign bank credit in several EMDE regions—ECA, LAC, and SSA—where lending by international banks was an important source of finance for the government and the private sector (World Bank 2018d, IMF 2016). The retrenchment of global banks has opened space for the rapid expansion of EMDE-headquartered banks in some regions, such as SSA.

Finally, financial intermediation in EMDEs with systemically important financial sectors is now larger and more complex, opaque, and internationally interconnected than at the onset of the crisis. This raises new regulatory challenges. For example, the nonbank financial sector in several large economies (especially China), is less heavily regulated than

banks and is playing a growing role in supplying credit to corporate borrowers (Ehlers et al. 2018).

Arteta and Kasyanenko (2019) expand a limited literature on post-recession financial market developments in EMDEs in several directions. First, it documents the extent to which the global financial crisis and subsequent global recession affected financial systems in EMDEs across a much larger sample of economies and in broader dimensions than in earlier exercises. Previous studies have focused on advanced-economy financial systems and associated global financial regulation. Other studies have focused on developments in EMDE banking systems, with limited integration of the discussion into the broader context of global capital markets. This study brings these different strands together into an overall assessment of EMDE financial systems over the past decade.

Chapter 5: Macroeconomic and financial sector policies

Koh and Yu (2019b) show how unprecedented monetary policy accommodation in advanced economies and a large, coordinated fiscal stimulus by G20 countries helped to support a solid rebound in global output in 2010. This experience highlights the benefits of well-timed, appropriately calibrated stabilization policies and illustrates how international cooperation and coordination can enhance the effectiveness of policies to cope with global downturns and restore financial stability. Against this backdrop, Koh and Yu (2019b) examine the following questions:

- What macroeconomic and financial sector policies characterized the environment prior to the global recession?
- How have macroeconomic and financial sector policies evolved since the global recession?

Koh and Yu (2019b) report the following findings.

First, during the global recession, unprecedented coordinated monetary stimulus in advanced economies and fiscal stimulus in G20 countries supported a rapid recovery in global growth. Three-fifths of EMDEs with floating exchange rates had lowered their policy interest rates by the first quarter of 2009. EMDEs also made use of other monetary policy stimulus measures such as reducing reserve requirements; accepting a broader range of collateral as lender of last resort; injecting liquidity into, and recapitalizing, domestic banks; and channeling government-supported lending through development banks. G20 countries introduced fiscal packages equivalent to 1.4 percent of global GDP. China had the largest stimulus package at 12.7 percent of GDP.

Second, since the global recession, monetary policy has remained accommodative and fiscal stimulus has not been fully unwound in many EMDEs. By 2018, fiscal balances had returned to 2007 levels in only one-quarter of EMDEs and real interest rates had returned to 2007 levels in only one-half of them. Most of the EMDEs that have unwound their

crisis-related fiscal stimulus are commodity importers. Many commodity-exporting EMDEs implemented pro-cyclical policy tightening in response to the steep commodity price decline of 2011-16. Rising external, corporate, household, and government debt stocks, combined with wider fiscal and current account deficits, have increased EMDEs' vulnerabilities to shocks.

Third, since the global recession, all advanced economies and about 70 percent of EMDEs have strengthened their macroprudential policy frameworks and the resilience of their financial systems. Several new instruments have been developed under the Basel III framework to reduce systemic risk. Relative to advanced economies, EMDEs have made greater use of macroprudential tools such as foreign exchange and liquidity policies (for instance, limits on foreign currency loans and foreign exchange countercyclical reserve requirements) to mitigate their exposure to volatile capital inflows.

Fourth, the legitimacy of capital controls as a tool to promote financial stability in appropriate circumstances has gained greater acceptance. During the global recession, many EMDEs strengthened existing capital controls while others introduced new ones. Measures such as reserve requirements on foreign investment, taxes on currency outflows, taxes on interest and capital gains earned by nonresidents, minimum term requirements for holdings of central bank securities, and limits on foreign currency positions have often been used by EMDEs over the past decade.

Fifth, the global recession offers important lessons for policy priorities. Fiscal and monetary policies can provide effective stabilization tools if they are implemented swiftly and are coordinated in response to global shocks. However, policy stimulus can have unintended consequences in sowing the seeds of vulnerability to the next crisis if the stimulus is not unwound in a timely manner and if financial sector supervision and regulation are inadequate. Hence, policymakers need to balance short-term gains and long-term sustainability risks of proactive macroeconomic policies and ensure coherence between their macroeconomic and financial sector policies.

Koh and Yu (2019b)'s work constitutes the first extensive stocktaking of the evolution of macroeconomic policies used by EMDEs before, during, and after the global recession. Previous studies focused on a subsets of policies, such as monetary policies or fiscal policies (Cukierman 2013; de Haan et al. 2018; Ramey 2019); policies during or shortly after the global recession (Akerlof et al. 2014; Blanchard et al. 2016; Taylor 2014); or macro-financial linkages that propagated the financial crisis (Blanchard, Faruqee, and Das 2010; Claessens and Kose 2018). Most of these existing studies do not distill policy lessons specifically for EMDEs. Koh and Yu (2019b) also provide a detailed overview of financial sector policies in EMDEs whereas the previous literature on such policies focuses on advanced economies (IMF 2018b). Third, Koh and Yu (2019b) distill lessons from the global recession that are relevant to EMDE policymakers today.

Chapter 6: Prospects, risks, and vulnerabilities

Ruch (2019a) shows that EMDE growth has repeatedly disappointed since the global recession. EMDEs continue to face multiple downside risks to the current subdued growth outlook. If these risks materialize, their impact on EMDEs depends on the magnitude of spillovers and domestic vulnerabilities. Since the 2009 global recession, external, corporate sector, and sovereign vulnerabilities have risen in most EMDEs, leaving them less prepared for future shocks. Over the longer run, EMDEs also face weakening potential growth, reflecting decelerations in capital accumulation and productivity growth, as well as demographic headwinds.

Against this background, Ruch (2019a) addresses the following questions:

- What are EMDEs' growth prospects?
- What are the main global and regional risks to growth faced by EMDEs?
- How have external and domestic vulnerabilities evolved over the past decade and how do they compare to developments following previous crises?

Ruch (2019a) presents the following findings.

First, EMDE growth has generally disappointed in the past decade, with repeated and significant forecast downgrades—and 2019 is no different. Income gaps with advanced economies are expected to widen again in 2019 in one-third of EMDEs, especially in MNA, SSA, and LAC. The prospects for progress of today's LICs, which are increasingly clustered in SSA, to middle-income levels are dimmer than before the global recession, in part because of a rising number of countries affected by fragility, conflict, and violence; the prospect of weaker demand for primary commodities; and higher vulnerability to extreme weather, especially in agriculture-dependent economies (World Bank 2019b). Sustained robust per capita income growth, however, is needed for EMDEs to meaningfully reduce poverty, improve shared prosperity, and converge to advanced-economy levels.

Second, near-term risks to EMDEs' growth outlook are tilted to the downside. At the global level, EMDEs face risks related to trade tensions between the United States and other major economies, especially China; broader threats to the international trade system; the risk of a disorderly exit of the United Kingdom from the EU; and the possibility of financial market disruptions. Some EMDEs also face risks related to security, geopolitical tensions, and severe weather events. Even in the case of risks outside EMDEs' control, effective monitoring and a thorough understanding of their likely effects can help develop appropriate policy responses to dampen their eventual impact.

Third, long-term growth prospects for EMDEs are weakening, as fundamental drivers lose momentum. In the mid-2000s, potential growth in EMDEs was 5.9 percent a year. However, it slowed to 4.7 percent a year in 2013-18 and, on current trends, is expected to

decelerate further over the next decade. This slowdown reflected a marked slowdown in capital accumulation and productivity growth amid pronounced investment weakness, as well as demographic headwinds. Weakening growth prospects do not bode well for poverty reduction in EMDEs; in fact, evidence is that the pace of poverty reduction has already started to slow.

Fourth, EMDEs' vulnerabilities to adverse events have risen since the 2009 global recession. Today's average EMDE has higher government and private debt, wider fiscal deficits, and only slightly smaller current account deficits than the average EMDE before past financial crises. This may be partly mitigated by greater exchange rate flexibility and more robust monetary, prudential and fiscal policy frameworks compared to previous crises as well as financial sector reforms and the expansion of country-specific, regional, and multilateral financial safety nets since the global recession.

Ruch (2019a) contributes to the existing literature in several dimensions. First, Ruch (2019a) updates earlier WBG work on short- and long-term growth prospects, with granular regional and group perspectives (World Bank 2018b, IMF 2019). Second, it provides a comprehensive overview of vulnerabilities for the largest sample of EMDEs yet. Existing studies, such as Chitu and Quint (2018), Dahlhaus and Lam (2018), IMF (2019), and Rojas-Suarez (2015), for example, limit their analysis to a few, mainly large, EMDEs. In addition, Ruch (2019a) is the first study that compares specific domestic and external vulnerabilities across a comprehensive list of close to 300 previous EMDE crises since 1980, building on the work of Laeven and Valencia (2018).

Chapter 7: Policy challenges

Unprecedented and coordinated policy stimulus supported a rebound from the global recession in 2010. Since then, amid anemic post-crisis growth, most EMDEs have not been able to fully unwind the policy stimulus put in place in response to the crisis. External, fiscal, and corporate vulnerabilities have increased since 2007. Ruch (2019b) cautions that 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. In addition, structural factors have eroded potential growth since the global recession.

Against this backdrop, Ruch (2019b) addresses the following questions:

- What macroeconomic policies should be implemented to build resilience?
- What financial sector policies should be employed to maintain financial stability?
- How have structural reforms evolved and what policies are needed to boost growth?

Ruch (2019b) reports the following findings.

First, it documents the extent to which current macroeconomic policies undermine EMDEs' resilience 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 macroeconomic and financial conditions. In several EMDEs, international reserves are currently inadequate.

Second, Ruch (2019b) points to several policy implications. EMDEs with unsustainable fiscal positions should prioritize rebuilding policy space by 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, 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, EMDEs with inadequate international reserve could focus on rebuilding them and restraining foreign currency borrowing.

Third, to improve longer-term resilience, EMDEs need to strengthen fiscal and monetary policy frameworks by adopting transparent and rules-based approaches. Fiscal rules, if effectively implemented, can help countries maintain sustainable finances and accumulate resources when the economy is doing well. Better fiscal frameworks also assist monetary policy by restraining procyclical fiscal policy. 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.

Fourth, 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 institutions with 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.

Fifth, 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. Governance in EMDEs has failed to improve since the 1990s, and some EMDEs have taken steps to reduce 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.

Ruch (2019b) adds to the existing literature in several ways. First, Ruch (2019a) assesses both the progress and impact of structural reforms in EMDEs since the global recession. Most studies focus either on quantifying the impact of a subset of these reforms on output (Égert 2018, Bailiu and Hajzler 2016) or the evolution of specific aspects of structural reforms (World Bank 2019d, 2019e). Second, compared to existing studies that focused on individual structural reforms, Ruch (2019a) 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.

Chapter 8: The role of the World Bank Group

The global financial crisis and the subsequent global recession not only adversely affected global growth and poverty, but also demonstrated the limitations and challenges of unilateral responses by national governments. The global recession required rapid and targeted responses by international financial institutions (IFIs)—in particular, it led the World Bank Group (WBG) to provide unprecedented financing support and advisory services to its member countries, as shown in Ye (2019).

Specifically, Ye (2019) examines the following four questions:

- How did the WBG respond during the global recession?
- What is the assessment of the WBG's response?
- How have the WBG's strategy and operating model changed since the global recession?
- What policies can the WBG offer to reduce vulnerabilities and build resilience ahead of future crises?

Ye (2019) documents the following findings.

WBG's financing during the global recession was unprecedented in volume. Financing commitments of the WBG nearly doubled in real terms (in 2010 U.S. dollars), from an annual average of $37 billion during the 2007-08 fiscal years to an annual average of $66 billion during the 2009-10 fiscal years. This WBG financing was larger than during earlier crises, with lending commitments made to more than 100 economies. The WBG's disbursements during the crisis were also larger than those of any other major IFI.

The forms of WBG financing were diverse across its multiple entities. Lending by the International Bank for Reconstruction and Development (IBRD) nearly tripled, while that of the International Development Association (IDA) rose by about 20 percent. The support of the International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) did not surge, but the former provided investments and the latter provided financial guarantees targeted at sectors and regions that were especially

hard-hit by the global recession.

Lending during the global recession increased the most for LAC and ECA, the two most crisis-affected regions. About one-fifth of World Bank (IBRD and IDA) lending was provided to LICs, equivalent to about 1 percent of their GDP. Upper middle-income countries (UMICs) and lower middle-income countries (LMICs) each received about 40 percent of World Bank crisis commitments, but these represented much smaller shares of recipient GDP than was the case for LICs.

As in previous global crises, the WBG prioritized its lending in the areas of social protection, infrastructure investment, fiscal management, and financial sector development. While investment lending served as the primary lending tool during the global recession, the WBG provided development policy lending more heavily than during non-crisis periods because of its faster pace of deployment. It also adopted crisis-specific facilities in targeted areas, such as trade finance and infrastructure investment, where the WBG has long-standing expertise.

The WBG has built upon its experience during the global recession in its subsequent work. It has improved its monitoring and surveillance of global macroeconomic and financial developments, allowing it to more effectively flag risks in the world economy. It has completed two global campaigns to improve its capital adequacy, partly to make it better prepared for future crises. It has refined its operating model by introducing new crisis response facilities and implementing a more coordinated Bank-wide strategy in its financing and advisory activities, helping to enhance its ability to respond quickly and flexibly should a future crisis arise. The WBG has an extensive set of both traditional and new support instruments to help members reduce the risk and impact of crises and to build longer-term resilience against future crises. These instruments constitute an important strategic capability that better enables it to advance its twin goals of poverty reduction and shared prosperity, including by mitigating the reversals that occur during economic downturns.

Ye (2019) links the WBG's response to the global recession with the evolution of its policy toolkit in the subsequent decade. While an exhaustive analysis of the WBG's role during the global recession is beyond the scope of Ye (2019), it adds to a set of studies that have examined the WBG's response to the global recession. Most prominently, the WBG's Independent Evaluation Group (IEG) conducted two comprehensive studies that examined the WBG's response. The first described the overall response of the WBG, presented an early evaluation of its effectiveness, and drew initial lessons (IEG 2011). The second analysis, a year later, examined the effectiveness of the WBG's crisis response in the areas of social protection, financial sector policies, and fiscal management (IEG 2012). The IEG and other studies have documented that the WBG largely retained its lending models and focus areas through the crisis and the subsequent global recession (Guven 2012; Hall 2015; IEG 2012).

Ye (2019) contributes to these works in three ways. First, it analyzes the WBG's crisis

response under the lens of the subsequent decade, a longer time span than the existing work. Second, it analyzes how the global recession affected WBG operations. It documents that, while the WBG demonstrated a consistent overall policy position that prioritized its traditional areas of expertise, such as social protection, it has also in the last decade made refinements to its strategy and operating model that were motivated by its experience responding to the global recession. Third, Ye (2019) shows that, partly drawing on the lessons from the global recession response, the WBG current crisis-response strategy in financing and advisory functions combines crisis risk and impact mitigation with longer-term efforts to build structural resilience.

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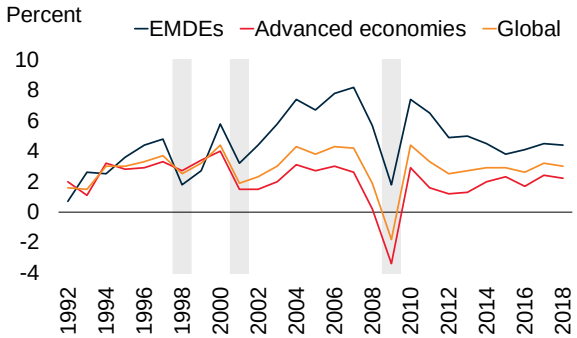
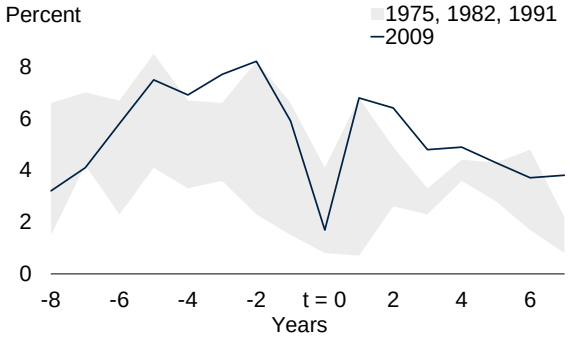
Figure 1. A decade since the 2009 global recession

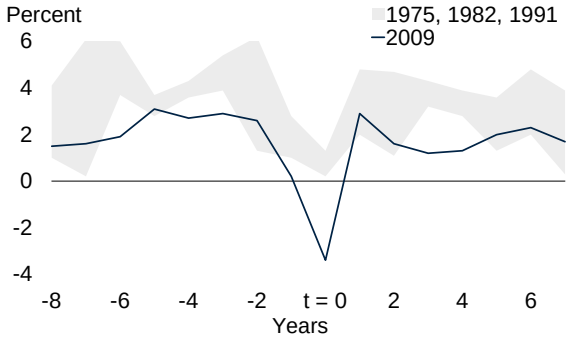
A. Growth around global recessions



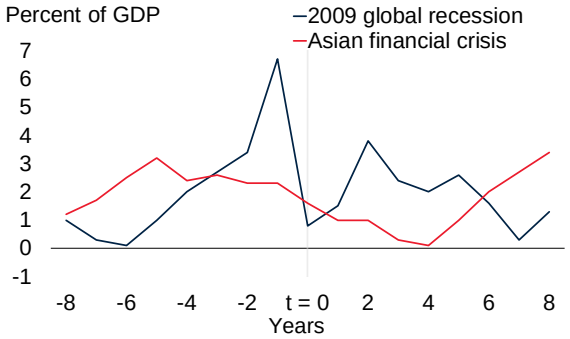
B. EMDE growth



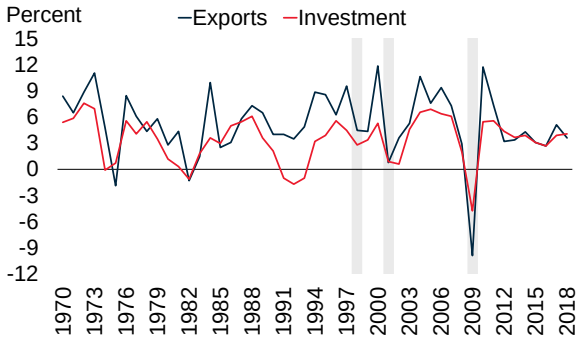
C. Advanced-economy growth around global recessions



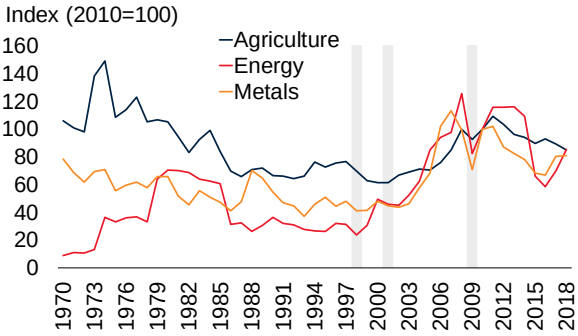
D. Private capital inflows to EMDEs around recessions



E. Global export and investment growth

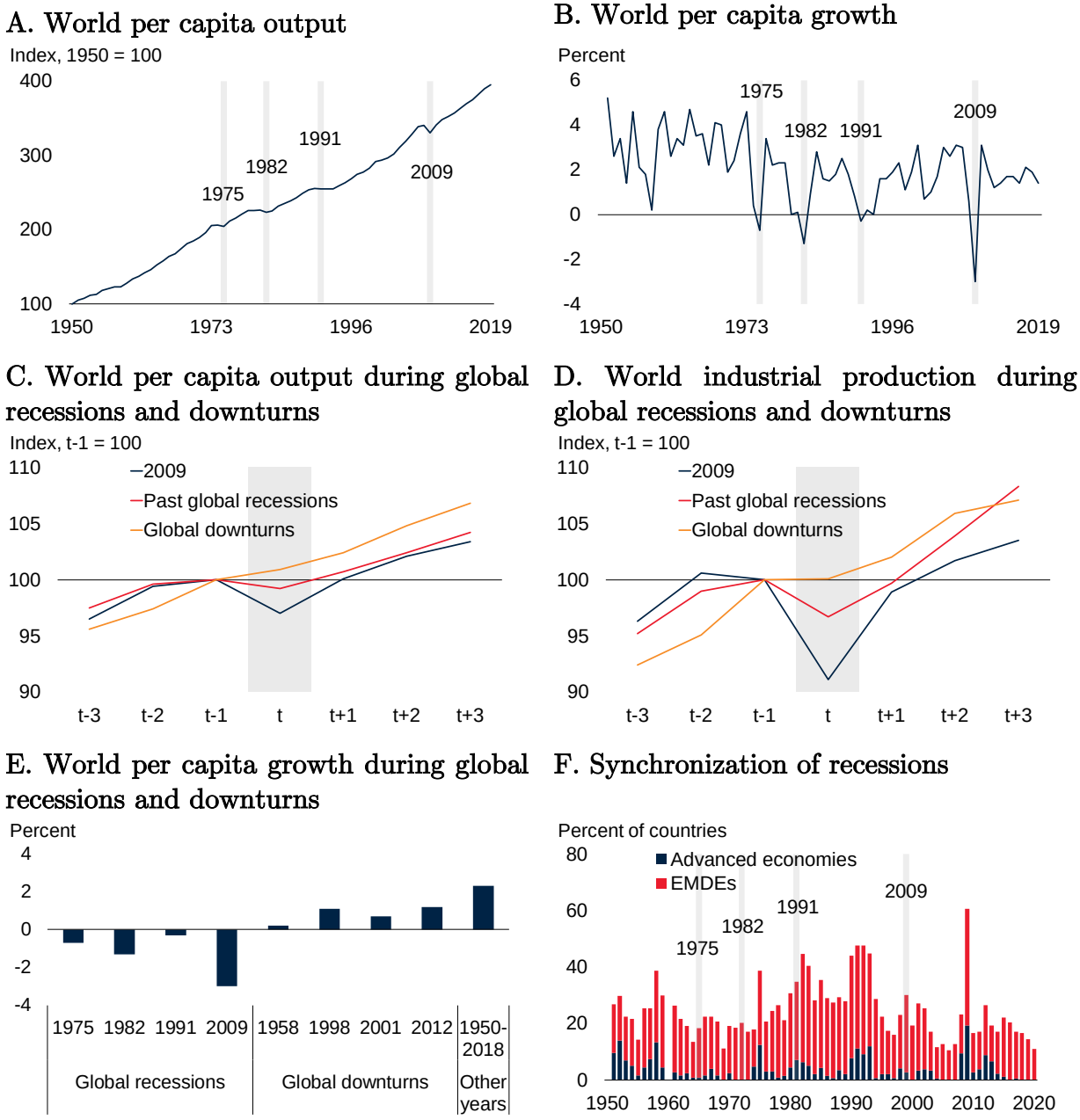


F. Commodity prices



Source: Chinn and Ito (2006), Haver Analytics, World Bank.
A. Grey bars indicate global recessions and slowdowns.
C. Shaded areas are the range of GDP growth in previous global recessions as defined by Kose and Terrones (2015).
D. t=0 indicates 2009 for "2009 global recession" and 1998 for "Asian financial crisis."
F. Prices measured in real terms (2010 U.S. dollars).

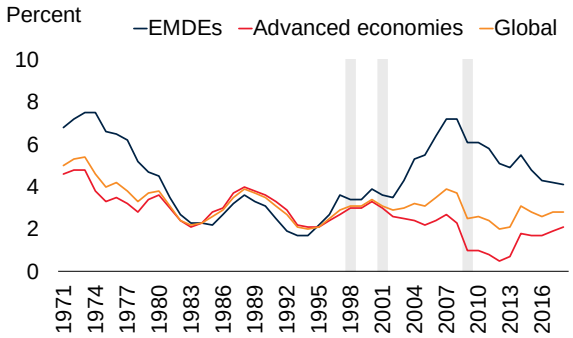
Figure 2. Global recessions: Costly and synchronous



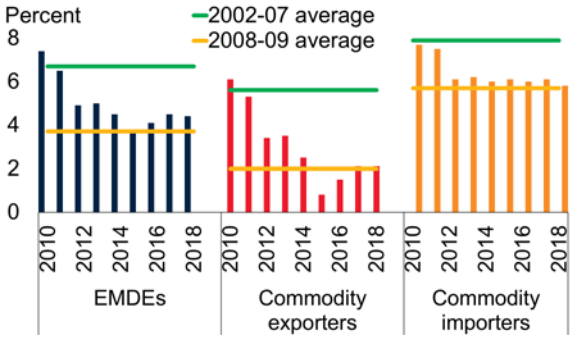
Source: World Bank.
Note: Aggregated with GDP-weights at 2010 prices and market exchange rates.
A. Shaded bars indicate global recessions.
C.D. Time t denotes the year of global recessions and slowdowns (shaded in gray). The line for past global recessions is an average of 1975, 1982, and 1991 global recessions, while the one for global downturns is an average of global downturns of 1958, 1998, 2001, and 2012.
E. Each bar shows world per capita output growth for the relevant years of global recessions and downturns, as well as average growth during non-recession/non-downturn years.
F. Recession is defined as a contraction in per capita GDP (unweighted). Global recession years are 1975, 1982, 1991, and 2009.

Figure 3. Global output, inflation, and poverty

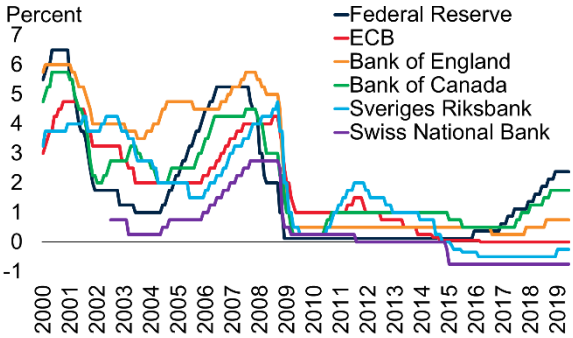
A. Growth



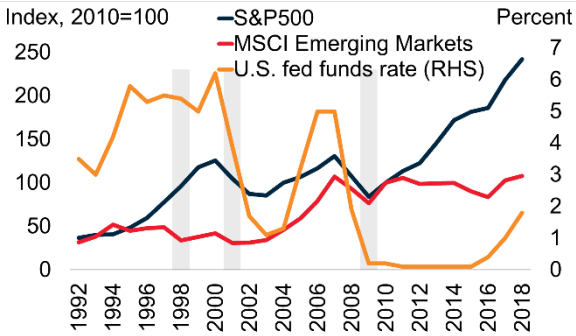
B. EMDE growth



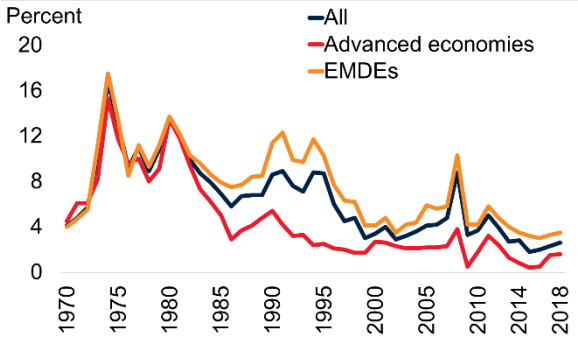
C. Monetary policy rates



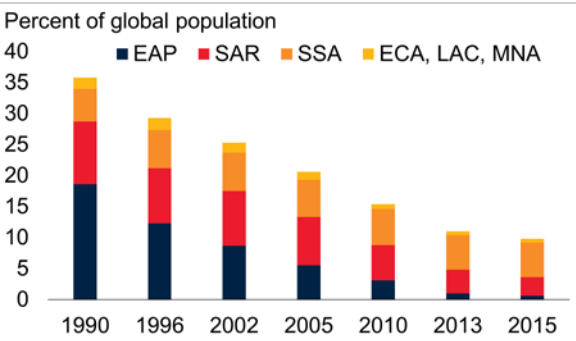
D. Equity markets



E. Inflation



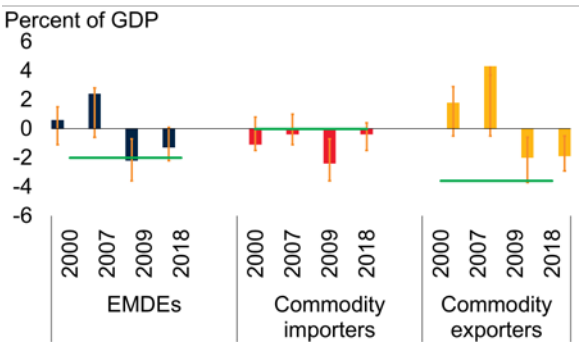
F. Poverty



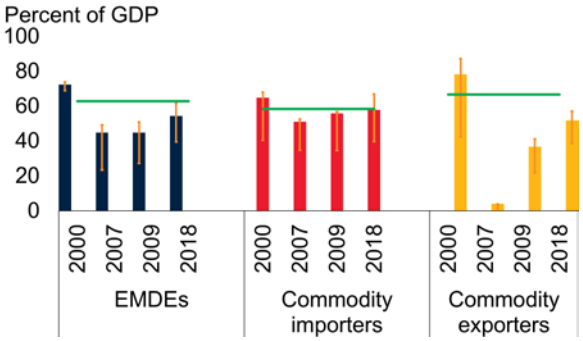
Source: Federal Reserve Economic Data, Haver Analytics, International Monetary Fund, PovCalNet, World Bank.
A. Five-year rolling averages.
A.B. GDP-weighted averages (at 2010 prices and exchange rates).
D. Grey bars indicate global recessions and slowdowns.
E. Median year-on-year CPI inflation for 29 advanced economies and 126 EMDEs.
F. Poverty defined as number of people living on $1.90 per day or less, as in World Bank (2018d).

Figure 4. Fiscal and external positions

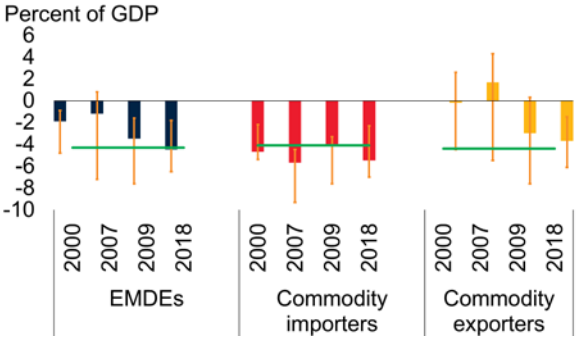
A. Fiscal balance



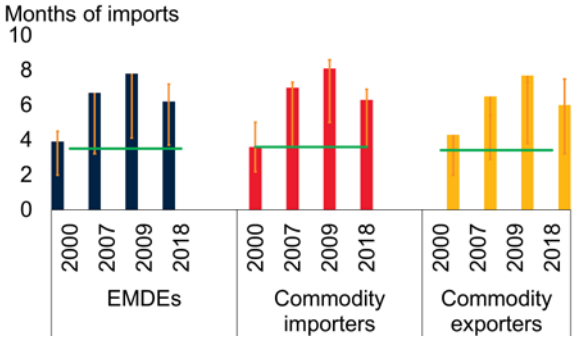
B. Government debt



C. Current account balance



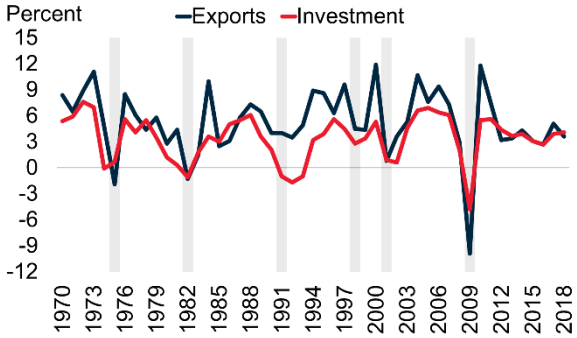
D. International reserves in months of imports



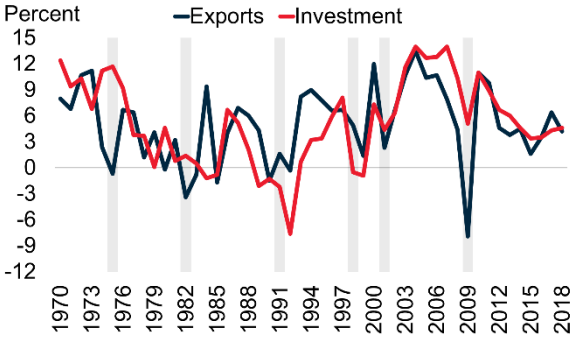
Source: International Monetary Fund (International Financial Statistics, World Economic Outlook), World Bank, Kose et al. (2017a).
Note: Blue bars denote unweighted averages for EMDEs. Orange whiskers denote intertercile ranges. Green lines denote 1980-99 averages.

Figure 5. Activity and monetary policy during the global recession

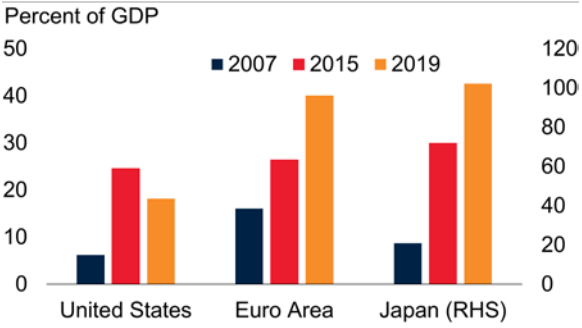
A. Global export and investment growth



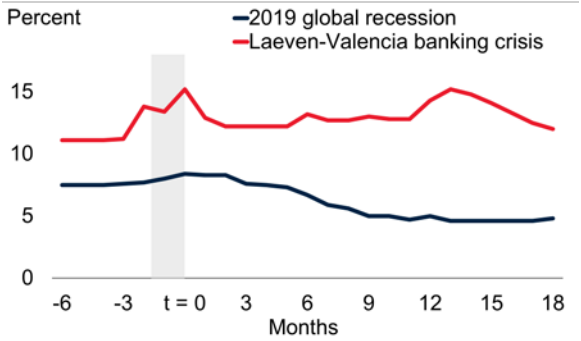
B. EMDE export and investment growth



C. Central bank balance sheets



D. EMDE policy interest rates compared with previous banking crises



Source: World Bank.

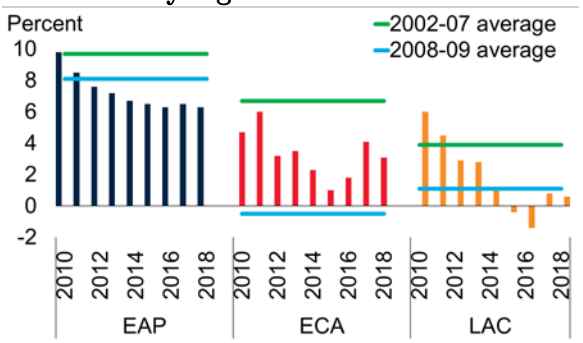
A.B. Shaded areas are the range of GDP growth in previous global recessions and downturns as defined by Kose and Terrones (2015).

C. Assets of the U.S. Federal Reserve, the European Central Bank (euro area) and the Bank of Japan (Japan) in percent of GDP, for end-2007, end-2015, and July 2019.

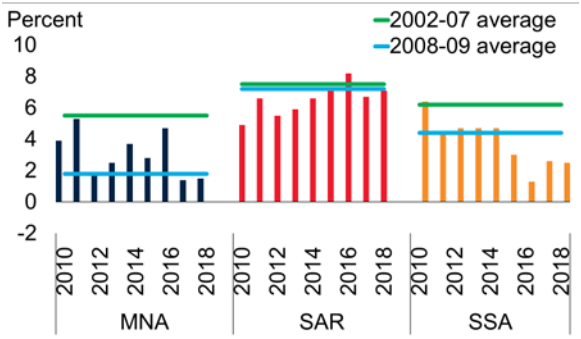
D. Median policy rates. The country sample of banking crisis episodes consists of Argentina, Bulgaria, Colombia, Croatia, Czech Republic, Hungary, Malaysia, Philippines, Russia, and Vietnam. The starting dates (t=0) are defined by Laeven and Valencia (2018). The country sample in the global recession consists of 26 EMDEs.

Figure 6. EMDE growth

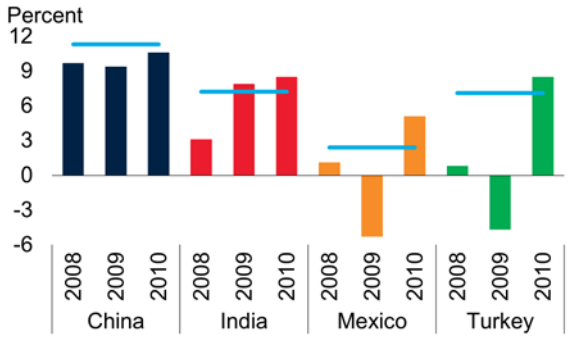
A. Growth by region



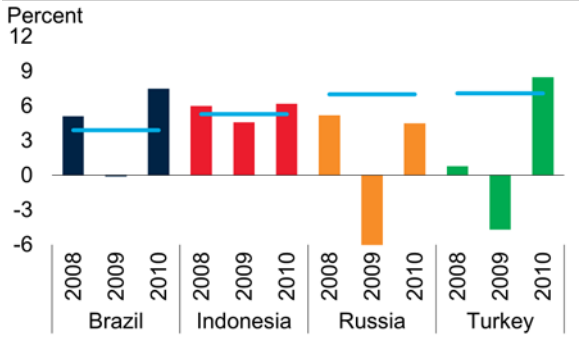
B. growth by region (continued)



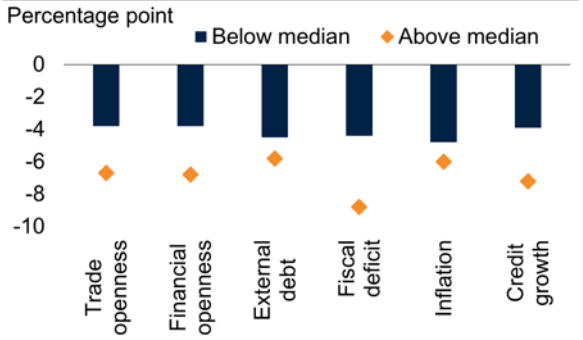
C. Growth in selected commodity importers



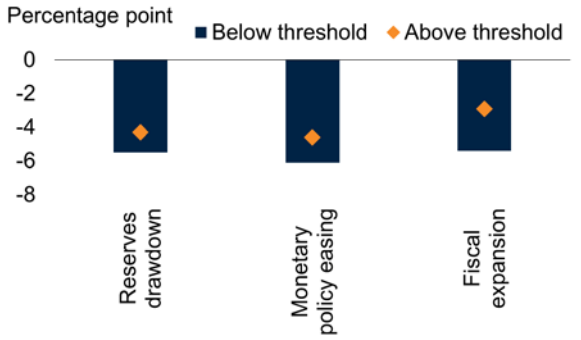
D. Growth in selected commodity exporters



E. EMDE growth slowdowns in 2007-09, by pre-crisis structural indicators



F. EMDE growth slowdowns in 2007-09, by policy intervention



Source: 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, SSA = Sub-Saharan Africa.

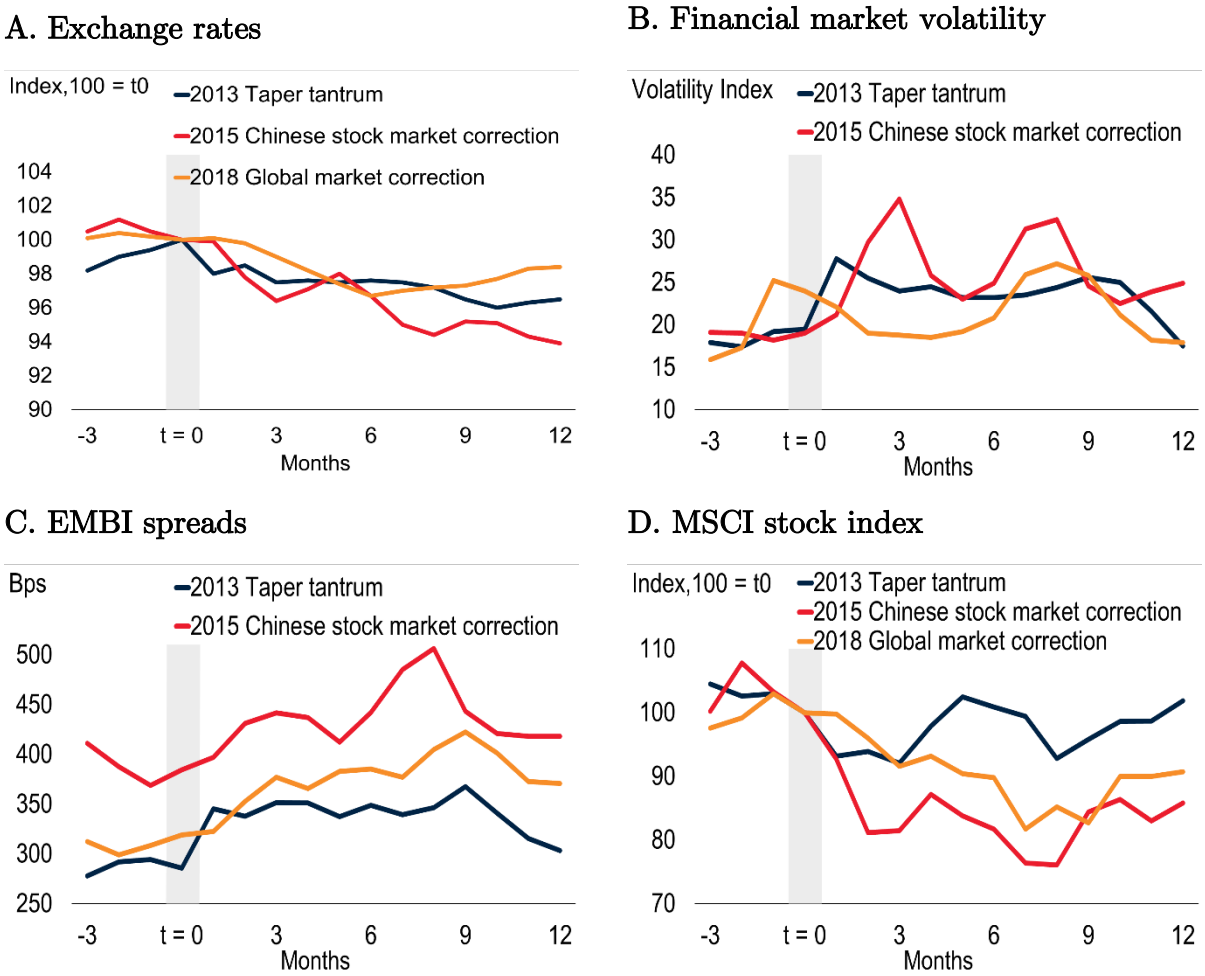
C.D. Blue bars denote 2002-07 averages.

E.F. Growth slowdown is the GDP growth differential between 2007 (pre-crisis) and 2009. Depending on data availability for each indicator, the number of EMDEs ranges from 80 to 154.

E. Trade openness is proxied by trade (exports and imports) in percent of GDP and financial openness is based on the Chinn-Ito index. External debt and fiscal deficit are in percent of GDP. Inflation is the annual change in the consumer price index. Credit growth is the annual change in domestic credit to the private sector.

F. The threshold for reserves drawdown is 10 percent of the reserve-to-debt ratio. Monetary easing refers to the lowering of interest rates, with a 0.5-percentage-point threshold. Fiscal expansion refers to growth in real government consumption expenditure, with a 10- percentage-point threshold.

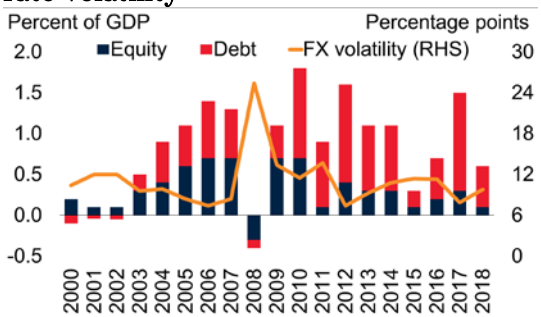
Figure 7. EMDE financial markets during periods of financial stress



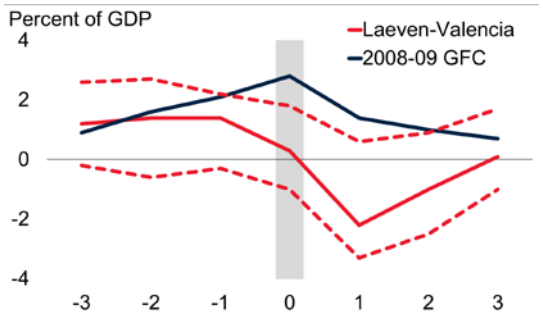
Source: Haver Analytics, World Bank.
Note: t=0 indicates May 2013, June 2015, and March 2018.
A. JP Morgan's nominal broad effective exchange rate for emerging markets.
B. Chicago Board Options Exchange emerging market exchange traded funds volatility index.
C. EMBI is JP Morgan's emerging market bond spread index.
D. MSCI is Morgan Stanley's emerging market stock market index.

Figure 8. Financial market developments

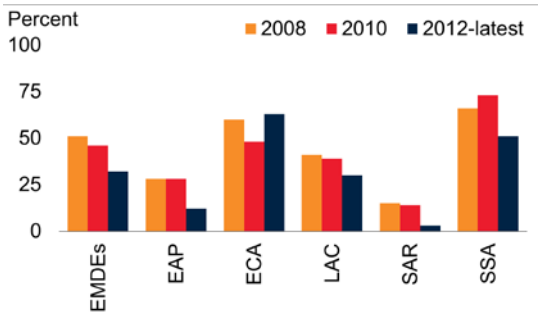
A. Net capital inflows to EMDEs and exchange rate volatility



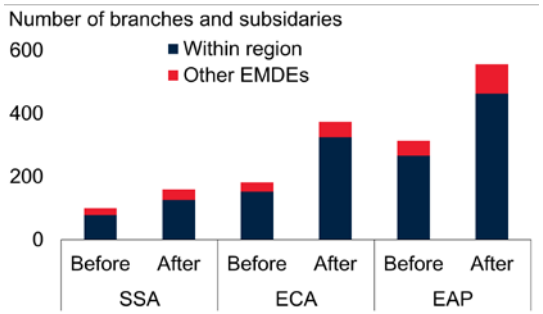
B. Change in bank credit to the private sector during financial crises



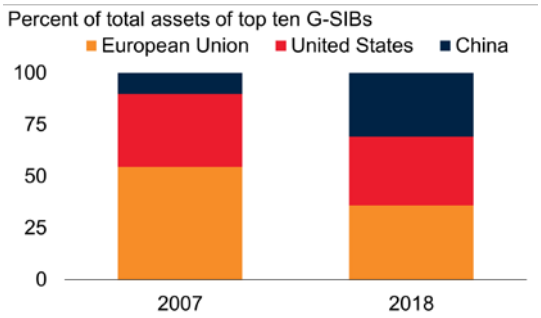
C. Foreign bank share of banking system assets



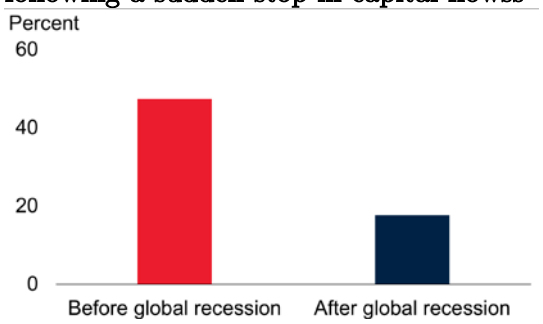
D. Pan-regional banks in EMDEs



E. Global assets of 10 largest G-SIBs, by bank domicile



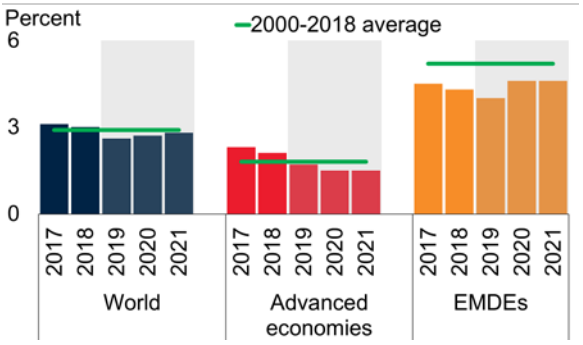
F. Share of EMDEs in a financial crisis following a sudden stop in capital flowss



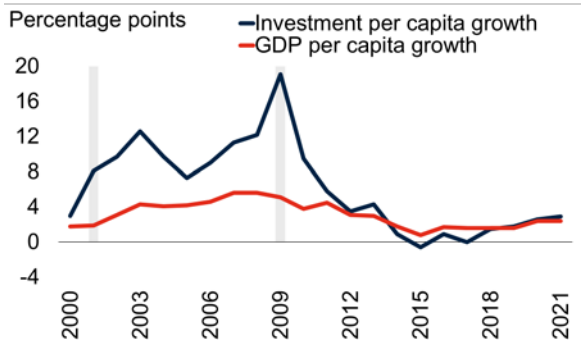
Source: Bank for International Settlements, Bloomberg, Eichengreen and Gupta (2016), International Monetary Fund, Institute of International Finance, Laeven and Valencia (2018), World Bank (2018a).
A. FX volatility is the JPMorgan VXY Global Index, a turnover-weighted index of the implied volatility of three-month at-the-money options on 23 USD currency pairs. B. t=0 indicates the year when crisis started. 2009 recession and global recessions show averages across all EMDEs. Global recession years are 1975, 1982 and 1991. Financial crises denote averages across EMDEs that went through a systemic banking crisis at t=0 (103 episodes from 1980-2014 as identified by Laeven and Valencia 2018). D. Based on annual bank statements. "Before" indicates before global recession (2008 or 2009, depending on data availability); "After" indicates 2018 or latest data available. E. Based on the Financial Stability Board (2018) list of global systemically important banks (G-SIBs). European Union includes Deutsche Bank, BNP Paribas, Barclays and HSBC Holdings; United States includes Bank of America, JP Morgan Chase, Goldman Sachs Group and Citigroup; China includes Industrial and Commercial Bank of China and Bank of China. F. Data include 36 sudden stops in EMDEs during 1993-2014 (Eichengreen and Gupta 2016). Each bar indicates the share of EMDEs that went through a financial crisis (as identified in Laeven and Valencia 2018) within two years of a sudden stop.

Figure 9. EMDE growth prospects

A. GDP growth



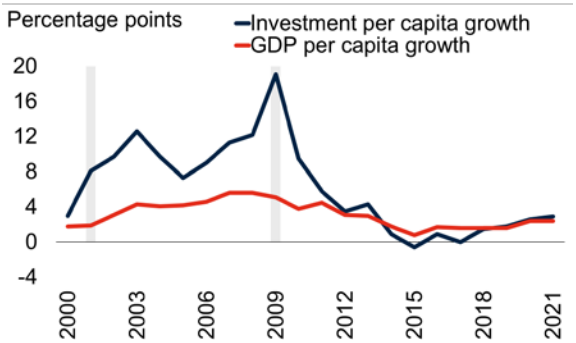
B. Per capita growth differential between EMDEs and advanced economies



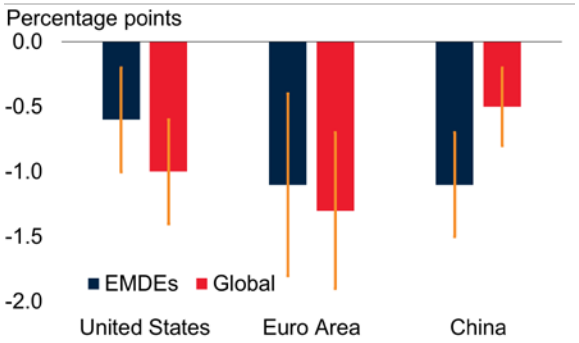
Source: Consensus Economics, Haver Analytics, World Bank.
A. Average growth rates are calculated using constant 2010 U.S. dollar GDP weights. Shaded areas indicate forecasts.
B. Weights based on real GDP and Investment in 2010 U.S. dollars. Investment refers to public and private real gross fixed capital formation. Sample consists of 50 EMDEs. Shaded areas indicate global recessions and slowdowns.

Figure 10. Risks to EMDE growth prospects and vulnerabilities

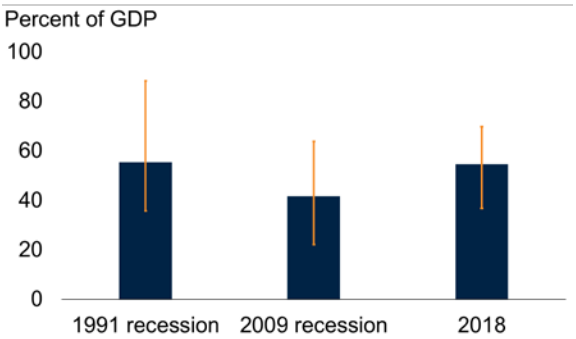
A. World policy uncertainty



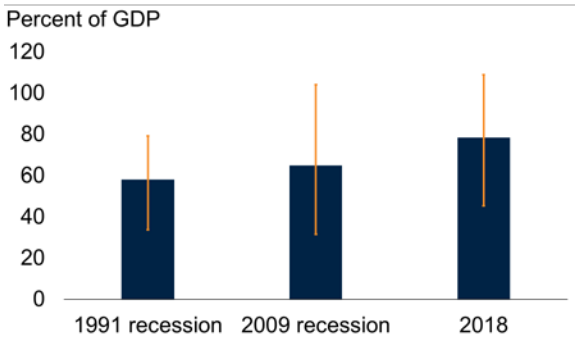
B. Growth spillovers from major economies



C. Gross government debt in EMDEs



D. Nonfinancial private debt in EMDEs



Source: International Monetary Fund; Ahir, Bloom and Furceri (2018); Kose, Kurlat, Ohnsorge and Sugawara (2017); World Bank.

A. News-based index by Ahir, Bloom and Furceri (2019) for 143 countries.

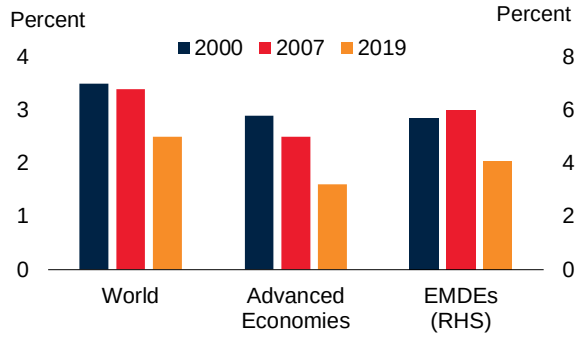
B. Median cumulative impulse response of EMDE and global GDP growth after one year to a 1-percentage-point decline in U.S., euro area and Chinese GDP growth. Based on vector autoregression of world GDP (excluding the source country of spillovers), output growth in the source country of the shock, the U.S. 10-year sovereign bond yield plus JP Morgan's EMBI index, output in EMDEs excluding China, and oil price as an exogenous variable (in the case of China's spillover, the order of growth is third). The "global" sample includes 22 AEs (Canada, 19 euro area countries, Japan, and the United Kingdom) and 19 EMDEs for 1998Q1-2016Q2.

C. Blue bars show median government debt (in percent of GDP) for EMDEs two years prior to recession/crisis. Whiskers show interquartile range. Data available for 98 EMDEs with data available for 1989.

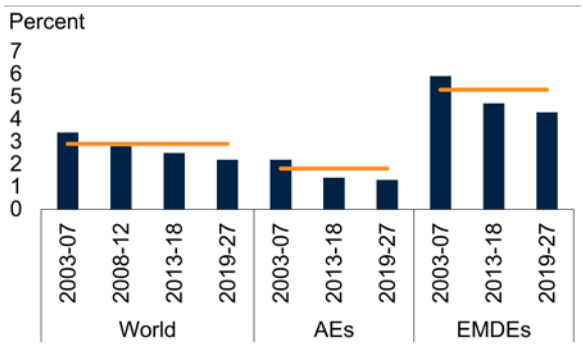
D. Private sector debt is proxied by private sector credit in percent of GDP. Blue bars show median private sector debt (in percent of GDP) for EMDEs two years prior to recession/crisis. Whiskers show interquartile range. Based on 10 EMDEs with data available for 1989.

Figure 11. Long-term growth prospects

A. Consensus long-term growth forecasts



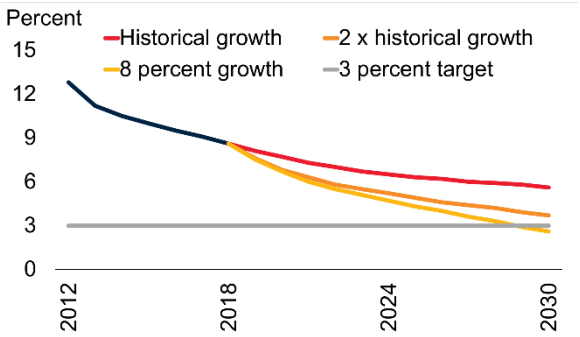
B. Potential growth



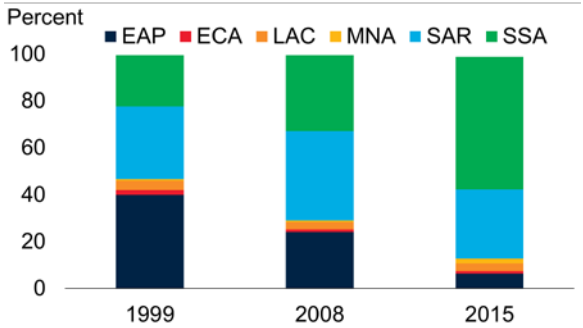
Source: Consensus Economics, Haver Analytics, Penn World Tables, World Bank, UN Population Prospects.
A. Bars show long-term (10 years ahead) average annual growth forecasts surveyed in respective years. Sample comprises 38 countries—20 advanced economies (AEs) and 18 EMDEs—for which consensus forecasts are consistently available during 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. World sample comprises 50 EMDEs and 30 advanced economies (AEs).

Figure 12. Poverty

A. Global extreme poverty



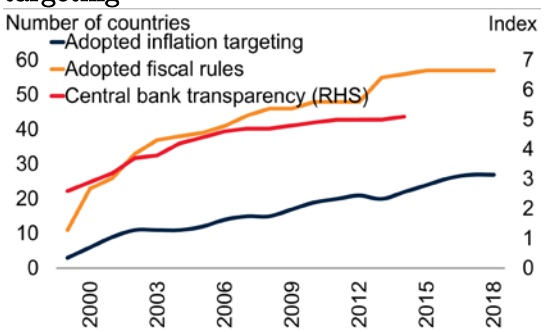
B. Distribution of extreme poverty



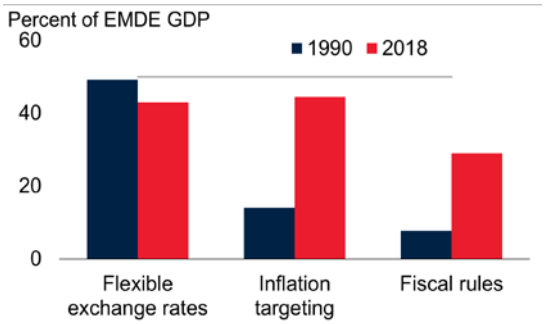
Source: World Bank PovcalNet
Note: EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa.
A. Data based on global real per capita growth. "8 percent growth" assumes 8 percent growth in per capita incomes of the poorest 40 percent of households and 4.7 percent growth in per capita incomes for all other households, such that per capita income growth averages 6 percent in all countries in every year until 2030.
B. Regional aggregation based on 2011 Purchasing Power Parity (PPP) and US$ 1.90 per day poverty line.

Figure 13. Structural policies in EMDEs

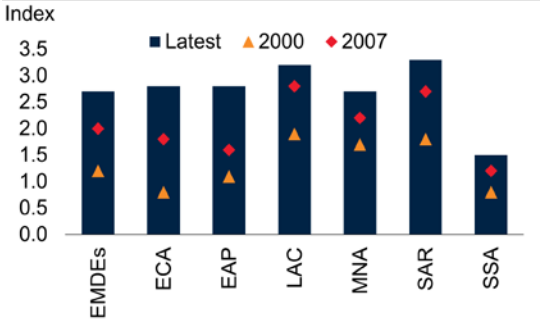
A. EMDEs with fiscal rules or inflation targeting



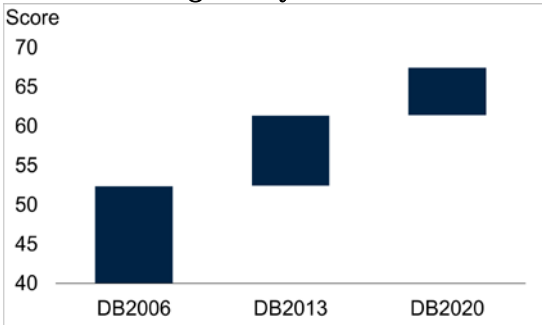
B. EMDE GDP governed by fiscal rules, inflation targeting or flexible exchange rates



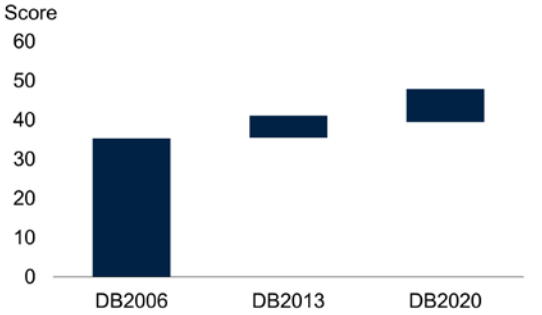
C. Macroprudential policies in EMDEs



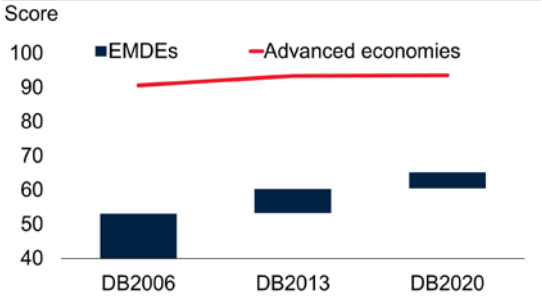
D. Business regulatory environment



E. Financial regulatory environment



F. Trade environment



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

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

B. Flexible exchange rate regimes are defined as "floating" or "freely floating" exchange rate regimes. GDP aggregation at 2010 prices and exchange rates. Grey line indicates 50 percent. C. 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, the countercyclical capital buffer and loan-to-value ratios. E.F. An economy s score is measured 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.

F. Scores are unweighted averages of 31 advanced economies and 129 EMDEs. The Trading Across Borders indicator is spliced backwards where methodological changes affected the level.