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Understanding the global waves of debt

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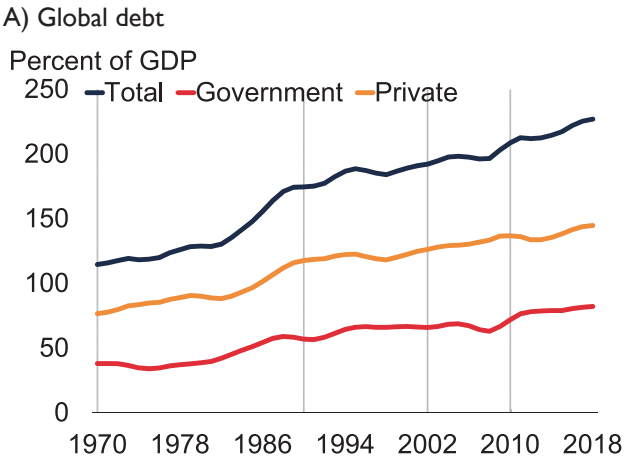
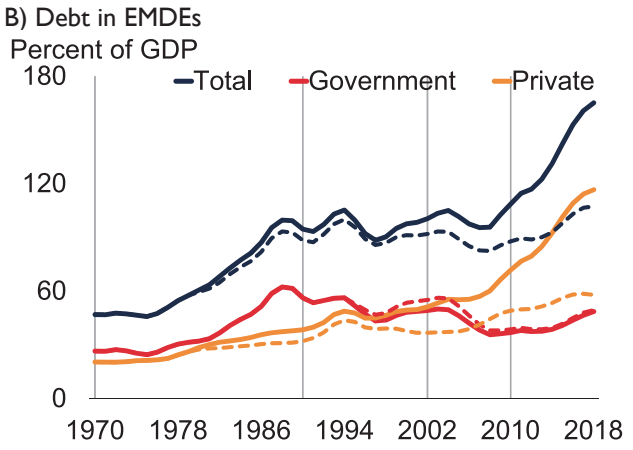
Waves of debt accumulation have been a recurrent feature of the global economy over the past 50 years, involving both advanced economies, and emerging market and developing economies (EMDEs). Since the global financial crisis, another wave has been building, with global debt reaching an all-time high of roughly 230% of global GDP in 2018 (Figure 1).

Total (public and private) EMDE debt also reached a record-high of almost 170% of GDP in 2018, an increase of 54 percentage points of GDP since 2010. Although China accounted for the bulk of this increase – in part due to its sheer size – the debt build-up was broad-based: In about 80% of EMDEs, total debt was higher in 2018 than in 2010. Excluding China (where the rapid debt build-up was mostly domestic), the increase in debt in EMDEs was in almost equal measure accounted for by external and domestic debt. In low-income countries (LICs), following a steep fall between 2000 and 2010, total debt also increased to 67% of GDP in 2018, up from 48% of GDP in 2010.

Figure 1 Evolution of debt





Source: Kose et al. 2020b.
Note: Aggregates calculated using current US dollar GDP weight and shown as a 3-year moving average. Vertical lines in grey are for years 1970,1990, 2002 and 2010. Dashed lines refer to EMDEs excluding China.

In contrast, in advanced economies total debt has remained near the record levels reached in the early aftermath of the global financial crisis – at about 265% of GDP in 2018. While government debt has risen, to a high of 104% of GDP, private sector debt has fallen slightly amid deleveraging in some sectors.

Debt accumulation in EMDEs has not followed a linear process. Different EMDE regions and sectors have experienced diverse debt developments since 1970. Prior to the current wave of debt accumulation, EMDEs experienced three waves of broad-based debt accumulation over the period 1970-2009: 1970-89; 1990-2001; and 2002-09. Although each of these waves of rising debt had some unique features, they all shared the same fate: they ended with financial crises and subsequent substantial output losses in many countries.

The current environment of low interest rates, combined with subpar global growth, has led to a lively debate about the benefits and risks of further

1. The findings, interpretations, and conclusions expressed in this Policy Insight are entirely those of the authors. They do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

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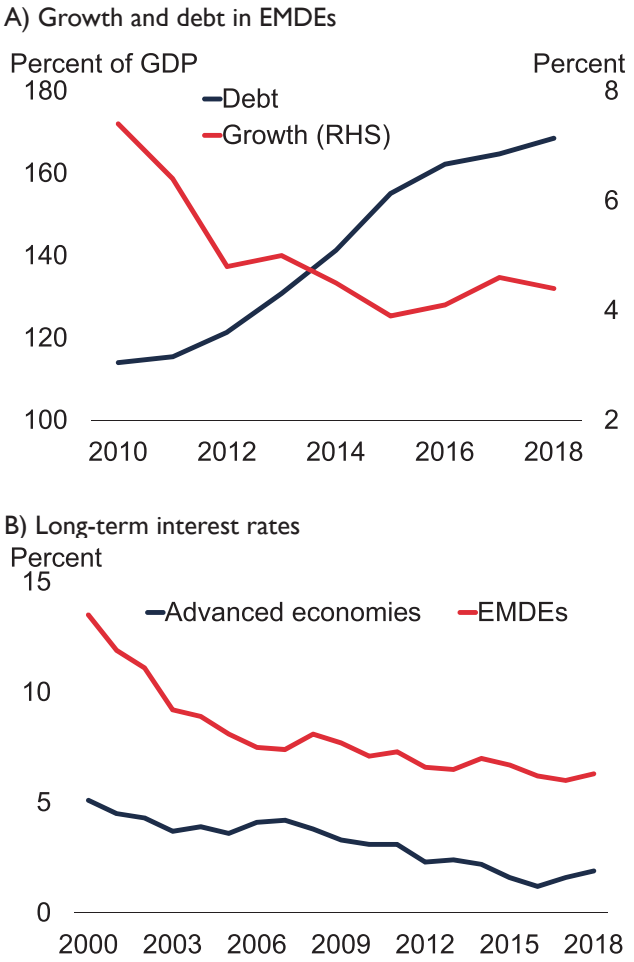
government debt accumulation to finance increased spending (Kose et al. 2020a, World Bank 2019).[2] Although the focus of this debate has been mainly on advanced economies, it is also of critical importance for EMDEs. Borrowing can be beneficial for EMDEs, particularly in economies with substantial development challenges, if it is used to finance growth-enhancing investments in areas such as infrastructure, healthcare, and education. Government debt accumulation can also be appropriate temporarily, as part of counter-cyclical fiscal policy, to boost demand and activity in economic downturns.

However, particularly for EMDEs, high debt carries significant risks, since it makes them more vulnerable to external shocks. The rollover of debt can become increasingly difficult during periods of financial stress, potentially resulting in a crisis. High government debt can also limit the size and effectiveness of fiscal stimulus during downturns, and dampen long-term growth by weighing on productivity-enhancing private investment.

EMDEs have been navigating dangerous waters, as the current debt wave has coincided with multiple challenges for these economies. Despite rising debt, they have experienced a decade of repeated growth disappointments and are now confronted by weaker growth prospects in a fragile global economy (Figure 2, Kose and Ohnsorge 2019). In addition to their rapid debt build-up during the current wave, these economies have accumulated other vulnerabilities, such as growing fiscal and current account deficits, and a compositional shift toward short-term external debt, which could amplify the impact of shocks. By 2018, the share of EMDE government debt held by non-residents had grown to 43% and foreign currency-denominated EMDE corporate debt had risen to 26% of GDP; by 2016, the share of non-concessional LIC government debt had risen to 55%.

The build-up of debt and other vulnerabilities in EMDEs, juxtaposed with the current environment of exceptionally low interest rates, raises the question of whether this time is different. Should countries no longer worry about the accumulation of debt? Are we in a 'new normal' where the risk of borrowing is substantially lower than in the past? Or will the latest wave of debt accumulation follow the historical pattern and culminate in widespread financial crises?

Figure 2 Post-crisis debt accumulation, growth, and interest rates



Source: Kose et al. 2020.
A. Total debt (in percent of GDP) and real GDP growth (GDP-weighted at 2010 prices and exchange rates).
B. Average long-term nominal government bond yields (with 10-year maturities) computed with current US dollar GDP weights, based on 36 advanced economies and 84 EMDEs.

In a recent book, we examine this issue, by considering the lessons learned from 50 years of debt accumulation and financial crises in EMDEs, using both qualitative and quantitative approaches (Kose et al. 2020b). This Policy Insight highlights the central findings and conclusions of the book, including a comparison of the current wave of debt accumulation with previous waves, an analysis of national episodes of rapid debt accumulation, and suggested policy options for policymakers to reduce the likelihood that this time also ends in crisis.

2 For example, Blanchard (2019), Blanchard and Summers (2019), Eichengreen et al. (2019), Krugman (2019), and Rachel and Summers (2019) discuss reasons for additional borrowing in advanced economies, and the United States in particular. Alcidi and Gros (2019), Auerbach et al. (2019), Mazza (2019), Rogoff (2019), and Wyplosz (2019) caution against adding to debt.

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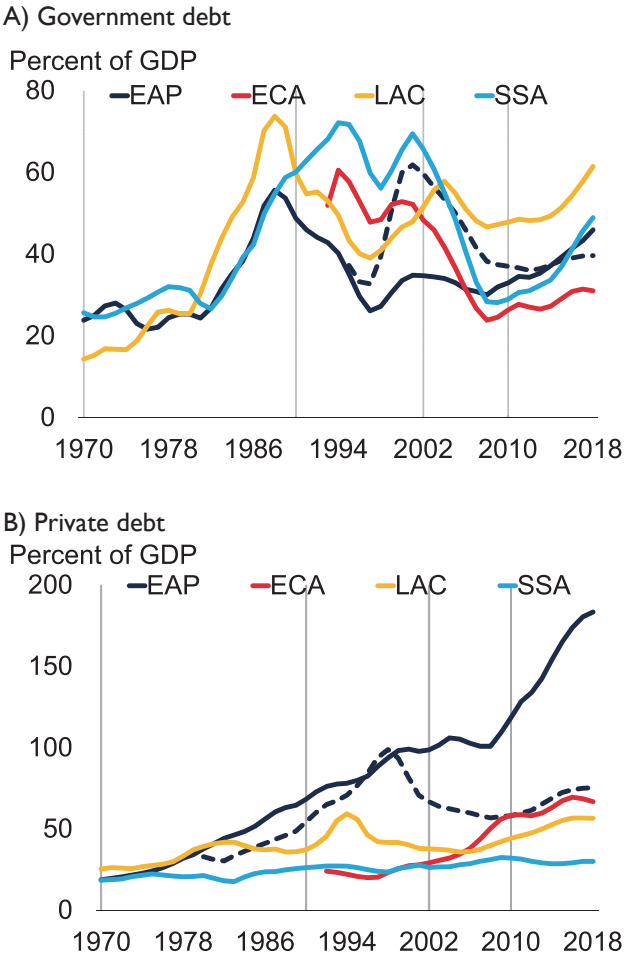
Previous global waves of debt: Similar yet different

The build-up of EMDE debt to record-high levels in 2018 has not been a linear process. Different EMDE regions and sectors have experienced diverse debt developments. There have been four waves of broad-based debt build-up in EMDEs since 1970 (Figure 3, Nagle 2020). The first (1970-89) occurred mainly by governments in Latin America and the Caribbean (LAC) and LICs, especially in Sub-Saharan Africa (SSA); the second (1990-2001) was concentrated in the private sector in East Asia and Pacific (EAP) but also involved some EMDEs in Europe and Central Asia (ECA) and LAC, and the third (2002-09) occurred chiefly among the private sector in ECA. The fourth wave (2010 onwards), in contrast, has covered all EMDE regions.

Figure 3 Debt in EMDEs



Source: Kose et al. 2020.
Note: Averages computed with current US dollar GDP as weight and shown as a 3-year moving average. Dashed lines for EAP refer to EAP excluding China. Lines for ECA start in 1995 due to smaller sample size prior to that year. Vertical lines in gray are for years 1970, 1990, 2002, and 2010.

The *first* wave spanned the 1970 and 1980s, with borrowing primarily accounted for by governments in LAC and LICs, especially in SSA (Cline 1995). The combination of low real interest rates in much of the 1970s and a rapidly growing syndicated loan market encouraged EMDE governments to borrow heavily (FDIC 1997, Gadanecz 2004). This debt build-up culminated in a series of crises in the early 1980s (Sachs 1985). Debt relief and restructuring were prolonged in this wave, ending with the introduction of the Brady plan in the late 1980s for mostly LAC countries, and debt relief in the form of Heavily Indebted Poor Countries Initiative and Multilateral Debt Relief Initiative in the mid-1990s and early 2000s for LICs (Unal et al. 1993, World Bank 2017).

The *second* wave ran from 1990 until the early 2000s as financial and capital market liberalisation enabled banks and corporations in EAP and governments in Europe and Central Asia (ECA) to borrow heavily (Mishkin 1999, Moreno et al. 1998). This wave saw the Asian financial crisis in 1997, and contagion elsewhere including Russia, Argentina, and Turkey (World Bank 1998).

The *third* wave was a run-up in private sector borrowing in ECA from EU-headquartered 'mega-banks' after regulatory easing (Demirgüç-Kunt and Huizinga 2013). This wave ended when the global financial crisis and the Euro Area debt crisis disrupted bank financing in 2008-09, and tipped several ECA economies into deep (albeit short-lived) recessions (Aslund 2010).

A comparison of the three waves provides insights into their common drivers and outcomes. All three waves began during prolonged periods of very low real interest rates, and were often facilitated by changes in financial markets that contributed to rapid borrowing – the development of syndicated loans in the first, capital and financial market liberalisation in the second, and the rise in cross-border lending from advanced economy banks in the third. The three past waves all ended with widespread financial crises and coincided with global recessions (1982, 1991, and 2009) or downturns (1998, 2001). Crises were often triggered by shocks that resulted in a sharp increase in borrowing cost, stemming from either an increase in investor risk aversion and risk premiums, or a tightening of monetary policy in advanced economies, and frequently featured sudden stops of capital flows. They usually led not only to economic downturns and recessions but also to reforms designed to lower external vulnerabilities and strengthen policy frameworks. In many EMDEs, inflation-targeting monetary policy frameworks and greater exchange rate flexibility were introduced, fiscal rules were adopted, and financial sector regulation and supervision were strengthened.

These similarities notwithstanding, the waves differed in some key dimensions. The financial instruments used for borrowing shifted over time as new instruments or financial actors emerged.

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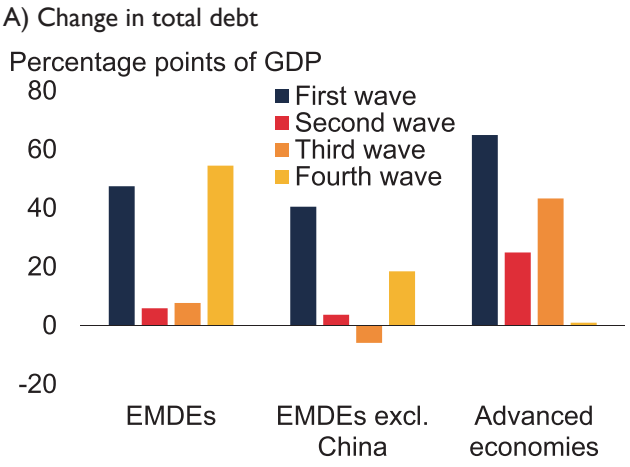
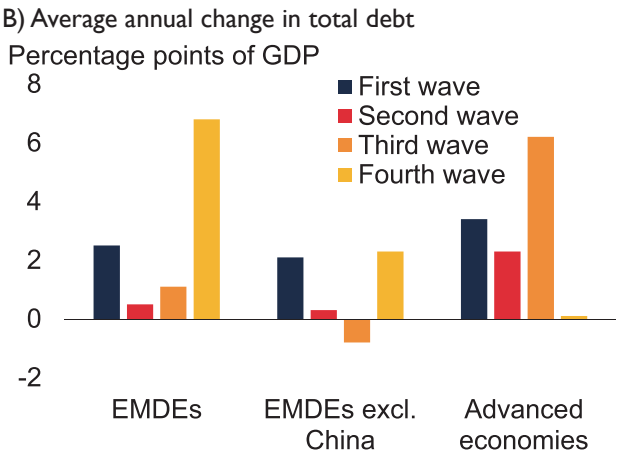
The nature of EMDE borrowers on international financial markets has changed, with the private sector accounting for a growing share of borrowing through the first three waves. The severity of the economic damage caused by the financial crises that ended the first three waves, also varied across the waves, and across regions. Output losses were particularly large in the first wave, when the majority of debt accumulation was in the government sector and debt resolution was protracted.

The current wave: Biggest, with vulnerabilities

The debt accumulation in EMDEs since 2010 has already been larger, faster, and more broad-based than in the previous three waves (Figure 4). Since 2010, EMDE debt has risen, on average, by almost 7 percentage points of GDP per year. The debt build-up in China has accounted for the bulk of the average EMDE debt increase and was predominantly in the private sector (more than four-fifths of the total debt build-up). Despite the dominance of China, the fourth wave has been global, with total debt rising in about 80% of EMDEs, and by at least 20 percentage points of GDP in more than one-third of EMDEs. This is a major contrast to previous waves, which typically occurred in one or two regions.

Figure 4 Change in debt in EMDEs





Source: Kose et al. 2020b.
Note: First wave covered the period 1970-89; second wave from 1990-2001; third wave from 2002-09; and fourth wave from 2010 onwards. EMDEs includes 147 economies.
A) Change in total debt from the start to the end of each wave.
B) Rate of change calculated as total increase in debt-to-GDP ratios over the duration of a wave, divided by the number of years in a wave.

In other aspects, the current wave of debt accumulation bears a resemblance to previous waves. Interest rates have been very low during the current wave, and the search-for-yield environment has contributed to falling spreads for EMDEs. Some major changes in financial markets have again boosted borrowing: these include a growing role for regional banks, a growing appetite for local currency bonds, and increased demand for EMDE debt from the expanding shadow banking sector. As in earlier waves, vulnerabilities have been mounting during the current wave, with a shift to riskier debt instruments, including greater reliance on financial markets and non-Paris club bilateral lenders (particularly in LICs).

National debt build-ups: Harbinger of crises?

When considering debt at the individual country level, episodes of rapid debt accumulation – when a country sees a sharp rise in its debt-to-GDP ratio – are very common. Since 1970, there have been around 520 national episodes of rapid debt accumulation in 100 EMDEs.[3] When these occur in tandem, they form the waves of debt discussed earlier. Examining these individual, national episodes of debt accumulation through the lens of an event study, offers a wealth of insights into macroeconomic developments during periods of rapid debt accumulation.

Among the 520 episodes identified, almost half were associated with a financial crisis (Figure 5)[4]. Episodes associated with crises had substantially worse macroeconomic outcomes than those without. Eight years after the beginning of a

3 A national episode of rapid debt accumulation is defined as a period during which the government debt-to-GDP ratio or the private sector debt-to-GDP ratio rises from trough to peak by more than one (country-specific) ten-year rolling standard deviation. The identification of troughs and peaks follows the approach of Harding and Pagan (2002).
4 Defined as in Laeven and Valencia (2018), and consisting of either a banking, currency, or sovereign debt crisis.

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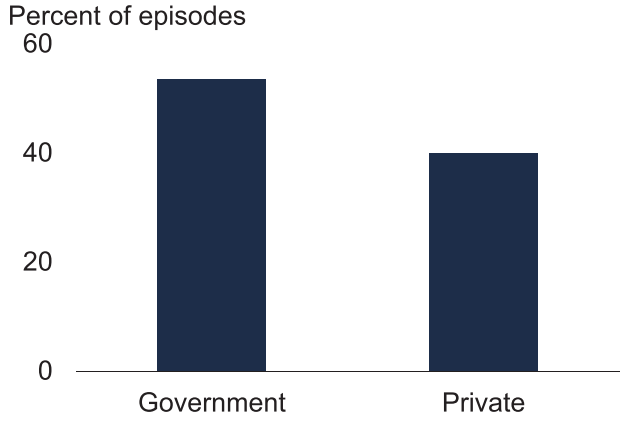
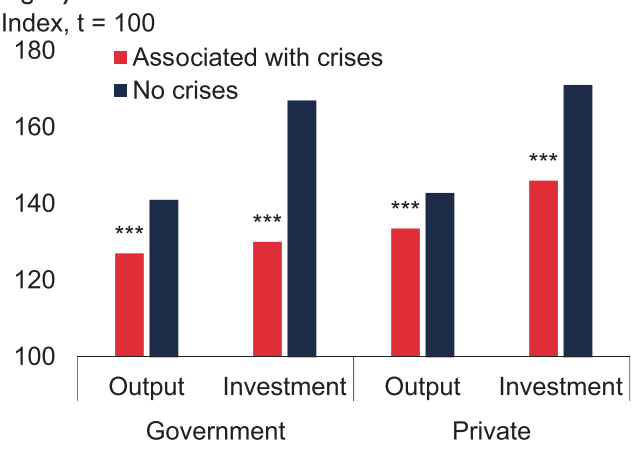
government debt accumulation episode, output in episodes with crises was around 10% lower than in episodes without a crisis, while investment was 22% lower. Similarly, eight years after the beginning of a private debt accumulation episode, output was 6% and investment 15% lower in episodes with crises, than in those without a crisis. Crises associated with rapid government debt build-ups tended to feature larger output losses than crises associated with rapid private debt build-ups.

Figure 5 Financial crises and their impact in EMDEs

A) Debt accumulation episodes associated with crises



B) Outcomes of rapid debt accumulation episodes after eight years



Source: Kose et al. 2020.
A. Episodes associated with crises are those that experience financial crises (i.e. banking, currency, and debt crises, as defined in Laeven and Valencia 2018) during or within two years after the end of episodes.
B. Median based on balanced samples. Chart shows the cumulative output and investment increase eight years from year 't', the beginning of a rapid government or private debt accumulation episode. Episodes associated with crises are those that experienced financial crises (banking, currency, and debt crises, as defined in Laeven and Valencia 2018) during or within two years after the end of episodes. '***' denotes that medians between episodes associated with crises and those with no crises are statistically different at 1% level, based on Wilcoxon rank-sum tests.

While financial crises were often triggered by external shocks, such as sudden increases in global interest rates, during rapid debt accumulation episodes, domestic vulnerabilities often increased the likelihood of crises and amplified their adverse impact. Most countries where crises erupted suffered from unsustainable combinations of inadequate fiscal, monetary, or financial policies. Crises were more likely, and the economic distress they caused was more severe, in countries with higher external debt – especially short-term – and lower levels of international reserves. When both government and private debt rose together – as they have in the current wave – the likelihood of a currency crisis was higher than when either government or private debt accumulated individually. These findings provide lessons for policymakers in EMDEs as the fourth wave progresses.

Looking forward: Will history repeat itself?

The current wave has already seen a substantial increase in debt in many EMDEs. Furthermore, most countries that have accumulated debt in the current wave have seen an increase in both government and private debt, in contrast to the previous three waves, when the build-up was concentrated in one of the two sectors.

EMDEs need to chart a course through troubled waters as the current debt wave evolves. They face weaker growth prospects because of multiple structural headwinds (World Bank 2020). They also have pressing investment needs to achieve development goals and improve living standards. The challenge for EMDEs is to find the right balance between taking advantage of the present low interest rate environment and avoiding the risks posed by excessive debt accumulation.

On the upside, the current financial environment appears to alleviate some risks associated with the ongoing debt wave. In particular, global interest rates are very low, and are expected to remain so for the foreseeable future. In addition, many EMDEs now have better fiscal, monetary, and financial sector policy frameworks than they did have during the previous debt waves (Kose and Ohnsorge 2019). A wide range of reforms have been implemented since the crisis to make the global financial system more resilient. The global financial safety net has also expanded over the past decade.

However, in addition to their record debt build-up during the current wave, EMDEs have accumulated other vulnerabilities that could amplify the adverse impact of financing shocks and cause debt distress. A sizeable number of EMDEs currently have not just higher total debt, but also higher external debt, higher short-term debt, and lower reserves, as well as wider fiscal and current account deficits, than at the peak of the third wave of debt accumulation.

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Debt distress could be triggered by unexpected, sustained jumps in global interest rates or in risk premia. In a highly uncertain global environment, EMDEs face a wide range of risks, including the possibility of disruptions in advanced-economy financial markets, steep declines in commodity prices, increased trade tensions, outbreaks of diseases, and a sudden deterioration in corporate debt markets in China. If any of these risks were to materialise, they could lead to a sharp rise in global interest rates, or risk premia, or weakening growth, and in turn, trigger debt distress in EMDEs. Furthermore, one of the lessons from previous crises is that shocks tend to come from unexpected sources. Thus, low or even falling global interest rates provide only a precarious protection against financial crises.

While EMDEs have gone through periods of volatility during the current wave of debt accumulation, they have not experienced widespread financial crises. A multitude of factors will determine the future evolution of the current wave. The key unknown is whether the current wave will end in financial crises in many EMDEs, as previous waves did, or whether EMDEs have learned the lessons from the previous waves and will prevent history from repeating itself.

Policies: They matter!

While there is no magic bullet of a policy prescription to ensure that the current debt wave proceeds smoothly, the experience of past waves points to the critical role of policy choices in determining the outcomes of these episodes. A menu of policy options is available to reduce the likelihood of the current debt wave ending in crisis, and if crises were to take place, to alleviate their impact.

First, higher government or private debt and a riskier composition of debt (in terms of maturity, currency denomination, and creditors) are associated with a higher probability of crisis. Hence, sound debt management and debt transparency will help reduce borrowing costs, enhance debt sustainability, and contain fiscal risks. Creditors, including international financial institutions, can spearhead efforts in this area by encouraging common standards and highlighting risks and vulnerabilities through timely analytical and surveillance work.

Second, strong monetary, exchange rate, and fiscal policy frameworks can safeguard EMDEs' resilience in a fragile global economic environment. The benefits of stability-oriented and resilient monetary policy frameworks cannot be overstated. Flexible exchange rates can discourage a build-up of currency mismatches and reduce the likelihood of large exchange rate misalignments. Fiscal rules can help prevent fiscal slippages, ensure that revenue windfalls during times of strong growth are prudently managed, and contain and manage risks from contingent liabilities. Revenue and expenditure policies can be adjusted to expand fiscal resources for priority spending.

Third, robust financial sector regulation and supervision can help recognize and act on emerging risks. Financial market deepening can help mobilise domestic savings that may provide more stable sources of financing than foreign borrowing.

Fourth, in several crisis cases, it became apparent that borrowed funds had been diverted towards purposes that did not raise export proceeds, productivity, or potential output. Apart from effective public finance management, policies that promote good corporate governance can help ensure that debt is used for productive purposes. Sound bankruptcy frameworks can help prevent debt overhangs from weighing on investment for prolonged periods.

Conclusion

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

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

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

References

Alcidi, C, and D Gros (2019), "Public Debt and the Risk Premium: A Dangerous Doom Loop", VoxEU.org, May 22.

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Aslund, A (2010), *The Last Shall Be the First: The East European Financial Crisis*, Washington, DC: Peterson Institute for International Economics.

Auerbach, A J, W G Gale and A Krupkin (2019), "If Not Now, When? New Estimates of the Federal Budget Outlook", Brookings Report, February 11, Brookings Institution, Washington, DC.

Blanchard, O J (2019), "Public Debt and Low Interest Rates", *American Economic Review* 109(4): 1197–1229.

Blanchard, O J and L H Summers (2019), *Evolution or Revolution? Rethinking Macroeconomic Policy After the Great Recession*, Cambridge: MIT Press.

Cline, W (1995), *International Debt Reexamined*, Washington, DC: Institute for International Economics.

Demirgüç-Kunt, A and H Huizinga (2013), "Are Banks Too Big to Fail or Too Big to Save? International Evidence from Equity Prices and CDS Spreads", *Journal of Banking and Finance* 37(3): 875-894.

Eichengreen, B, A El-Ganainy, R Esteves and K. J. Mitchener (2019), "Public Debt through the Ages", NBER Working Paper 25494.

FDIC (Federal Deposit Insurance Corporation) (1997), "History of the Eighties: Lessons for the Future. Vol. 1, An Examination of the Banking Crises of the 1980s and Early 1990s", FDIC, Washington, DC.

Gadanecz, B, (2004), "The Syndicated Loan Market: Structure, Development and Implications", BIS Quarterly Review, December, Bank for International Settlements, Basel.

Harding, D, and A Pagan (2002), "Dissecting the Cycle: A Methodological Investigation", *Journal of Monetary Economics* 49(2): 365-381.

Kose, M A, F Ohnsorge and N Sugawara (2020a), "Benefits and Costs of Debt: The Dose Makes the Poison", World Bank Policy Research Working Paper 9166.

Kose, M A, P Nagle, F Ohnsorge and N Sugawara, (2020b), *Global Waves of Debt: Causes and Consequences*, Washington, DC: World Bank.

Kose, M A, and F Ohnsorge, eds. (2019), *A Decade Since the Global Recession: Lessons and Challenges for Emerging and Developing Economies*, Washington, DC: World Bank.

Krugman, P (2019), "Perspectives on Debt and Deficits", *Business Economics* 54(3):
157–159.

Laeven, L and F Valencia (2018), "Systemic Banking Crises Revisited", International Monetary Fund Working Paper 18/206.

Mazza, J (2019), "Is Public Debt a Cheap Lunch?", *Bruegel* (blog), January 21.

Mishkin, F (1999), "Global Financial Instability: Framework, Events, Issues", *Journal of Economic Perspectives* 13(4): 3-20.

Moreno, R, G Pasadilla and E Remolona (1998), "Asia's Financial Crisis: Lessons and Policy Responses", Pacific Basin Working Paper Series 98-02, Federal Reserve Bank of San Francisco.

Nagle P (2020), "Waves of Debt in Emerging and Developing Economics", World Bank Policy Research Working Paper, forthcoming.

Rachel, L, and L H Summers (2019), "On Falling Neutral Real Rates, Fiscal Policy, and the Risk of Secular Stagnation", BPEA Conference Draft, March 7-8, Brookings Institution, Washington, DC.

Rogoff, K (2019), "Government Debt is Not A Free Lunch", *Project Syndicate*, 6 December.

Sachs, J (1985), "External Debt and Macroeconomic Performance in Latin America and East Asia", *Brookings Papers on Economic Activity*, 1985(2): 523-573.

Unal, H, A Demirgüç-Kunt and K. Leung (1993), "The Brady Plan, 1989 Mexican Debt-Reduction Agreement, and Bank Stock Returns in United States and Japan", *Journal of Money, Credit and Banking*, 25(3): 410-429.

World Bank (1998), *Global Economic Prospects and the Developing Countries: Beyond Financial Crisis*, Washington, DC: World Bank.

World Bank (2017), "Heavily Indebted Poor Countries (HIPC) Initiative and Multilateral Debt Relief Initiative (MDRI) - Statistical Update", Washington DC: World Bank.

World Bank (2019), *Global Economic Prospects: Heightened Tensions, Subdued Investment*, Washington DC: World Bank, June.

World Bank (2020), *Global Economic Prospects. Slow Growth, Policy Challenges*, Washington DC: World Bank, January.

Wyplosz, C (2019), "Olivier in Wonderland", VoxEU.org, June 17.

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