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Addressing the Corporate Debt Overhang

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Foreword

The ability of businesses to borrow affects investment, entrepreneurship, and overall economic growth. However, there can be too much of a good thing. A buildup of debt can pose risks to the financial system and impair economic growth. Excessive corporate debt can lead to higher cost of capital and cause businesses to forego productive investment opportunities. It can raise businesses' risk of default, which can in turn weaken financial institutions that lend to them. If left unchecked, the so-called "corporate debt overhang" phenomenon can compromise economic recovery and stability of the financial system.

After years of the COVID-19 pandemic, nonfinancial corporate debt levels in many countries are at record levels, fueled by extensive public support programs introduced in many countries to maintain economic activity. According to statistics from the Bank for International Settlements, nonfinancial corporate debt has nearly doubled in emerging markets and developing economies (EMDEs) since the global financial crisis of 2008–2009.

If not brought down urgently and in a balanced way, excessive corporate debt will likely inhibit new investments and slow down recovery from recession caused by the COVID-19 pandemic. As such, addressing corporate debt overhang will be a central pillar in facilitating an equitable recovery from the pandemic, which was the focus of the recent 2022 World Development Report. Much current corporate debt is not sustainable, particularly in EMDEs. Cross-country studies suggest that a large percentage of nonfinancial firms in EMDEs entered the COVID-19 pandemic with fragile balance sheets—with over a quarter of them being unable to cover interest payments with current earnings—which in turn made them susceptible to insolvency in the event of a shock to earnings and receivables. As fiscal support measures are gradually withdrawn, nonperforming loans (NPLs) could rise quickly and a wave of insolvencies could spill over to the financial sector, restricting its ability to support growth.

To avoid this dire outlook, policy makers should take comprehensive and expedient action to reduce the risks associated with corporate debt overhang. This report, "Addressing the Corporate Debt Overhang," draws on the World Bank Group's extensive experience implementing on-the-ground solutions for reducing financial risks, in collaboration with financial institutions, regulators, and other public sector authorities. Among the cross-cutting solutions assessed in this report are strategies for resolving NPLs, measures to strengthen corporate debt restructuring frameworks, and ways capital markets can help alleviate debt levels. Policy recommendations provide valuable guidance to anyone facing the multifaceted challenge of a corporate debt overhang. I highly recommend this report to policy makers and World Bank staff alike.

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Global Director, Finance
Finance, Competitiveness & Innovation Global Practice

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Executive Summary

This White Paper considers the problem of corporate debt overhang and discusses the policy tools to address it. Corporate debt overhang describes the scenario in which a company's debts are so great that they deter new lenders, affect corporate decision-making, and stifle new investment. At scale, this phenomenon can compromise economic recovery. A greater level of debt can be tolerated in a booming economy, where returns on investment are high, but in a stagnant or contracting economy, where returns on investment are low, the risks associated with corporate debt overhang tend to be more severe. The White Paper is timely and unique in its breadth and perspective. It presents the different elements of the possible solution sets to the corporate debt overhang problem, drawing on the World Bank Group's unique field experience in designing and delivering these solutions. The findings in this paper can be used to help policy makers understand the tools available to them and, more importantly, which tools are most likely to deliver the highest marginal benefit for their country.

Three sets of interlinked policy tools for mitigating debt overhang risks are considered. First, financial stability instruments (particularly approaches to address bank nonperforming loans (NPLs)), second, corporate debt restructuring (CDR) frameworks, and third, capital market solutions. While each of these policy tools is considered in a stand-alone chapter (Chapters 2 through 4), they have several common threads. First, they are concerned with the creation of effective enabling regulatory environments. Second, cognizant of government balance sheet limitations, the policy settings are intended to operate in a manner that reduces the risk for widespread government fiscal intervention. Finally, these reforms are experience-driven rather than theoretical, building on the lessons from what has and has not worked in previous financial crises.

Chapter 1 "sets the scene" with an empirical analysis of the evolution of corporate debt vulnerabilities up to and during the pandemic. While there is no set value at which corporate debt levels become economically harmful, the post-2009 rise had begun to cause concern even before the COVID-19 pandemic. The policy response to the COVID-19 pandemic, characterized by widespread fiscal support to keep businesses afloat, has exacerbated these fears. The concern is that when these temporary support measures are phased out, many businesses in need of fresh funding to kick-start their operations after months in quasi-hibernation will be unable to secure this funding because of the scale of their existing debts. In this context, the chapter analyzes the evolution of corporate debt vulnerabilities up to and during the pandemic. Drawing on a set of novel datasets, the chapter highlights the scale and distribution of corporate vulnerabilities across regions, sectors, and firm size.

Given the record level of corporate leverage in many countries and the adverse economic shocks caused by the pandemic, there is a high risk of a sharp increase in defaults in the nonfinancial corporate sector. This would in turn affect financial sector stability because higher proportions of NPLs threaten both the profitability and the liquidity of financial institutions. This is particularly important at present because recent stress-test analysis reveals that, for the median bank, all that is required to wipe out 20 percent of its capital buffer is a 3.8 percent increase in NPLs. In addition to increasing financial sector stability risks, high NPLs inhibit future recovery. History shows that jurisdictions with high levels of unresolved NPLs typically experience deeper and more protracted recessions and slower recoveries than jurisdictions in which NPL problems are speedily addressed.

Chapter 2 focuses on the link between nonperforming loans and financial stability, as well as the measures that authorities and financial institutions can take to identify and resolve problem assets at an early stage. The chapter underlines the risk of inaction when encountering rapidly deteriorating bank asset quality and provides a high-level overview of the most important factors in ensuring proper management of NPLs. The chapter also reviews the strategies and tools adopted by banks and the public sector and provides policy recommendations.

NPL resolution requires sound laws that create clear rights and procedures for creditors and debtors; a regulatory framework that establishes unambiguous, accurate, and timely indicators of bank asset quality; and an effective supervisory system to ensure NPLs are promptly identified and addressed. Financial institutions should be encouraged to set up dedicated workout units and to develop a strategy and timeline to address loan quality problems and reduce NPLs. Components of such a strategy can include loan restructuring, legal action, debt write-offs, and sales. In the event of a system-wide increase in NPLs, enhancing coordination among the various stakeholders, both public and private, is essential. This can be achieved by establishing a committee or working group. Such processes can help the authorities develop coordinated strategies for NPL resolution as well as obtain buy-in and inject impetus into the chosen approach.

Chapter 3 considers CDR frameworks that can help deal with the ensuing corporate debt overhang and the expected rise in the number of financially distressed businesses. In-court and out-of-court processes for corporate debt restructuring are also an integral part of any effective NPL management strategy. Well-developed CDR frameworks offer a variety of procedures that can be used for different levels of corporate financial distress, with varying levels of court involvement/supervision. The chapter presents a taxonomy of CDR tools and uses a specially created dataset to provide evidence of the development and key features of CDR mechanisms in 114 economies around the world. In particular, it shows that, despite the known benefits of informal restructuring tools, they remain less widespread than formal insolvency tools. Out-of-court workouts (private agreements between creditors and debtors with limited or no judicial involvement) also remain relatively uncommon. Jurisdictions with a framework, guideline, or agreement regarding the conduct of out-of-court workouts enjoy greater creditor participation. This is important because economies where creditors regularly use informal restructuring tools tend to have higher levels of access to credit. Even when these tools are available, however, special rules to deal with micro, small, and medium enterprises in financial distress—often the great majority of firms within an economy—seldom exist and are particularly critical in contexts like that created by the COVID-19 pandemic. An additional finding of the data analysis in Chapter 3 is that "separate entry systems," in which an indebted company can choose to file for either restructuring or liquidation (unlike "single entry systems," which offer one entry path that can branch off into either liquidation or restructuring), are associated with substantially higher rates of creditor recovery.

Many tangible and intangible elements are needed for CDR frameworks to be successful, including the enabling environment, the right choice of tools, and effective implementation. In recognition of this complexity, Chapter 3 also sets out 20 practical lessons learned in developing CDR frameworks in emerging markets. The lessons are presented in two sections: first, those most relevant in the early, design stage of a CDR framework and that may influence the choice of CDR mechanism, and second, those that should be considered for the implementation stage. The overarching message from these lessons learned is that there is no "one-size-fits-all" solution, and a good understanding of a country's market needs, negotiation and business culture, and existing legal and institutional environment is critical for developing an effective CDR framework.

Chapter 4 focuses on the role that capital market solutions can play in helping nonfinancial corporations (NFCs) in emerging markets and developing economies (EMDEs) deal with debt overhang as the COVID-19 crisis continues to evolve. The chapter outlines both debt and equity approaches that can help NFCs improve their balance sheets and financial position to deal with already high levels of leverage and help lower-leveraged NFCs improve their performance and probability of survival, given the severe adverse shock of the pandemic. Capital market solutions for NFCs suffering from a debt overhang should focus primarily on increasing the equity base of the corporate to address the high leverage, helping reduce adverse effects on economic activity from unintended NFC deleveraging. NFCs with low leverage before the pandemic will not necessarily face a threatening debt overhang, but they may nonetheless experience liquidity problems, and well-designed debt solutions could suffice to address their current financial problems.

Capital market solutions are most applicable in countries with relatively developed local capital markets. These markets are characterized by a well-functioning local currency government bond market, a broad and diversified investor base, and the presence of foreign investors. Of course, in some instances, international capital markets will be relevant, although in most cases this relates only to large international companies with established access to these markets. For the majority of EMDEs with no developed capital markets, the low depth of local capital markets significantly limits their access. In jurisdictions that show potential for capital market development, a combination of policy reforms and government support could help propel some market-based financing mechanisms. Chapter 4 provides a framework to assess the need for interventions, while assuming that the exact mechanism of support will depend on local specificities and the type of problem confronted. Further, although the task is challenging, the experiences of Asian countries after the Asian Financial Crisis (1997–1998) and of many euro area countries after the euro crisis (2007–2012) do show that implementing a policy reform agenda and government support can lead to an increase in the availability to businesses of market-based financing mechanisms. Thus, it is critical that government authorities factor in the importance and benefits of developing capital markets when they assess whether to intervene and, if so, what type of interventions would be needed as their countries move into the recovery phase.

Acronyms

AMC	asset management company
ASEAN	Association of Southeast Asian Nations
BP	break point
BPS	Business Pulse Survey
CDR	corporate debt restructuring
CVI	Corporate Vulnerability Index
DaR	debt at risk
EAP	East Asia and Pacific
EBIT	earnings before income and taxes
EBITDA	earnings before interest, taxes, depreciation, and amortization
ECA	Europe and Central Asia
EMDE	emerging market and developing economy
EU	European Union
FSAP	Financial Sector Assessment Program
GDP	gross domestic product
GFSR	Global Financial Stability Report (IMF)
IAIR	International Association of Insolvency Regulators
IASB	International Accounting Standards Board
IFC	International Finance Corporation
IFRS	International Financial Reporting Standards
IIF	Institute of International Finance
IMF	International Monetary Fund
LAC	Latin America and the Caribbean
MENA	Middle East and North Africa
MSEs	micro and small enterprises
MSMEs	micro, small, and medium enterprises
NFC	nonfinancial corporation

NPL	nonperforming loan
OCW	out-of-court workout
OECD	Organisation for Economic Co-operation and Development
PE	private equity
SAR	South Asia Region
SAR	Special Administrative Region
SSA	Sub-Saharan Africa
SMEs	small- and medium-sized enterprises
UK	United Kingdom
UNCITRAL	United Nations Commission on International Trade Law
US	United States
USD	United States dollar
VAT	value-added tax

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Setting the Scene: The Evolution of Corporate Vulnerabilities and Firm Debt Dynamics up to and During the Pandemic

I. Introduction

The ongoing COVID-19 pandemic has prompted an unprecedented scale of public support to help businesses through the crisis. While these measures have been crucial in ensuring business survival in the short term, as policy support begins to unwind, a wave of insolvencies is expected. Corporate debt overhang disincentivizes overleveraged firms from engaging in productive investments,[1] thus amplifying the adverse business cycle shock and compromising the economic recovery. If unchecked, a sharp increase in corporate vulnerabilities will profoundly impact the banking system, spilling over to the broader financial sector (Group of 30 2020; Helmersson et al. 2021). Hence, efficient procedures for restructuring or liquidating unviable firms will minimize the financial and economic damage inflicted by a wave of defaults.

The purpose of this report is to describe the scale of this problem, to highlight why policy makers should be concerned about it, and to present tools and policy options that countries should consider for dealing with these problems. **The report sets out the key policy tools and "lessons learned" from extensive work by the World Bank Group in mitigating debt overhang risks** by promoting financial sector stability in emerging markets and developing economies (EMDEs), facilitating corporate restructuring, and where appropriate, strengthening access to capital market finance to weather the effects of a crisis. Table 1.1 summarizes measures to deal with the corporate debt overhang using the lenses of financial stability, corporate debt restructuring, and capital market solutions.

1. Firms are less incentivized to raise finance for new investments with a positive net present value as proceeds from new investments will predominantly service debts held by existing creditors instead of benefiting shareholders or new holders of debt.

Even before the pandemic, policy makers had expressed concerns that the potential impact of high nonfinancial corporate debt, increasingly from subprime issuers, could lead to financial stress and impair economic growth (International Monetary Fund 2019; United Nations 2019). Nonfinancial corporate debt in EMDEs has been accumulating since the global financial crisis—from 56 percent of gross domestic product (GDP) in 2008 to 103.5 percent of GDP in Q4 of 2020.[2] Preceding the pandemic crisis, many firms took advantage of the "lower for longer" interest rate environment, accumulating additional debt in a period of low economic growth and subdued corporate earnings. Over this period, the growth in corporate syndicated loans and the shift from bank to bond debt in some countries led to concerns over debt sustainability and refinancing.[3] In light of these developments, many firms entered the pandemic crisis with elevated pre-existing vulnerabilities.

Recent studies show the risks of a potentially rapid deterioration of corporate sector health. In a sample of advanced economies and several major EMDEs, Banerjee, Noss, and Pastor (2021) found that, for most firms in their sample, if corporate revenues fell by 25 percent in 2020, in the absence of any corporate refinancing, corporate debt service and operating expenses would exceed cash buffers and revenues. Demmou et al. (2020) similarly reported that social distancing measures would precipitate liquidity shortfalls after three months for 35 to 38 percent of European firms. Didier et al. (2020) noted the unprecedented collapse in revenues and reported that, in the United States, cash flow would cover less than 30 days of operating expenses. Kroeger et al. (2020) indicated that over half of corporate debt in ASEAN and Vietnam is at risk.

A growing body of evidence indicates that certain segments of the economy have been significantly impacted by the pandemic crisis. For example, small- and medium-sized enterprises (SMEs) are more vulnerable because of their thin equity cushions, lower liquidity buffers, limited financing, and less diversified revenue streams. Where bank lending is concentrated in vulnerable sectors, this may be a source of problems for small and regional banks with high SME exposure (International Monetary Fund 2020).

To provide context, the following analysis draws on the Corporate Vulnerability Index[4] (CVI) and the Business Pulse Survey[5] (BPS) to highlight how corporate vulnerabilities have developed over the pandemic crisis and presents some measures of how much corporate debt is at risk.[6] This review culminates in a more complete analysis of private sector developments. Analysis based on the survey provides insights into the financial pressures facing firms across two snapshots in time during the crisis. Complementing the survey insights, the CVI uses balance sheet data to track how corporate sector vulnerabilities have evolved and covers listed nonfinancial corporates using granular balance sheet data for a more detailed analysis of corporate sector vulnerabilities. Both data sources in tandem provide rich insight into corporate sector health across the universe of firms, highlighting the potential magnitude of the ensuing debt overhang and differences in firms' experiences.

A. Corporate Vulnerabilities

Results from the BPS analysis during wave 2 (September 2020) indicate that two-thirds of firms are financially vulnerable based on estimates drawn from 20,500 firms in 19 countries. Firms are deemed financially vulnerable using present and forward-looking measures of financial vulnerability. Within the group of financially vulnerable firms, just over half are already at risk,[7] while 36 percent of all firms are expected to face difficulties in meeting their future debt obligations.[8] With more firms showing signs of financial vulnerabilities, as captured by forward-looking measures, decisive action now may prevent firms from entering into arrears and potential debt defaults down the line.

2. Bank for International Settlements statistics: Data of total credit to nonfinancial corporations (core debt) recorded as a percentage of GDP (https://stats.bis.org/statx/srs/table/f4.1). Aggregates are based on conversion to US dollars at market exchange rates. Note: The estimate from the Bank for International Settlements includes only emerging market economies: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Hong Kong SAR, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Poland, Russia, Saudi Arabia, Singapore, South Africa, Thailand, and Turkey.
3. Syndicated loans are often denominated in foreign currency and primarily extended by foreign lenders (Chen et al. 2019).
4. Using balance sheet information from 17,284 listed nonfinancial firms in 74 countries (for 2020Q4), the Corporate Vulnerability Index (CVI) is based on seven indicators that capture four key dimensions of firms' financial vulnerabilities: debt service capacity, leverage, rollover risk, and profitability/market valuation. The seven indicators are interest coverage ratio, leverage ratio, net debt to earnings before income and taxes (EBIT) ratio, current liabilities to long-term liabilities ratio, quick ratio, return on assets, and market to book ratio. For methodological details, see Feyen et al. (2017).
5. The World Bank's Business Pulse Survey provides insights into the economic conditions experienced by over 100,000 firms across 72 countries during the pandemic. Covering primarily low- and middle-income countries across almost all economic sectors, the dataset provides the most comprehensive information on the current impact of COVID-19 on businesses across the world (Apedo-Amah et al. 2020). The first wave comprised 57 countries surveyed between April and November 2020. Data processing from the second wave, which took place from April 2020 to March 2021, is ongoing. Information from the second wave is used to track how the debt levels have evolved from January to September 2020.
6. The BPS analysis is based on preliminary results adapted from Chelva, Farazi, and Feyen (2022). BPS data is currently being processed and revised, with forthcoming information on wave 3 expected. See the forthcoming working paper for the most up-to-date analysis.
7. Firms are identified as financially vulnerable at present if they are already in arrears.
8. Firms in this latter category are identified by their anticipation of going into arrears, having already made amendments to their loan payment schedules, or having clients in or expecting to go into arrears.

Analysis from the BPS shows that in early 2020 sales were hit hard for the universe of firms across the board, with micro, small, and medium enterprises (MSMEs) facing a much more severe contraction in sales compared to large firms (Figure 1.2, Panel A). The magnitude of this shock to earnings is likely to compromise a firm's ability to repay debts and cover current expenses. The pandemic led to a substantial fall in sales in early 2020, 48 percent on average,[9] with **South Asia** showing the **highest median drop** in sales (64.5 percent) and **Europe and Central Asia the lowest** (37.9 percent). Disaggregated by firm size, MSMEs faced a much more severe contraction in sales compared to large firms: median country estimates of large firms show a 37.8 percent sales decrease, as compared to 44.5, 50.7, and 56.6 percent falls for medium-, small-, and micro-sized firms, respectively. With this in mind, corporate vulnerabilities are likely to be even more severe for MSMEs than for the listed firms (which are typically large) captured by the CVI.

Balance sheet vulnerabilities of EMDEs' listed non-financial corporations have increased since the global financial crisis and are now at the highest level recorded since the first CVIs in 2006.[10] All regions have trended upward since 2018; however, 2020Q3 and 2020Q4 data indicate that this has stabilized at a heightened level in most regions, apart from Europe and Central Asia, where it continues to increase (see Figure 1.1) on the back of deteriorating debt service capacity and highly leveraged firms in Bulgaria and Latvia. Several sectors adversely impacted by the pandemic include aviation, hospitality, transportation, tourism, and energy. Figure 1.1 shows that listed firms in the consumer services sector display the highest vulnerabilities, while technology, consumer goods, and telecommunications have remained stable.

From January to September 2020, the median proportion of firms in or expecting to be in arrears remained at around 43 percent, with significant heterogeneity at the country level, consistent with the stable but elevated vulnerabilities of listed firms captured in the CVI. BPS results (Figure 1.2, Panel D) highlight corporate vulnerabilities across the 72 countries, measured by the proportion of firms in or expecting to go into arrears. South Asia shows consistently high levels of firms struggling to meet their debt obligations, coinciding with the worsening health crisis, which has yet to abate. Most countries in Sub-Saharan Africa have seen an improvement in scores, with the exception of Zambia. The situation continues to deteriorate in Latin America and the Caribbean and in most of Europe and Central Asia. Taking the proportion of corporate debt to total debt into account, the arrears in Bangladesh, Nepal, Vietnam, and Zambia have the potential to adversely impact the banking sectors in those countries.

On the listed and unlisted side, regional estimates of expected time to cash flow shortages show that firms face tight funding conditions across all regions, with East Asia and Pacific, the Middle East and North Africa, and Latin America and the Caribbean experiencing the largest squeeze (Figure 1.2, Panel B). The conditional average number of days during which an establishment can cover its costs with cash on hand, controlling for size, sector, and weeks after peak, was calculated by region using BPS wave 1 data. Expected time to cash flow shortages shows that firms in East Asia and Pacific have as few as 43.3 days on average, while firms in Europe and Central Asia have the largest cash buffers, at 74 days on average. In contrast, listed firms in Europe and Central Asia show the most severe vulnerabilities across regions. Regional averages mask a significant amount of variation at the firm level, partly represented by the confidence intervals demonstrated in Figure 1.2, Panel C.

B. Corporate Debt

Listed nonfinancial corporate debt in the 74 countries surveyed reached US$5.64 trillion, with almost 54 percent classified as "financially vulnerable" according to at least one balance sheet indicator, similar to the estimate from two quarters ago. While levels of vulnerability have stabilized, this stabilization comes after a record accumulation of global nonfinancial corporate debt, exceeding 103 percent of GDP[11] for emerging markets and US$80.6 trillion globally in 2020Q4, compared to 92 percent of GDP and US$75.2 trillion in 2019Q4.[12] Supportive government measures, such as debt moratoria and loan guarantee programs, as well as improved market sentiment, may have pushed corporate debt levels up further in the recovery phase of the pandemic. As such support measures are unwound, the full effect of potential corporate insolvencies and resulting credit losses may be substantial (for instance, losses are estimated to be US$1 trillion or 2 percent of GDP for G7, Australia, and China) (Mojon, Rees, and Schmieder 2021).

9. Median country estimates from BPS wave 1 dataset.
10. See Feyen et al. (2020) for an in-depth analysis of corporate vulnerabilities in listed firms.
11. High debt to GDP ratios also reflect the deep contraction in GDP during this period.
12. Global debt monitor database, Institute of International Finance (IIF). IIF estimates of nonfinancial corporate debt are based on 31 emerging markets and incorporate cross-border and domestic bank loans as well as onshore/offshore outstanding bonds.

Vulnerabilities related to debt service capacity stabilized for listed corporates during 2020Q2 to 2020Q4 (Figure 1.3), with some regional differences. Estimates are shown for debt at risk in terms of debt service capacity using the interest coverage ratio.[13] In 2020Q4, listed firms facing difficulties in covering their interest expense with earnings held 21.3 percent of total listed corporate debt, similar to the 21.6 percent observed two quarters ago. Europe and Central Asia experienced the largest increase, from 14.6 percent to 21 percent, while South Asia experienced an improvement from 20.1 percent to 11.9 percent. Other regions experienced more modest changes during the period: 31.2 percent of listed EMDE firms are at risk, according to the application of the interest coverage ratio, suggesting that smaller listed firms in general face more severe earnings difficulties.

Corporate debt levels on aggregate have stabilized, but with significant disparities below headline estimates. Preliminary results from the BPS wave 2 for the 20 countries listed in Figure 1.2 show that the dynamics of corporate debt accumulation are highly heterogenous even within regions. Seven countries show a decrease in corporate debt levels while 10 are increasingly indebted. Several countries in Sub-Saharan Africa have seen a decline in indebtedness, but concerns of a new COVID-19 wave and a slow vaccine rollout weigh on the corporate sector outlook, exacerbated by the high proportion of debt at risk in the region.

Debt at risk measures for listed and unlisted firms show that the overwhelming majority of debt could be at risk and adversely impact the banking sector when future prospects are taken into account (Figures 1.3, 1.4, and 1.5). With a median country value of around 87 percent in both January and September 2020 (Figure 1.5), this assessment highlights that the potential financial impact on the banking sector is significant and has yet to decline.[14] However, most countries have under half of total debt at severe risk, measured by present debt at risk, with a country median of 32.9 percent, which also shows a moderate decline since January 2020, when it stood at 38.5 percent. This is potentially driven by policy measures to prevent firms from technically entering into arrears, but the firms remain at risk of doing so in the future (captured in future debt at risk). A significant proportion of debt at risk falls within future debt at risk measures, where anticipated effects are a key concern. In this sense, policies that prevent such situations from being realized are crucial to protecting the viability of corporate debt.

C. Policy Response

EMDEs have implemented a variety of policy measures to ensure credit flows to the corporate sector are maintained. These measures were intended to provide immediate relief to firms by directly lending to corporates, introducing temporary debt moratoria, introducing state guarantee schemes, and strengthening debt workout mechanisms. Policies have also incentivized banks to continue lending to firms by using capital buffers and measures to avoid liquidating viable firms. These much-needed measures are likely to have pushed nonfinancial corporate debt some 8 percentage points higher, to 100 percent of GDP.[15]

The COVID-19 Financial Sector Policy Compendium shows that over 3,100 measures have been adopted in over 150 countries since September 2020, with the pace of policy interventions recently decreasing (Figure 1.6). Since last fall, the number of policies that roll back support measures has increased. The eventual unwinding of these measures is likely to depend on how the pandemic further develops and on the accompanying macroeconomic conditions and outlook. While the support measures have helped to prevent unnecessary bankruptcies and economic scarring and have limited the contraction in private sector activity, such policies are temporary and costly, impact market functioning, and were introduced when several EMDEs had limited budgetary resources to achieve their overall goals. In addition, to avoid severe consequences from unwinding these measures too quickly, countries would benefit from rolling them back gradually and from carefully targeting ongoing support policies toward viable firms that continue to face severe temporary liquidity problems.

13. The interest coverage ratio is defined as EBIT divided by interest expenses.
14. Analysis is currently under way looking at disaggregating the proportion of debt at risk by firm size. By separating the impact of large firms, which are likely to have access to alternative sources of funding, from banks, debt at risk measures will be further refined.
15. IIF Global Debt Monitor (February 2021).

D. Impact of Nonperforming Loans on the Banking Sector

The negative effects of COVID-19 have not yet been observed in bank capitalization and asset quality, according to analysis by Feyen and Mare (2021), who measure the resilience of the banking sector to the potential wave of NPLs. EMDE banks are resilient to credit shocks in the short term, although this varies widely across regions and countries. Conducting a bottom-up reverse stress test, Feyen and Mare identify banking systems that appear most vulnerable to a deterioration in asset quality and that could render a significant fraction of the banking system undercapitalized. Figure 1.7 shows the results from this analysis, highlighting how much NPLs would have to increase to wipe out capital buffers in the banking system across regions. Feyen and Mare find that the banking systems in South Asia appear the most vulnerable. The measure of distance to bank undercapitalization indicates that the median percentage point increase in NPLs (as a percentage of gross loans) that would render at least 20 percent of total banking system assets undercapitalized is 3.8 percentage points.

The wide variation in countries' vulnerability to credit shock calls for a careful assessment of country circumstances, including the effect of unwinding credit moratoria and other borrower support measures on bank resilience. The findings underscore how a weak economy and slow recovery may weigh negatively on the banking sector, which, especially in Bangladesh and India, is already under heightened pressure. In this regard, an increase in the NPL ratio of 0.1 and 3.3 percentage points for these two countries would render banks representing around 20 percent of total banking system assets undercapitalized.

II. Conclusion

The COVID-19 outbreak has generated a severe global shock requiring widespread official measures to support the nonfinancial corporate sector, with an estimated two-thirds of all firms deemed financially vulnerable. The corporate sector entered the crisis in an already financially vulnerable position, with record debt levels and weak earnings. Emergency liquidity credit lines have supplied viable firms with much-needed short-term support to avoid a wave of bankruptcies, but at the cost of propping up "zombie" firms. These exceptional measures have shielded firms from market forces, including the enduring changes in consumer demand and supply chains induced by the pandemic.

To tackle the impact of the corporate debt overhang, a range of policy options and tools are presented in the subsequent chapters of this paper, categorized by financial stability instruments (particularly approaches to address bank NPLs), measures to strengthen corporate debt restructuring and insolvency frameworks, and capital market solutions. In reality, however, these measures are often complementary and overarching. For example, measures to reduce NPLs through increased access to finance in capital markets may prevent NPLs from accumulating in financial institutions, thus easing financial sector vulnerabilities. The development of CDR measures to reduce the number of firms applying for bankruptcy is likely to reduce pressure on a potentially overwhelmed and underdeveloped court or legal framework charged with handling the anticipated scale of potential NPLs. And lastly, careful use of capital market solutions has important requisites, such as a sufficiently developed capital market, without which such measures may be unfeasible. With these interlinkages in mind, the following chapters present a range of policy tools, along with historical examples, to better equip policy makers to address corporate debt vulnerabilities.

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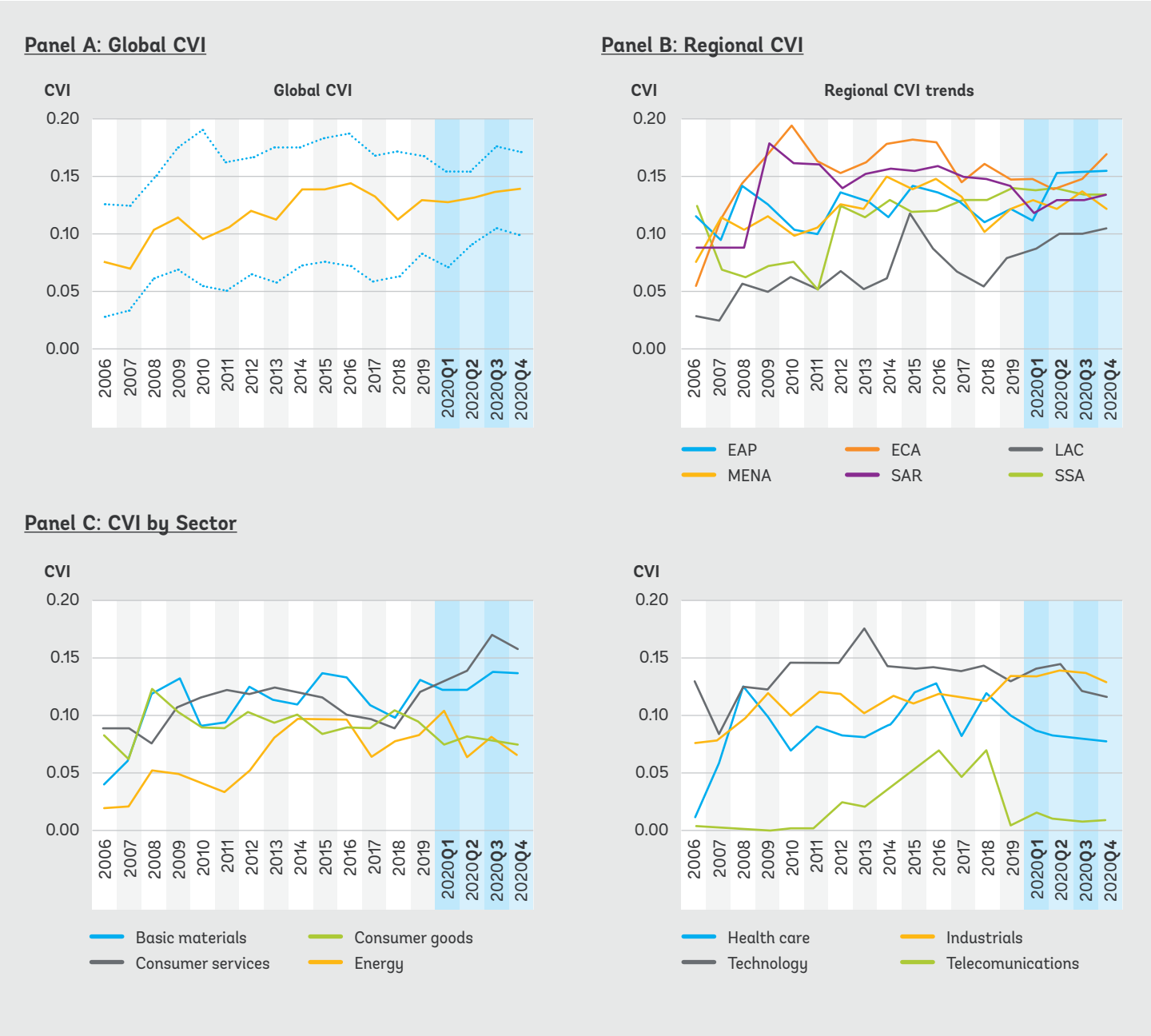
FIGURE 1.1 **Corporate Vulnerabilities in Listed Firms**



Source: World Bank staff estimates from Corporate Vulnerability Index.

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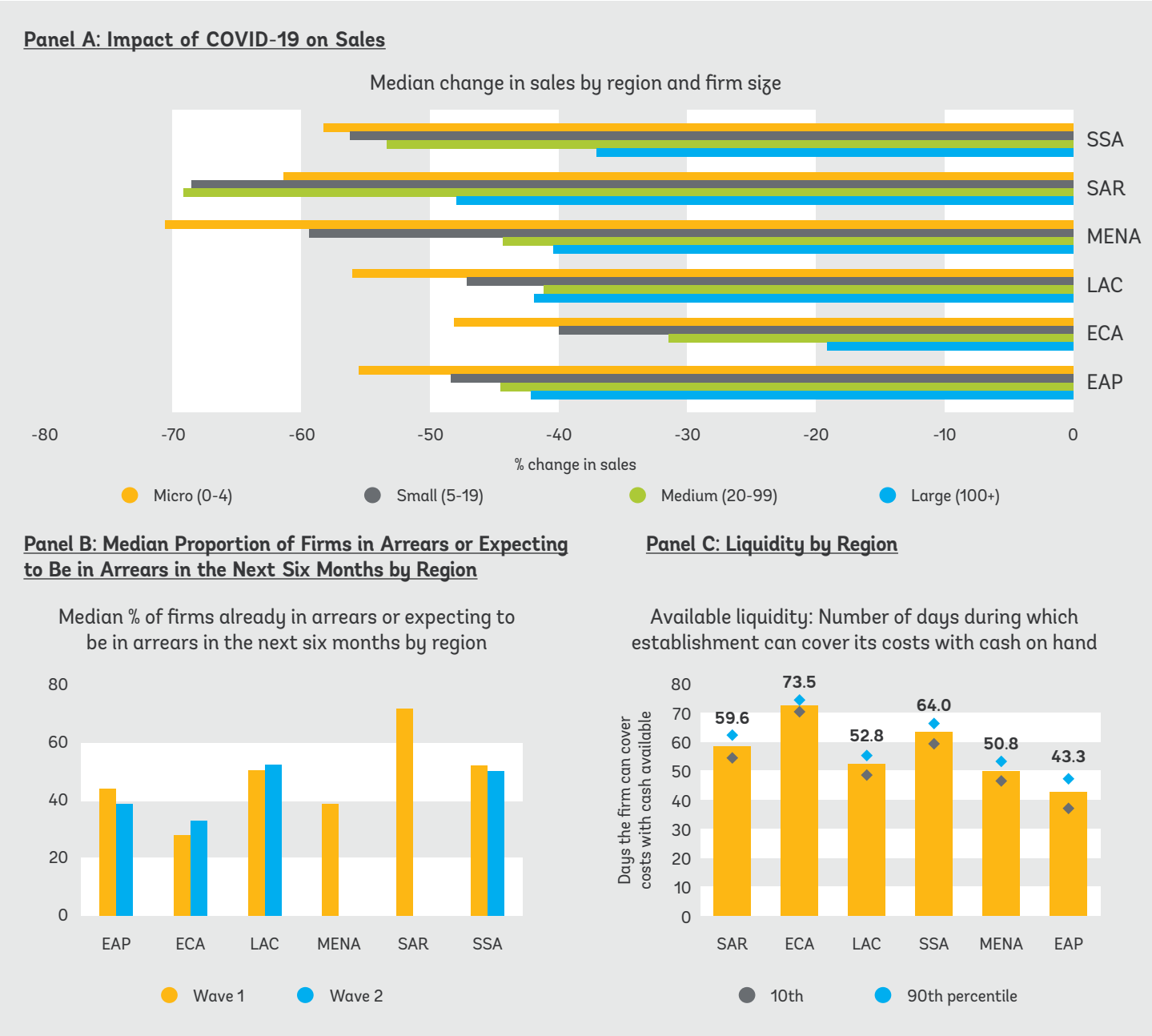
FIGURE 1.2 **Corporate Vulnerabilities in Listed and Unlisted Firms from Business Pulse Survey**



Source: Business Pulse Survey, World Bank.

Panel A

Source: Business Pulse Survey wave 1 data, World Bank.

Note: Median percentage change in sales by region and firm size. Median regional estimates comprise country-level data (measured in the month given in parentheses), accessed via the BPS dashboard, as follows: EAP: Cambodia (May), Indonesia (September), Mongolia (May), Philippines (July), Vietnam (June). ECA: Albania (June), Armenia (June), Bulgaria (June), Croatia (June), Cyprus (September), Georgia (June), Greece (June), Hungary (July), Italy (June), Moldova (June), Poland (July), Romania (June), Russian Federation (June), Slovenia (June), Turkey (June). LAC: Brazil (June), El Salvador (April), Guatemala (June), Honduras (June), Nicaragua (June). MENA: Jordan (June), Morocco (August), Tunisia (June). SAR: Afghanistan (June), Bangladesh (June), Nepal (August), Pakistan (August), Sri Lanka (May). SSA: Chad (June), Côte d'Ivoire (June), Guinea (June), Kenya (July), Madagascar (July), Niger (June), Nigeria (June), South Africa (July), Sudan (May), Zambia (June), Zimbabwe (June).

Panel B

Source: Business Pulse Survey, World Bank.

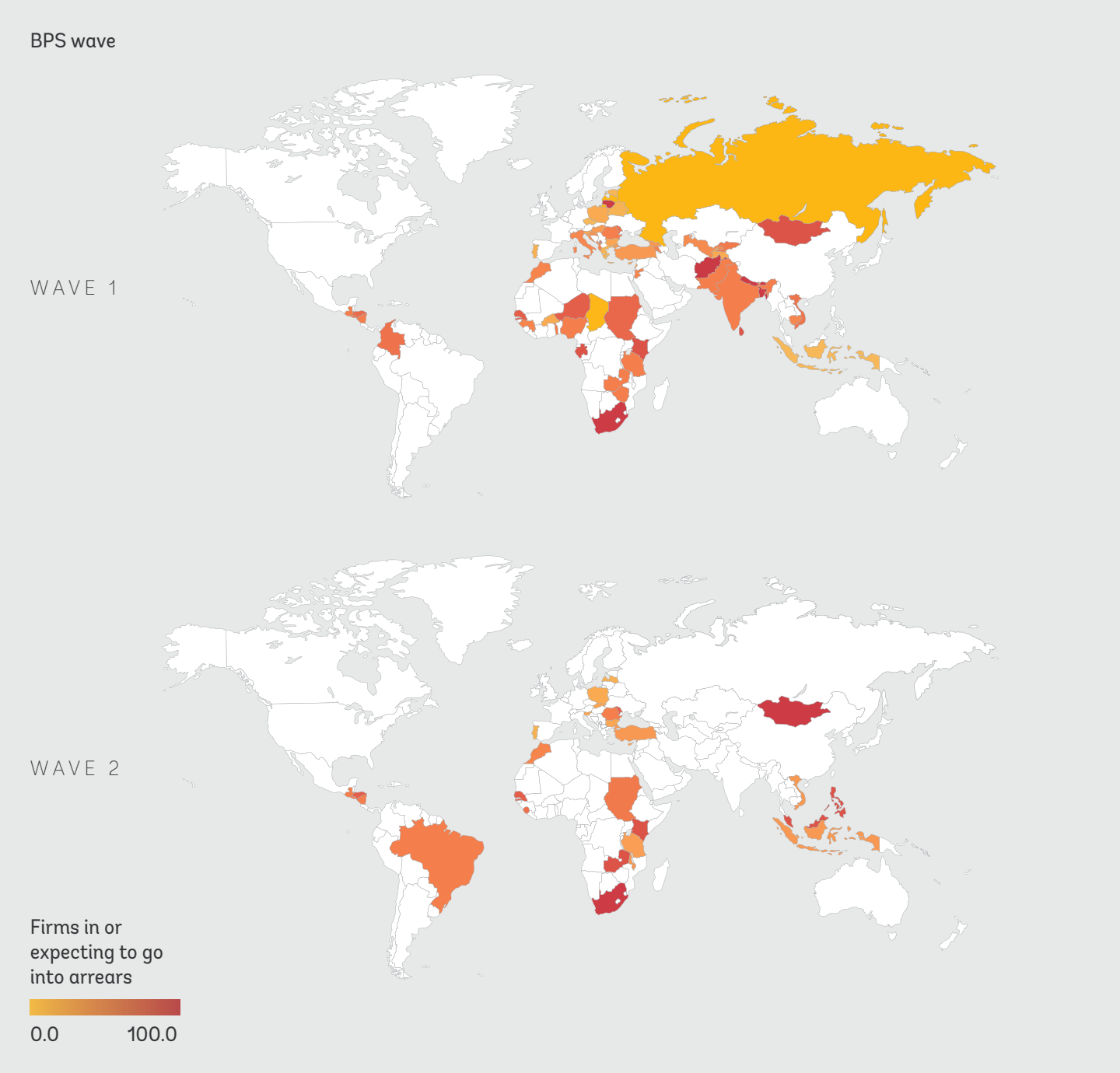
Note: Regional percentage estimates are taken from the median country values listed in Table 7. Values are unadjusted based on the survey date as reported in Table 7. Wave 1 took place from April 2020 to November 2020; wave 2 is dated from October 2020 to March 2021.

Panel C

Source: Business Pulse Survey, World Bank. Wave 1 data used in Apedo-Amah et al (2020). Wave 1 surveys were conducted from April to November 2020. Country periods are reported in Table 1.1.

Note: Number of days during which establishment can cover its costs with cash on hand, by region, controlling for size, sector, and weeks after peak.

Panel D: Heatmap of Firms in Arrears or Expecting to Be in Arrears in the Next Six Months



Source: Business Pulse Survey, World Bank.
Note: Wave 1 took place from April 2020 to November 2020; wave 2 took place from October 2020 to March 2021.

> > >

TABLE 1.1 **Proportion of Firms in Arrears or Expecting to Be in Arrears in the Next Six Months**

		BPS Wave 1 (April 2020 to November 2020)		BPS Wave 2 (October 2020 to April 2021)		Change in Debt (percentage points)	Corporate Debt as a % of Total Debt
		Arrears (%)	Survey Date	Arrears (%)	Survey Date		
EAP	Mongolia	71	Aug	86.2	Feb	↑	
	Philippines		July–Aug	76.2	Nov–Dec		49.5
	Malaysia			59.5	Oct		34.4
	Vietnam	49.8	June–July	41.7	Sep–Oct	↓	96.5
	Cambodia	38.5	June		Sep		67.7
	Indonesia	13.4	June		Oct–Nov		43.7
ECA	Moldova	52	May	57.7	Oct–Nov	↑	0
	Latvia	5.6	Oct	44.6	April	↑	30.4
	Romania	45	May–Sep	42.5	Nov–Jan	↓	31.4
	Slovak Republic			34.2	Jan–Feb		28.8
	Turkey	40.9	June–July	33.2	March	↓	71.2
	Slovenia	22.6	July	29	Nov–Dec	↑	31.7
	Portugal	16.7	Sep–Oct	29	Jan–Feb	↑	26.8
	Poland	20.7	May–Aug	27.5	Sep–Dec	↑	23.6
	Lithuania	84.4	Oct		March		27.2
	Kosovo	55.2	July				58.9
	Kyrgyz Republic	45.5	Aug–Sep				52.5
	Armenia	42.7	June				46.4
	Italy	38.6	May–June		Nov–Dec		30.2
	Albania	38	June				59.7
	Uzbekistan	36.6	Aug–Sep				75
	Croatia	32.1	Sep		Jan		29.1
	Georgia	29.6	June		Oct–Nov		47.7
	Tajikistan	27.8	Aug–Sep				57.5
	Hungary	27.6	Sep		Jan–Feb		35.7
	Bulgaria	27.4	May–Aug		Nov–Dec		56.6
	Greece	26.3	June		Nov		34.3
	Cyprus	24.2	June		Nov–Dec		32.2
	Belarus	15.7	Aug				69.3
	Estonia	13.7	Oct		Feb		35.9
	Czech Republic	13.4	Sep–Oct		Jan–Feb		24.6
	Russian Federation	12.2	June				43.8
LAC	El Salvador	44	June–July	60.8	Nov–Dec	↑	40.9
	Nicaragua	50.6	June–July	54	Dec–Jan	↑	43.4
	Honduras	55.8	June–July		Nov–Jan		0
	Colombia	50.9	May–June				35.1
	Guatemala	40.4	June–July		Dec–Jan		62.9
MENA	Morocco	39	July–Aug	58	Feb	↑	
	Jordan	51	July–Aug				18.3
	Lebanon	23.5	Nov				90

> > >

TABLE 1.1 **Proportion of Firms in Arrears or Expecting to Be in Arrears in the Next Six Months**

		BPS Wave 1 (April 2020 to November 2020)		BPS Wave 2 (October 2020 to April 2021)		Change in Debt (percentage points)	Corporate Debt as a % of Total Debt
		Arrears (%)	Survey Date	Arrears (%)	Survey Date		
SAR	Nepal	83.2	May–June				65.1
	Bangladesh	79.3	April–June				77.6
	Afghanistan	74.2	June				0
	Sri Lanka	69.1	May				0
	India	53.5	May–June				18.3
	Pakistan	53.3	June–July				58.4
SSA	Zambia	41.2	June	66.9	Dec–Jan	↑	58.5
	South Africa	90.1	May–June	62.1	Oct–Dec	↓	31.5
	Senegal	64.3	April–May	56.4	Dec	↓	
	Sierra Leone			40.4	Oct–Dec		
	Malawi			40.2	Nov–Dec		60.7
	Sudan	58.2	July	34.5	Oct–Nov	↓	
	Tanzania	46.7	June–July	31.2	Nov–Dec	↓	46.6
	Kenya	71.7	June–Aug		Sep–Oct		63.5
	Gabon	70.1	May–June				41
	Niger	63.9	June				
	Guinea	53.7	June				89.4
	Togo	51	June				
	Nigeria	49.2	July–Sep				82.7
	Zimbabwe	42.5	June–July				
	Burkina Faso	26	Oct				
	Chad	5.9	June				0

Source: Business Pulse Survey and IMF FSI.
Note: Country estimates are unweighted. Hence, measures represent corporates in the sample that may not reflect national trends. Some values are omitted as data from the survey is still being processed.

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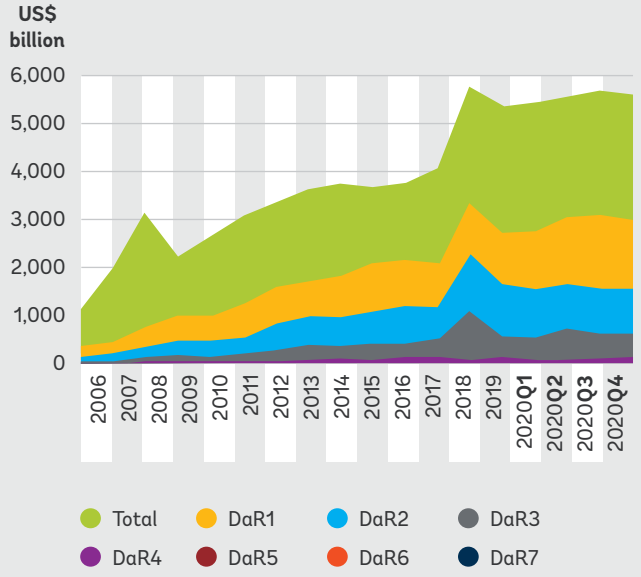
FIGURE 1.3 **Debt at Risk in Listed Firms: Debt at Risk Over Time**



Note: See the section on corporate vulnerabilities above for methodological details.

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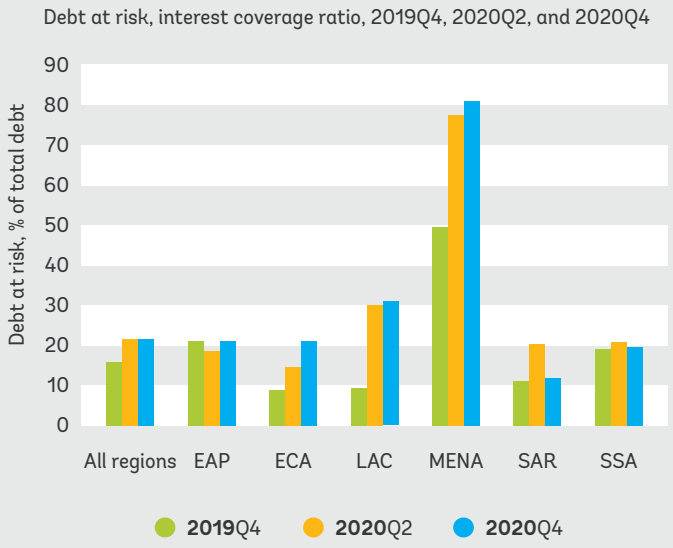
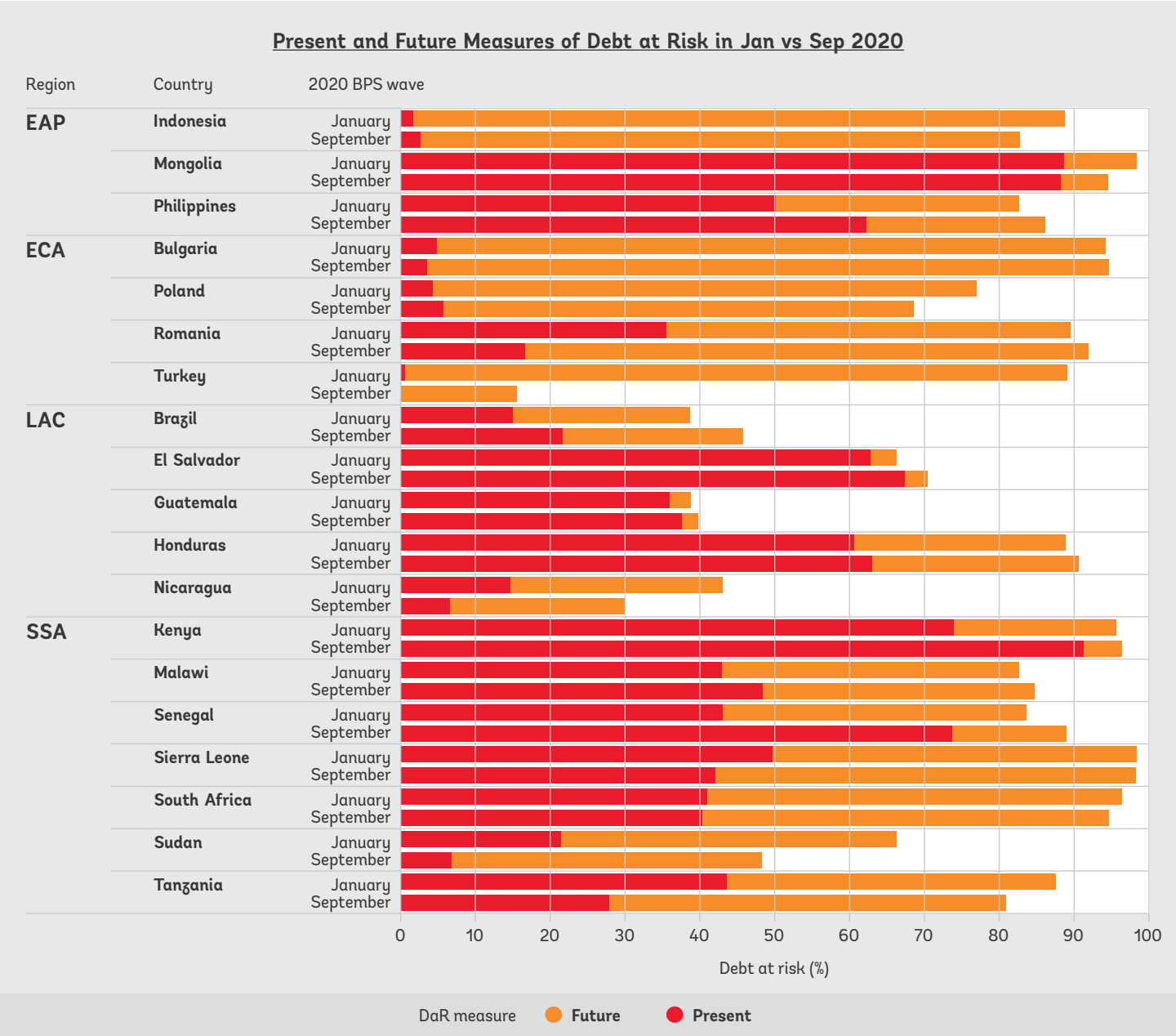
FIGURE 1.4 **Debt at Risk for Selected Balance Sheet Indicators**



Source: Bloomberg; staff calculations.
Note: The interest coverage ratio captures the ability of a firm to cover interest expenses with current earnings. Debt is considered to be at risk for firms with an interest coverage ratio < 1. A lower value indicates higher difficulty to meet these expenses.

> > >

FIGURE 1.5 **Debt at Risk from Listed and Unlisted Firms**



Source: Business Pulse Survey.

Note: Debt at risk measures total debt owned by financially vulnerable firms as a proportion of total debt of all firms from the BPS. Firms are deemed financially vulnerable using present and forward-looking measures of financial vulnerability. Firms already in arrears are classified as at present risk, while firms in the future category are identified by their anticipation to go into arrears, have already made amendments to their loan payment schedules, or have clients in or expecting to go into arrears. The debt associated with firms in these categories is aggregated and presented as a proportion of reported total liabilities of all firms, as discussed in Annex A.

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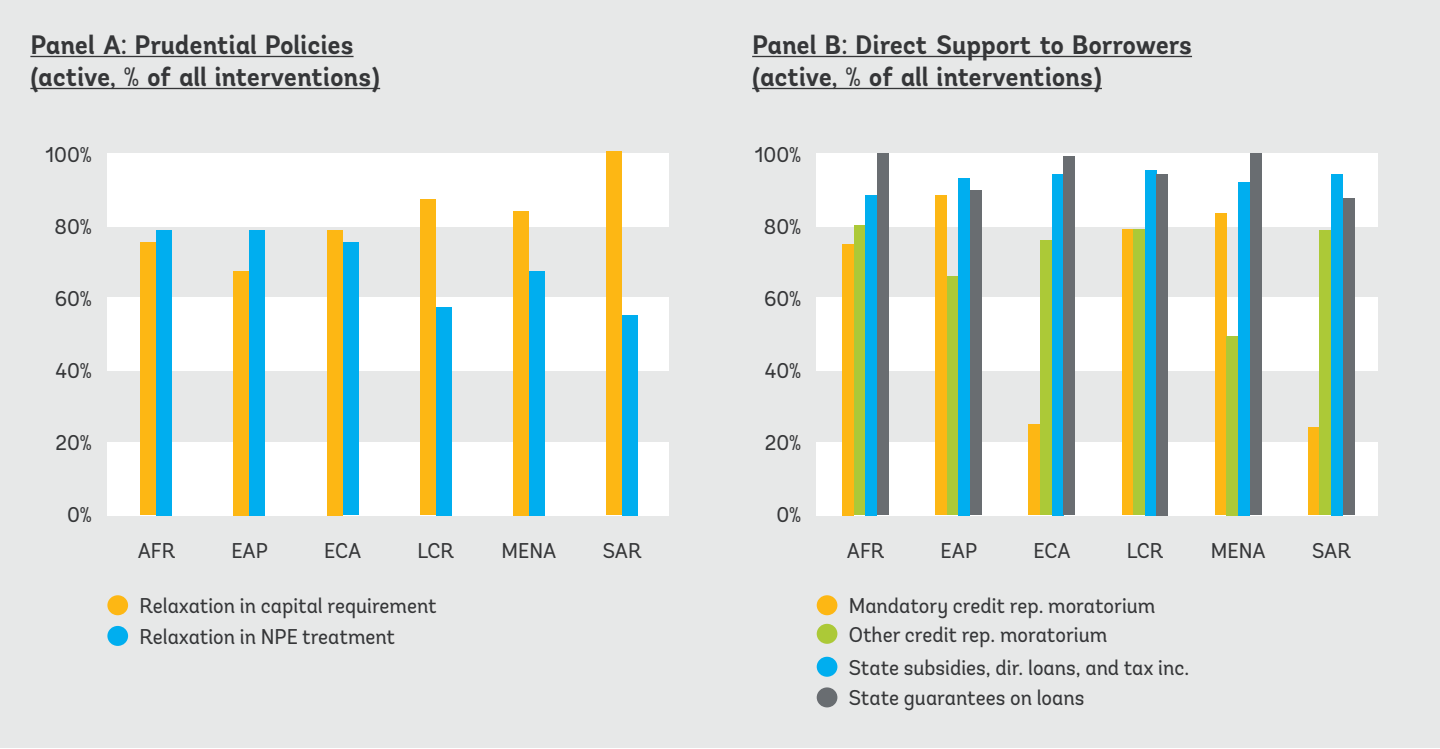
FIGURE 1.6 **Percentage of Active Measures Over Total Interventions Since the Beginning of the Crisis by Type and Region**



Source: FCI GP COVID-19 Financial Policy Response Compendium as of February 15, 2021.
Note: Panel A and B present information on interventions undertaken in the World Bank developing regions (low, lower-middle, and upper-middle income) since the beginning of the pandemic. Panel A presents the percentage of still active specific prudential measures; Panel B presents the percentage of still active measures that provide specific support to borrowers.

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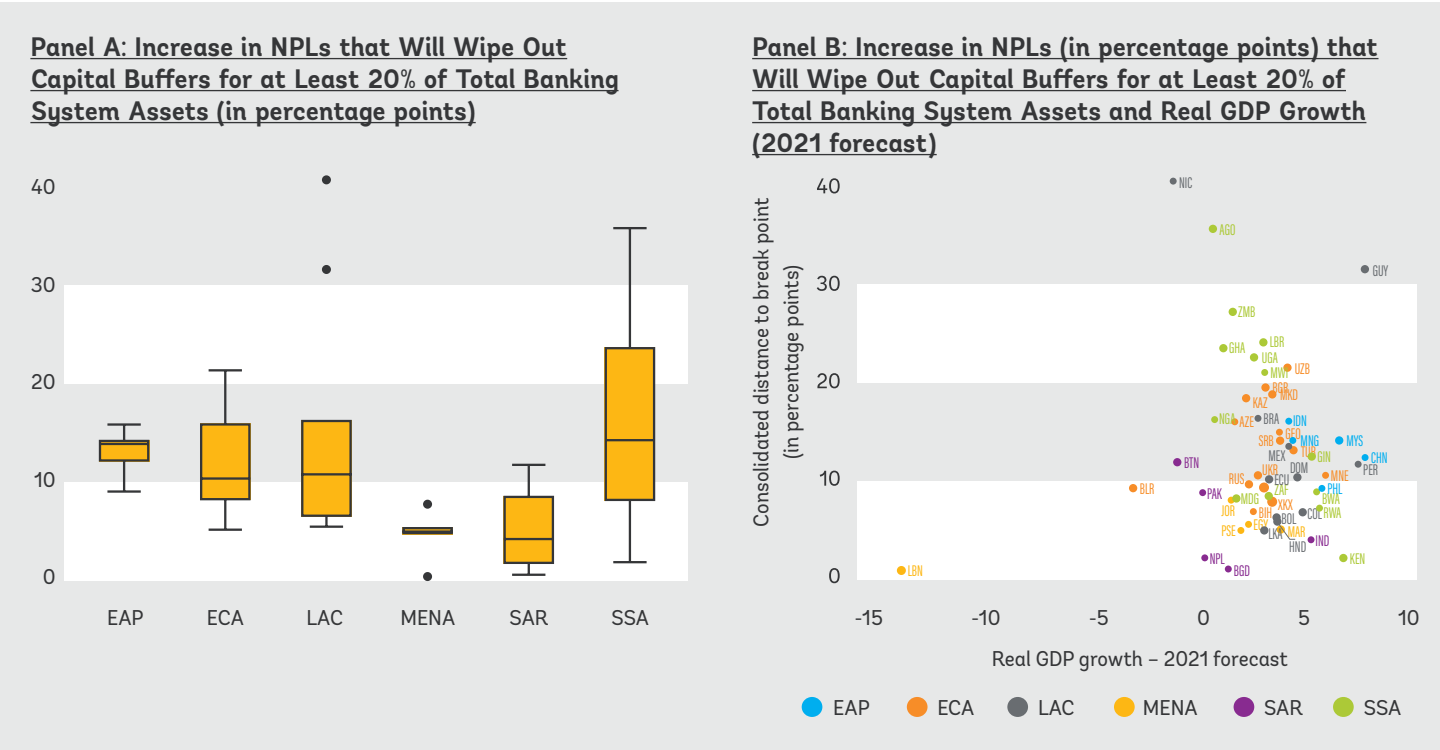
FIGURE 1.7 **Bank Undercapitalization**



Source: FCI Macro-Financial Unit and World Bank MFMOD (October 2020).

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Annex 1A: Measuring "Debt at Risk" Using the BPS: Methodological Approach

The objective of the debt at risk measure is to identify which firms are financially vulnerable and how much debt is associated with these firms. Should these firms fail to perform, how much debt is at risk to the banking sector? Using the BPS wave 2 survey data, we carried out the following steps to construct the "debt at risk measure" defined below. We used firm-level data for over 20,500 businesses across 20 emerging and developing countries to quantify the amount of debt held in January 2020 and in September 2020. In the survey, firms reported total liabilities in January and September 2020. These values were used to estimate debt in each period. Firms were identified as financially vulnerable at present if they were in arrears. A forward-looking measure of financial vulnerability classifies firms as at financial risk in the future if they anticipated going into arrears, have adjusted their payment schedule, or had clients that were in arrears with them or anticipated going into arrears with them. We then consolidated the amount of debt held by firms in present and future financially vulnerable positions at the country level. The future debt at risk group is exclusive of firms anticipating going into arrears.

> > >

FIRM-LEVEL ESTIMATES

STEP 1 Using cov6e survey responses, we assumed debts at the firm level were equivalent to the reported total liabilities values in January 2020 (cov6e1) and September 2020 (cov6e2). Hence, debt in January 2020 was equal to total liabilities as of January 2020, and debt in September 2020 was assumed to be equal to total liabilities as of September 2020.

STEP 2 Categorized firms based on whether the firm was financially vulnerable. The financially vulnerable variable took a value of 1 or 0 depending on whether the firm satisfied the criteria for each group below:

Current group: Firm was **already in arrears**.

Future group: Firm **anticipated going into arrears** in the next six months; OR

the **firm had made adjustments to its payments schedule**; OR

clients of the firm were in/expected to go into arrears with the firm.

STEP 3 Multiplied firm-level debt variables in Step 1 by financial vulnerability group variables in Step 2 to create monetary measure of vulnerable debt.

> > >

AGGREGATE ESTIMATES

STEP 4	Sum total firm-level debts by country (this can also be done for sector and firm size). When either the firm debt level or the measure of financial vulnerability group indicator is missing, the record is omitted from the aggregation. Country-level total debt in January 2020 was considered equal to the sum of firm-level total liabilities in January 2020.
STEP 5	Summed firm-level debts for firms categorized as financially vulnerable in Step 3 by country (this can also be done for sector and firm size) to derive **debt at risk measure values for current and future estimates** in January and in September 2020, respectively.
STEP 6	Divided sum of debts from financially vulnerable firms by sum of all firm-level debts by country to calculate **debt at risk measure as a % of total debt**.
STEP 7	Assigned colors based on the centile of debt at risk measure.

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Annex 1B: Corporate Vulnerability Index Methodology

The CVI is based on the concept of debt at risk—the total amount of outstanding debt in a country (or industry) associated with firms that are deemed financially vulnerable. Debt at risk (DaR) is an attractive concept to track corporate vulnerabilities since it exposes both the risk and magnitude present in the tail of the firm's distribution, as opposed to other methodological approaches, such as calculating averages or medians of (normalized) firm vulnerability indicators. Specifically, we define DaR_y as the share of corporate debt in a country that is considered vulnerable according to indicator *Y* at time *t* and country *c*.

> > >

FIGURE 1B.1 **Structure of Corporate Vulnerability Index (Feyen et al. 2017)**[16]

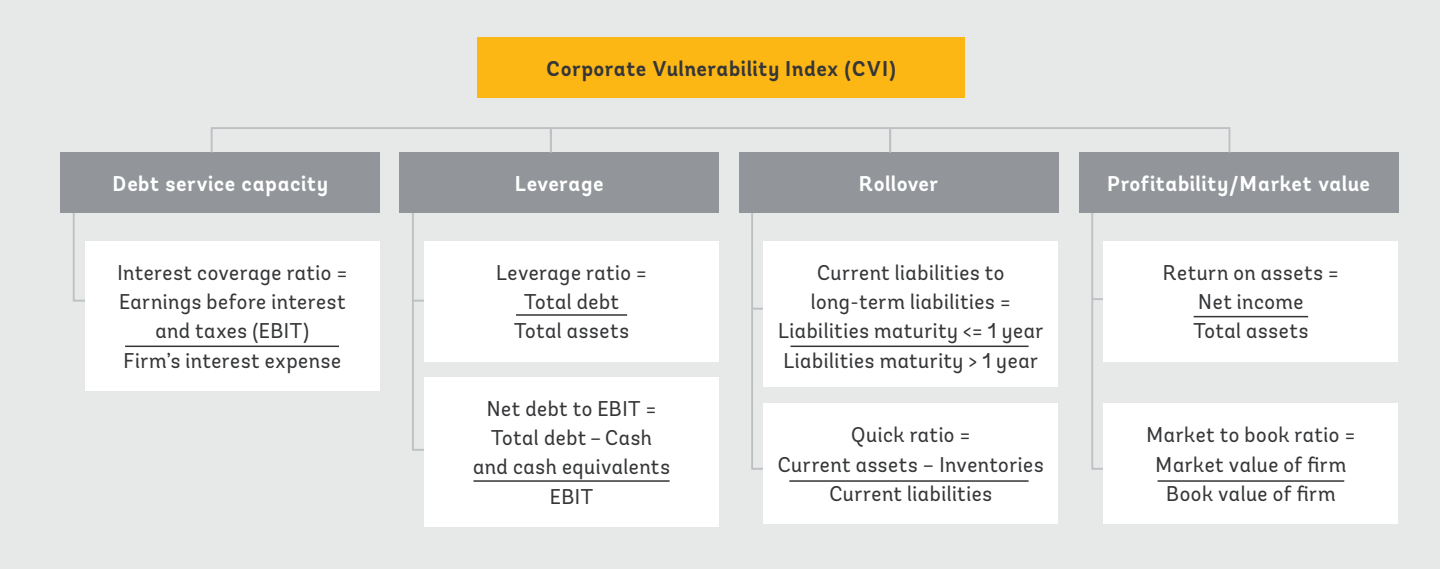

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TABLE 1B.1 **Thresholds to Classify a Firm as Financially Vulnerable**

Indicator	"At Risk" Thresholds
▪ Interest coverage ratio	< 1 (profits less than interest expenses)
▪ Leverage ratio ▪ Net debt to EBIT ▪ Current liabilities to long-term liabilities	> 90th percentile value of the indicator for **all firms** within the **same industry**, for the **whole sample 2006–2016**. One threshold per industry
▪ Quick ratio ▪ Return on assets ▪ Market to book ratio	< 10th percentile value of the indicator for **all firms** within the **same industry**, for the **whole sample 2006–2016**. One threshold per industry

Note: Our sample includes financial information from 14,273 listed nonfinancial firms in 96 emerging and developing economies, for years 2006 to 2016. A representativeness restriction is imposed in which countries with at least five firms in the sample are considered in the calculations. Therefore, the adjusted sample includes 14,207 firms from 69 countries.

16. As discussed earlier in Chapter 1; see Feyen, Fiess, Zuccardi Huertas, and Lambert (2017) for the methodology to construct the CVI in detail. All figures and tables are adapted from this paper.

> > >

COUNTRY COVERAGE

Country	Region
Cambodia	East Asia & Pacific
China	East Asia & Pacific
Indonesia	East Asia & Pacific
Laos	East Asia & Pacific
Malaysia	East Asia & Pacific
Mongolia	East Asia & Pacific
Philippines	East Asia & Pacific
Thailand	East Asia & Pacific
Vietnam	East Asia & Pacific
Bosnia and Herzegovina	Europe & Central Asia
Bulgaria	Europe & Central Asia
Croatia	Europe & Central Asia
Czech Republic	Europe & Central Asia
Estonia	Europe & Central Asia
Georgia	Europe & Central Asia
Hungary	Europe & Central Asia
Kazakhstan	Europe & Central Asia
Latvia	Europe & Central Asia
Lithuania	Europe & Central Asia
Macedonia	Europe & Central Asia
Montenegro	Europe & Central Asia
Poland	Europe & Central Asia
Romania	Europe & Central Asia
Russian Federation	Europe & Central Asia
Serbia	Europe & Central Asia
Slovak Republic	Europe & Central Asia
Slovenia	Europe & Central Asia
Turkey	Europe & Central Asia
Ukraine	Europe & Central Asia
Argentina	Latin America & Caribbean
Bahamas	Latin America & Caribbean
Bolivia	Latin America & Caribbean
Brazil	Latin America & Caribbean
Chile	Latin America & Caribbean
Colombia	Latin America & Caribbean
Costa Rica	Latin America & Caribbean
Ecuador	Latin America & Caribbean

Country	Region
Jamaica	Latin America & Caribbean
Mexico	Latin America & Caribbean
Panama	Latin America & Caribbean
Paraguay	Latin America & Caribbean
Peru	Latin America & Caribbean
Trinidad and Tobago	Latin America & Caribbean
Uruguay	Latin America & Caribbean
Venezuela	Latin America & Caribbean
Bahrain	Middle East & North Africa
Egypt	Middle East & North Africa
Israel	Middle East & North Africa
Jordan	Middle East & North Africa
Kuwait	Middle East & North Africa
Morocco	Middle East & North Africa
Oman	Middle East & North Africa
Palestine	Middle East & North Africa
Qatar	Middle East & North Africa
Saudi Arabia	Middle East & North Africa
Tunisia	Middle East & North Africa
United Arab Emirates	Middle East & North Africa
Bangladesh	South Asia
India	South Asia
Pakistan	South Asia
Sri Lanka	South Asia
Botswana	Sub-Saharan Africa
Côte d'Ivoire	Sub-Saharan Africa
Ghana	Sub-Saharan Africa
Kenya	Sub-Saharan Africa
Malawi	Sub-Saharan Africa
Mauritius	Sub-Saharan Africa
Mozambique	Sub-Saharan Africa
Nigeria	Sub-Saharan Africa
South Africa	Sub-Saharan Africa
Tanzania	Sub-Saharan Africa
Uganda	Sub-Saharan Africa
Zambia	Sub-Saharan Africa
Zimbabwe	Sub-Saharan Africa

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Annex 1C: Bottom-Up Reverse Stress Test: Methodological Approach

The objective of reverse stress testing is to identify banking systems that appear most vulnerable to a deterioration in asset quality and that could render a significant fraction of the banking system insolvent (Feyen and Mare 2021). The test uses bank-level data for over 1,500 banks across 58 emerging and developing countries to quantify the rise in nonperforming loans necessary to trigger a bank's undercapitalization. For each bank, we compute the NPL ratio at which its capital buffers are depleted (BP) and the percentage point increase in NPLs that would render a bank undercapitalized (DBP). We then consolidate the results at the banking system level (CDBP), focusing on the set of most fragile banks (i.e., those with the smallest DBPs), which collectively represent at least 20 percent of total banking system assets ("banks at risk").

> > >

BANK-LEVEL ANALYSES

STEP 1	We assume the overall level of **provisioning for NPLs** is 55 percent, in line with the IMF (Ong 2014). This is based on the average of common provisioning levels across NPL categories (e.g., substandard, doubtful loans, loss).
STEP 2	Compute **capital buffers**: total regulatory capital – minimum capital requirement.
STEP 3	Compute the **bank break point (BP, % of gross loans)** by solving for NPLs in the following equation: ((BP-NPLs)/gross loans) × 55% = capital buffers.
STEP 4	Compute the **bank distance from BP (DBP, in percentage points)**: max {bank break point – bank NPL ratio,0}.

> > >

COUNTRY-LEVEL ANALYSES

STEP 1	Sort banks according to their **DBP** (from small to large) and by bank assets (large to small) to break ties for banks with the same DBP value.
STEP 2	Identify **banks at risk**, the set of banks that are most fragile (i.e., that exhibit the lowest DBP values), which jointly represent at least 20 percent of banking system assets.
STEP 3	Calculate the **consolidated BP (% of gross loans) of banks at risk**. This is the weighted average BP of the individual banks, weighted by the size of their gross loans.
STEP 4	Calculate the **consolidated DBP (percentage points)**. This is the weighted average DBP of the individual banks, weighted by the size of their gross loans.

2

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Failing to Prepare Is Preparing to Fail: Getting Ready for Financial Hardship—Nonperforming Loans and Financial Stability

I. Introduction

"Going into the recent financial crisis, there was a widespread view that debtors and creditors had learned from their mistakes and that financial crises were not going to return for a very long time, at least in emerging markets and developed economies," wrote Carmen Reinhart and Kenneth Rogoff in 2009. They continued, "We have come full circle to the concept of financial fragility in economies with massive indebtedness. All too often, periods of heavy borrowing can take place in a bubble and last for a surprisingly long time. But highly leveraged economies, particularly those in which continual rollover of short-term debt is sustained only by confidence in relatively illiquid underlying assets, seldom survive forever, particularly if leverage continues to grow unchecked."[17]

In recent years, corporate leverage has risen to record levels globally, leaving many companies ill-prepared to weather the major adverse impact of the COVID-19 pandemic. There has, however, been a massive policy response to provide temporary support to incomes and relief from credit payments, to tide firms and households over and to prevent unnecessary and costly economic scarring. Moreover, the pandemic crisis stems from a health crisis: the economic shock did not arise from the pricking of a credit bubble. But while this time truly is different (Kennedy 2020), the pandemic has created or exacerbated multifaceted economic and financial vulnerabilities on a foundation of already weak economic fundamentals in many countries. While the coronavirus did not start as a financial crisis, Carmen Reinhart has highlighted that it may well morph into one (Reinhart 2021).

17. Reinhart and Rogoff 2009, 290–92.

Given the vulnerability from high leverage and the shock of the pandemic, the risk of a sharp rise in corporate financial stress is great. Indeed, in many cases, debt vulnerabilities have increased as a result of the pandemic as support measures have facilitated provision of additional credit to ease strains on corporate cash flow. Moreover, support measures are very costly and distort market functioning, even as the pandemic changes demand and production patterns in ways that will have a widespread impact on many corporations' business prospects. As support measures are gradually withdrawn, given the depth of the economic slump, many commentators and policy makers have highlighted the risks of a sharp increase in corporate distress, which in turn will quite likely have a profound impact on the banking system as debt servicing problems expand (Group of 30 2020; European Central Bank 2021).

Past experience highlights the importance of taking early, decisive action to address rising payment performance problems. If unaddressed, these problems tend to mount and become more difficult and costly to resolve. Furthermore, NPLs act as a deadweight on financial intermediation and on the economy more broadly, as credit is locked up in weak and failing firms to the extent that new, innovative, dynamic firms find it difficult to obtain. Failure to address a major overhang of NPLs typically leads to a protracted period of stagnant credit provision and lackluster economic growth.

Experience also emphasizes the value of advance preparations to improve the effectiveness of the underlying framework for addressing high levels of NPLs. Weaknesses in bank approaches to the management of problem loans; shortfalls in banking supervision; and ineffective legal systems to protect creditor and debtor rights and enable speedy resolution of disputes can all act as significant impediments, adding to the delay and cost. Reviewing and strengthening the preparedness to address failure is a prudent investment that will not only pay dividends in the event of a major surge in NPLs in the coming period, but also help address future financial stress and strengthen market functioning.

In addition to this introduction, this chapter has four main sections. The next section outlines the need for action, drawing on lessons from previous periods of financial stress. Section III covers the building blocks that enable successful resolution of NPL problems, while Section IV reviews the strategies and tools adopted by banks as well as by the public sector. Section V concludes and provides some policy recommendations.

II. Need for Action

Financial crises are very damaging and costly. Policy actions to lower vulnerabilities and risks and the probability of crisis and to strengthen frameworks to manage and lower the impact of financial stress are vital. This section highlights the need for policy action, drawing on the lessons from previous crises, and current vulnerabilities and risks from high corporate leverage.

A. What Have We Learned from Previous Crises?

Past experience has shown that high corporate leverage can presage a sharp increase in NPLs, which may impair banking intermediation and, in the most severe cases, jeopardize financial stability and precipitate a financial crisis. Evidence from previous episodes of financial crisis shows that high corporate leverage is often an important contributory factor to major banking system stress (often alongside overleverage in other sectors and low levels of resilience in the banking system itself). Exploiting the vulnerability of high corporate leverage, the scenario of an unexpected adverse shock hitting corporate income and triggering loan repayment problems has been played out many times. NPLs can increase rapidly. For example, in the aftermath of the global financial crisis, NPL ratios were around 45 percent in Cyprus and Greece and 15 percent in Italy, Spain, and Slovenia, while during the 1997 Asian Financial Crisis, NPL ratios peaked at over 50 percent in Thailand and 13 percent in Korea (Baudino and Yun 2017). A sharp rise in NPLs, in turn, depresses bank earnings and weakens bank balance sheets; erodes bank capital and lending capacity to support economic recovery; and exacerbates the risks of a vicious deleveraging cycle and potential financial crisis.

High levels of NPLs can thus prove very costly. Jurisdictions where NPLs are high and remain unresolved typically experience deeper and more protracted recessions and slower recoveries than those where NPL problems are more speedily addressed.[18] An unresolved overhang of NPLs preserves the extension of credit to weak and failing firms, props up often ultimately nonviable "zombie" borrowers, and thereby reduces the availability of finance to support vibrant, more productive firms. Impaired banking credit intermediation channels damage economic prospects and often result in prolonged periods of stagnation (Peek and Rosengren 2005; Caballero, Hoshi, and Kashyap 2008; Acharya et al. 2020). As

18. Ari, Chen, and Ratnovski (2021), using a sample of 92 financial crises since 1990, present evidence of a close relationship between NPL problems—elevated and unresolved NPLs—and the severity of post-crisis recessions.

a recent example, the weak banking sector, burdened with a legacy of NPLs from the global financial crisis, was a major contributor to sluggish growth in many Eastern European and Central Asian economies in recent years (Bauze et al. 2020). In India, too, both credit growth and overall economic growth have remained subdued in the past five years as bank balance sheets have been burdened by a legacy of high NPLs (which reached 10 percent in 2015 and upward of 15 percent in public sector banks), following a period of excessive credit growth in the wake of the global financial crisis.

Action to address NPLs must confront a series of adverse incentives that delay recognition of the problem and its magnitude. In particular, banks face incentives that encourage an underappreciation of growing credit problems. As a deterioration in asset quality indicates a weakening in the financial health of a bank and requires prompt remedial action, banks have strong internal incentives to take a sanguine view of loan performance to avoid signaling financial weakness and to forestall supervisory intervention. An optimistic assessment reduces the requirement to increase provisions against expected losses that lower income and profitability and may eat into reported capital buffers. If not countered by strong internal governance and credit risk management,[19] as well as by effective prudential bank regulation and supervision, the incentives would enable the bank to record an overly rosy financial position. As signs of financial weakness are likely to raise the cost of bank funding and, if severe, risk sharp adverse reactions that could ultimately threaten the availability of funding and prompt depositor flight, the pressures to "look good" are understandable.

The under-recording of deteriorating loan quality may manifest itself in multiple forms. For example, banks may delay the recognition of payment problems facing particular borrowers by "evergreening" loans—simply rolling credit over at maturity in the event of potential repayment difficulty; they may also take an optimistic valuation of collateral posted as security for a loan or they may transfer problem loans to off-balance-sheet affiliates that are not reported in the consolidated financial statement. Thus, underlying credit problems may turn out to be larger than originally estimated. For example, detailed independent reviews of loan quality in the form of system-wide asset quality reviews conducted at the request of supervisory authorities have typically revealed hidden problems. In the case of Serbia in 2015, a special diagnostic review identified an additional 4.7 percentage points of NPLs in the total loan book (lowering the capital adequacy ratio by almost 1.8 percentage points),[20] while an asset quality review in India in 2015/16 identified an additional 2.5 percentage points of bank advances as nonperforming.[21] In Ukraine, following several rounds of asset quality reviews that revealed high volumes of NPLs in bank lending to related parties, the NPL ratio grew from 13 percent in 2014 to some 55 percent in 2017.[22]

Underestimation of the magnitude and extent of rising NPLs delays remedial actions by banks and policy responses by authorities. Such delays can be costly, amplifying and prolonging credit misallocation. Previous experience suggests that failure to take early action typically necessitates taking larger and more costly actions later. Left unchecked, individual loan performance problems tend to increase over time. Debt levels rise through the capitalization of unpaid interest. And collateral values often fall, for example, as real estate is not serviced and maintained, given the pressures on borrower cash flow. Moreover, failing borrowers may also be encouraged to take additional, excessive risks, frequently termed "gambling for resurrection." While the most likely outcome of such risks may be further losses, if borrowers are technically insolvent (with shareholders losing their equity stake), these downside risks would be borne by creditors in the form of lower recoveries, whereas the gains from a successful gamble would disproportionately benefit shareholders. Alternatively, problem banks may also exhibit extreme defensiveness in terms of credit provision, deleveraging their books to preserve and protect dwindling capital levels, in the hope that they can survive and will be saved by a sharp recovery in the economy (Ben-David, Palvia, and Stulz 2019). If multiple banks restrict credit in this way, however, the resulting credit crunch will in practice substantially reduce the likelihood of such a recovery (Bauze et al. 2020).

19. Internal controls are often organized under the three lines of defense framework set out by the Institute of Internal Auditors: the first line, management by risk owners; the second line, risk control and compliance; and the third line, risk assurance, typically provided by internal audit. The internal controls are supplemented by external assurance through external audit and regulation and supervision; these have sometimes been defined as providing a fourth line of defense (Arndorfer and Minto 2015).
20. National Bank of Serbia Financial Stability Review (2015), fsr_2015.pdf (nbs.rs).
21. Reserve Bank of India, Financial Stability Report June 2016, 0FSR2316BB76DB39BF964542B9D1EBE2CBC273E7.PDF (rbi.org.in).
22. IMF Financial Soundness Indicators Database.

Historical experience highlights the importance of various obstacles that can hamper the resolution of a burgeoning NPL problem. In particular, experience demonstrates that the regulatory and supervisory framework may be deficient and fail to guard against the incentives to underestimate the emergence of major loan performance difficulties and the corresponding pressures that encourage a delay in taking action to address them. Weaknesses in legal frameworks can also be a major impediment. Slow and ineffective legal procedures typically lead to a significant loss of asset value, as well as tying up resources in unproductive uses for an extended period. Moreover, weak legal frameworks for debt resolution in turn affect creditor and debtor incentives. Absent a strong framework that protects and enables the enforcement of property rights and facilitates the timely resolution of claims and disputes and the orderly workout of debts, creditors are more likely to agree to other options. For example, without an effective option for legal redress, creditors are more likely to acquiesce to the evergreening of loans and to questionable debt restructuring deals that kick the problem down the road but do not address the fundamental performance issue. The tax system may also create misaligned incentives that discourage writing down or crystallizing losses that may hold back timely resolution of NPLs. There may also be no developed market structure for selling distressed assets, which can also have a significant influence on the speed and efficiency of NPL resolution. One reason may be that the necessary legal foundations are not in place to support such markets and thus encourage the entry and growth of specialist debt management firms with experience and expertise in debt workouts. Small countries may also be disadvantaged if the size of the NPL market is insufficient to justify the initial investment by potential purchasers in understanding the domestic legal and regulatory structure.[23]

Given these hurdles, resolving major NPL problems has often proved to be a difficult and protracted process, highlighting the value of early preparations to address them. Resolving NPLs is a complex and multifaceted problem, given the multiple stakeholders involved and the web of incentives, influences, and interactions among the commercial drivers, regulatory and legal frameworks, tax codes, and financial market structure. The process of workout and cleanup of balance sheets is thus often long and drawn out; for example, 30 percent of the 92 countries that have experienced banking crises since 1990 still recorded elevated NPL levels above 7 percent seven years after the start of the crisis.[24] Given the costs of an ineffective and inefficient protracted response, advance preparations to improve the framework and infrastructure to handle corporate failures and the debt overhang consequently may have a high payoff.

B. What Are the Current Vulnerabilities and Risks from High Corporate Leverage?

The vulnerability of nonfinancial companies to adverse economic and financial shocks has increased since the global financial crisis in many countries, as companies took advantage of accommodative monetary policy and the associated low (and in some cases negative) interest rates to expand leverage. At the end of 2019, global nonfinancial corporate debt had expanded to 91 percent of GDP, compared to a level of 75 percent in early 2007 in advance of the global financial crisis. Although levels vary significantly across countries and regions (as well as across industrial sectors), the rise has been sharpest on average in emerging markets, where the level of nonfinancial sector corporate debt increased from 62 percent of GDP in early 2007 to 91 percent at the end of 2019.[25]

The weakening of corporate sector balance sheets has lowered their resilience to the stress from the pandemic. Extensive support (in the form of income assistance to workers and firms, debt payment moratoria, and credit guarantees, among others) has succeeded in cushioning the impact of the pandemic and limiting the costs of unnecessary foreclosures and the risks of scarring. But as many firms entered the crisis with already stretched debt servicing capacity, there remains a high risk of a substantial rise in NPLs and in corporate insolvencies, as support measures are gradually withdrawn and market conditions normalize. For example, in advance of the support measures being introduced, staff at the Bank for International Settlements estimated that, as a result of the COVID-19 shock, around 50 percent of firms would not have sufficient cash buffers to cover their debt servicing and operating costs (Banerjee, Noss, and Pastor 2021).[26] Moreover, a simple balance sheet stress test based on pre-

23. It is noteworthy, however, that as a result of steps taken to develop the NPL market in Eastern Europe following the global financial crisis, a number of deals have also taken place in frontier markets in the Western Balkans, as well as in larger countries in the region.
24. Ari, Chen, and Ratnovski (2021). The authors review NPL data from 92 crises since 1990. An elevated NPL level is defined by the authors as an NPL ratio of 7 percent or greater.
25. This information comes from the IMF Global Financial Stability Report (GFSR) from April 2021, based on Institute of International Finance data for 52 countries, including advanced economies and emerging markets. Note that there are some quite marked differences across regions; see Figure 2.1.1 of the IMF GFSR April 2021 Online Annex. All regions experienced an increase in nonfinancial corporate leverage over the past 10 years or so—the highest regional level is in Europe, followed by Asia and Pacific, the Americas, the Middle East and North Africa, and Sub-Saharan Africa.
26. The study, published in April 2020, was based on a sample of some 40,000 companies in 26 advanced economies and emerging markets.

COVID-19 data suggests that nonfinancial corporates in EMDEs may be vulnerable to liquidity and earnings shocks (Feyen et al. 2020). MSMEs are particularly vulnerable to the pandemic shock (Aidan et al. 2020; Díez et al. 2021; Group of 30 2020).

While various support measures from governments and banks have enabled many corporates to weather the initial shock, these measures have added further to already high debt and leverage and thus to future risks. Bank for International Settlements staff (Banerjee, Noss, and Pastor 2021) note that while ample credit provision facilitated by support measures succeeded in significantly lowering bankruptcies relative to levels that would typically have been expected, given the sharp drop in economic activity, "significant increases in leverage and weak earnings forecasts in some sectors suggest that for some firms, greater credit extension may have only postponed, rather than cancelled, their insolvency."[27] Indeed, the IMF estimates that the ratio of global nonfinancial corporate debt to GDP rose by 11.5 percentage points between the end of 2019 and 2020Q3 (International Monetary Fund 2021). While the sharp decline in GDP, particularly in emerging markets, contributed to the rise in the ratio, the IMF notes that a rise in debt levels during the COVID-19 crisis was also visible.

In most countries, banks are the main providers of credit to nonfinancial corporates. This is especially the case in EMDEs that have underdeveloped capital and corporate bond markets. High corporate indebtedness and the associated risks of a sharp rise in corporate financial stress and debt servicing problems consequently pose a significant risk to banks. Indeed, recent IMF research highlights that high corporate leverage significantly increases the likelihood that a banking system will face stress from elevated NPLs (Ari, Chen, and Ratnovski 2021). The risk from corporate debt is compounded by high levels of household leverage in many countries; although, in aggregate, household debt has dipped slightly as a share of income in recent years in advanced economies, there has been a contrasting sharp rise in household leverage in emerging markets (International Monetary Fund 2021).[28]

As temporary financial support measures are gradually lifted, banks are likely to face increasing payment delays. In some cases, where borrowers have experienced purely temporary income stress during the pandemic, banks and borrowers are likely to be able to reschedule loans to enable borrowers to repay over a longer period without any loss to the bank (in terms of net present value). But in other cases, particularly where the viability of the firm's business model has come into question, the quality of banks' assets will deteriorate as arrears start accruing.

NPLs have a major impact on banks' financial strength given the heightened prospects of loss in recovering the claims as well as the immediate drop in servicing income. An increase in NPLs has a number of effects: a reduction in net interest income; a rise in provisions and impairment costs; an increase in capital requirements to reflect higher risk weights;[29] a rise in bank funding costs; and an increase in staff and management time and costs to address the problem. To support effective management by banks, as well as to inform policy responses by supervisors and national authorities, it is vital that supervisors ensure that banks apply rigorous and consistent classification standards and record accurately and transparently any deterioration in loan quality. Supervisors must also ensure that banks apply robust provisioning policies based on realistic assessments of expected losses and thus that capital strength is recorded accurately.[30]

Published data on NPLs was broadly stable at the global level during the first year of the pandemic, but it does not provide an accurate signal of underlying asset quality, given the suppressing forces from extended payment moratoria and other forms of regulatory relief and government support measures. On average, NPLs rose by 0.1 percentage points during 2020 at the global level, although low-income countries experienced a rise of 0.5 percentage points. But such measures are significantly affected by payment moratoria, which freeze the classification of assets by payments past due as well as by other forms of regulatory easing in some countries. Moreover, in addition to the cushioning impact of the temporary support measures,

27. Based on a sample of more than 11,000 firms in nine advanced economies (Banerjee, Noss, and Pastor 2021).
28. Globally, household debt stood at 60 percent of GDP at the end of 2019. The IMF estimates that household leverage rose by 5 percentage points between the end of 2019 and 2020Q3.
29. Under the Basel III Standardized Approach to Credit Risk, higher risk weights apply for the unsecured portion of any loan (other than a qualifying residential mortgage loan) that is past due for more than 90 days, net of specific provisions (including partial write-offs). See Paragraph 20.26 of the Basel Framework (Basel Committee on Banking Supervision 2019). See also Annex 2 of Awad et al. 2020.
30. Banks take provisions against expected losses as a pre-emptive step to ensure that income is accurately recorded, taking account of lending losses that are likely to be unavoidable. Capital provides a buffer for abnormal or unexpected losses, and thus increases the financial strength of banks to absorb such unexpected shocks while remaining solvent. Under-provisioning against expected losses overstates banks' income and capital strength.

NPLs are typically a lagging indicator of asset quality problems as it takes time for banks to recognize and acknowledge emerging payment difficulties.[31] Current NPL data is thus likely to underestimate the true extent of asset quality deterioration. Other indicators, where available, such as the number of loans covered by the moratoria and/or that are being restructured as a result of the pandemic, may provide a better forward-looking indicator.

Given high leverage levels, there is a significant risk of a sharp increase in NPLs in the coming years as support measures are phased out and payment profiles are normalized. This may place significant stress on banking systems. Positively, many banks and banking systems across the globe have bolstered capital levels in recent years, reflecting the tightening of international regulatory standards in response to the lessons of the global financial crisis, and are thus much better positioned to meet the stress than in the past. Average Tier 1 capital ratios rose from 11.5 percent in 2010 to 15.1 percent in 2019, with an increase from 11.2 percent to 16.0 percent in emerging markets (International Monetary Fund 2020). Capital levels, nonetheless, vary significantly across jurisdictions and regions (as well as within), highlighting differences in the capacity of banks and banking systems to absorb the pandemic shock.[32,33] Furthermore, notwithstanding the positive steps to strengthen global financial regulation and supervision, there are shortfalls in implementation,[34] and policy frameworks to address a surge in NPLs remain relatively weak in many countries, as discussed further below. Against this background, strengthening such frameworks and the preparedness to address a potential sharp rise in NPLs following the pandemic would provide helpful contingency planning that would also be valuable for addressing future adverse shocks.

III. The Building Blocks for NPL Resolution

Timely and efficient resolution of NPLs depends on the effectiveness of the legal and regulatory framework. Several preconditions should be met to deliver success: (i) an enabling legal environment; (ii) solid regulatory and supervisory architecture, drawing on a sound reporting and accounting framework; and (iii) practical supervisory guidance and oversight. This section highlights several key aspects of these interrelated elements.[35]

A. An Enabling Legal Environment

A sound legal framework is an essential precondition for the efficient, effective resolution of NPLs.[36] The framework should clearly set out and specify the rights and responsibilities of creditors and borrowers, as well as the process and range of tools for enforcing claims and settling disputes. Although many NPLs are resolved by negotiation and agreement between creditors and borrowers, in some cases after rescheduling or restructuring payment profiles, the legal infrastructure provides the bedrock for such agreements. In particular, as highlighted in Chapter 3 of this report, the insolvency framework supplies the structure and mechanism for the enforcement of creditors' claims while also protecting borrowers' interests, thus underpinning and providing a legal backstop to negotiations between creditors and debtors.[37] Such frameworks frequently enable the ultimate resolution of disputes through court procedures, although as such processes may be lengthy, complex, and costly, many jurisdictions have introduced out-of-court workout procedures to settle simpler and more straightforward cases and promote and gain the benefits of more efficient CDR approaches. As

31. For example, Ari, Chen, and Ratnovski (2021) note that, on average, NPL levels keep rising for almost 2.5 years after the start of a banking crisis.
32. Analysis within the World Bank of the vulnerability of banks and banking systems to a rise in NPLs due to the pandemic suggests that the South Asia region is the most vulnerable, with the Middle East and North Africa and Europe and Central Asia regions second and third. The weakest banks in the Latin America and the Caribbean and Sub-Saharan Africa regions could, on average, sustain higher increases in NPLs before capital is depleted, although there is significant variability across jurisdictions within each region (Feyen and Mare 2021).
33. Fiscal capacity to support the economy and the financial system also differs significantly across countries. Fiscal positions have deteriorated substantially, reflecting the shock to the economy and the extensive support measures taken to cushion the impact.
34. A recent review by IMF staff of lessons from Financial Sector Assessment Programs (FSAPs), which are conducted jointly by the World Bank and IMF, notes that while jurisdictions have made steady progress in implementing the major regulatory reforms, progress in enhancing banking supervision has been slower (Dordevic et al. 2021).
35. In particular, effective financial regulation and supervision depend on a strong legal foundation. The Basel Core Principles for Effective Banking Supervision note that a system of business laws that are consistently applied and that provide a mechanism for the fair resolution of disputes is an important precondition for effective supervision.
36. Chapter 3 presents an in-depth assessment of the legal infrastructure covering corporate debt restructuring and sets out policy recommendations.
37. The preconditions for use of the insolvency framework must be met, namely that the debtor is unable to pay debts as they become due or has liabilities in excess of assets. The insolvency framework is a multilateral process involving all creditors of a debtor entering insolvency.

Chapter 3 emphasizes, such out-of-court workout approaches help resolve individual cases more quickly and cheaply and thus preserve value for both debtors and creditors. Such processes also decrease the pressure on judicial capacity, which is often a constraint and, indeed, one that may bind particularly severely when there is a surge in the number of NPLs. Putting in place robust architecture that can facilitate negotiated settlements and lower the number of cases that require court deliberations will help to overcome such a constraint. Such streamlined, low-cost NPL resolution tools will be particularly helpful when there is a large volume of problem loans to MSMEs, as well as to retail borrowers, which may be the case in the aftermath of the pandemic, given the severity of the impact (Aidan et al. 2020; Díez et al. 2021). Chapter 3 provides a series of lessons and recommendations to support efficient corporate debt restructuring.

Other key elements of NPL resolution also depend on the strength of the legal framework. In particular, a robust legal infrastructure enables creditors to enforce claims on collateral that has been pledged as security on a loan contract (or real estate transaction), as well as to resolve any disputes arising over the transfer and title, in the event that the borrower fails to meet contractual payments when due. Furthermore, the framework should also set out the conditions governing the potential sale and transfer of creditor claims, which provide an important tool to facilitate NPL resolution. For example, does the framework enable the creditor to transfer or sell NPLs (together with all creditor rights and privileges) to third parties, such as specialist investors and workout firms, or are such transfers prohibited? When permitted, do such sales require the prior consent of the debtor, which could thus act as a potential roadblock to the development of distressed debt markets?

Accurate and reliable information on creditor claims and on the ownership of collateral facilitates the resolution of NPLs, as well as supports market functioning and credit provisioning more broadly (World Bank 2015a). For example, credit registries enable lenders to record their claims and to pool information on outstanding debt commitments and payment performance of individual borrowers and firms. Improving the information infrastructure not only helps to develop and deepen credit provisioning, it also facilitates the resolution of debt performance problems should they occur. Business registries may also provide valuable information to support the pursuit and recovery of claims. Given the importance of land and real estate as collateral for loans, a high-quality cadaster (or land registry) that provides an accurate legal record of the ownership of title, as well as the details of land and real estate holdings, is often a key foundational document for settling disputes. More broadly, a modern collateral registry that records claims on movable assets (as used in factoring and leasing, for example) may also protect creditors and help resolve claims on other types of secured transactions (World Bank 2015a).

A supportive tax structure is an additional building block for effective NPL resolution. As losses on loans are a business expense that reduce bank tax payments, tax authorities naturally seek strong evidence and proof of loss before granting tax deductions. This may create an incentive to delay NPL resolution, which would be at odds with the desire of the financial authorities to encourage a rapid cleanup of bank balance sheets and avoid the costs to the economy of weak and misallocated credit provisioning. Communications and dialogues that deliver a clear and consistent government policy will help ease such tensions.

B. Relying on Solid Regulatory and Supervisory Foundations

Establishing accurate and timely indicators of bank asset quality is an essential first step to understanding and managing the pressures on banks and the financial system from rising NPL problems. Asset quality indicators underpin assessments of banks' capital positions and financial health, as well as provide clear signals of emerging loan performance problems that warrant remedial action and help avoid the associated deadweight costs of a major overhang of troubled assets. Reliable data provides the cornerstone to help ensure that banks provision appropriately for expected credit losses, while also highlighting banks that require heightened supervisory attention due to their high NPL exposure. In particular, timely and accurate information is needed to gauge the magnitude of the problem as well as the banks' ability to weather and absorb the impact of likely credit losses, while also retaining sufficient capital strength to supply new credit to support a sound and sustainable economic recovery.

Given the various incentives for banks to signal strength and to underestimate and under-report incipient credit problems, a disconnect between reported figures and the underlying economic realities can readily arise. To support timely and effective responses by banks and policy makers to address rising NPLs, it is important to counter the risk of such a disconnect. Succumbing to the pressures to underestimate the deterioration in asset quality, on the other hand, will not resolve the underlying problem—banks would still face increasing credit losses, and pressures on provisions and capital would still materialize. But it would delay the response, likely adding significantly to the risks and costs.

Applying well-founded accounting principles and standards is an important precondition. A large majority of countries have adopted International Financial Reporting Standards (IFRS) developed by the International Accounting Standards Board (IASB).[38] In the past few years, the IASB has introduced a new standard for financial instruments ("IFRS 9"). As a response to the lessons from the global financial crisis, a major change from the previous standard is to require banks to account and provision for estimates of expected credit losses, rather than to wait for losses to be incurred, which had led to provisioning being regarded as too little, too late under the previous accounting framework.[39] Although more challenging to apply, the introduction of a specific forward-looking approach is very helpful in encouraging bank management and boards to intensify their focus on prospective payment performance and to identify emerging problems at an early stage. Assets are grouped into three categories: Stage 1, assets where there has been no significant increase in credit risk since initial recognition; Stage 2, assets where a significant increase in credit risk has occurred; and Stage 3, when the asset is credit-impaired. Under IFRS 9, expected credit losses switch from a 12-month perspective to an expectation of credit losses over the full lifetime of the asset on moving from Stage 1 to Stage 2, with an associated impact on provisions. Bank boards and management have the responsibility to ensure that financial statements provide an accurate picture, and thus that estimates of expected credit losses are of high quality. External audit is essential to provide independent quality assurance and opinion on the accounts and financial statements. Steps have been taken to strengthen the quality of external audits of banks in recent years following the lessons of the global financial crisis (Basel Committee on Banking Supervision 2014).

Banking supervisors play a key role in upholding clear, consistent, robust standards of credit risk management and loan asset classification, as well as in ensuring that banks produce clear and accessible financial statements subject to external audit. Although supervisory reporting has been streamlined during the pandemic, it is crucial that banks report reliable, frequent, detailed, and up-to-date information on credit quality, including on the performance of loans that have benefited from borrower relief measures, to underpin high-quality prudential supervision and broader policy analysis. Supervisors also have an important role in setting out clear guidelines and expectations on the prudential implications and application of accounting and reporting standards. World Bank staff recently set out a number of policy recommendations for prudential supervisors in EMDEs to support this process (Caruso et al. 2021).

Clear, unambiguous, consistent definitions of the key concepts that underpin banks' loan classification and grading schemes are a critical component of effective monitoring and assessment of asset quality. Although there is as yet no internationally harmonized framework that governs the measurement of nonperforming assets and the calculation of provisions (Baudino, Orlandi, and Zamil 2018), the Basel Committee has provided valuable guidance on definitions and terminology that has helped to promote greater consistency (Basel Committee on Banking Supervision 2017a and 2017b). In specific relation to problem assets, the guidance on the categorization and classification of loans is centered on the degree of delinquency (90 days past due) or the unlikeliness of repayment (see Box 2.1). This guidance forms the basis for many national approaches.

Standard setters have also published helpful guidance on applying regulatory frameworks during the pandemic (Financial Stability Board 2020a and 2020b; Basel Committee on Banking Supervision 2020; International Accounting Standards Board 2020). The Basel Committee highlighted, first, that payment moratoria should not be counted in days past due for assessing loan performance, and second, that judgments of the ability to meet payment obligations should focus on the borrower's ability to meet the requirements of rescheduled payments after the moratorium ends. But equally, to underpin such judgments, and thus policy actions by the bank and the authorities, it is vital that banks continue, during the moratoria, to undertake in-depth, high-quality monitoring of the financial health of borrowers and conduct rigorous assessments of their payment capacity and likely longer-term viability, drawing on a range of financial and economic indicators. As payment moratoria temporarily switch off the important signal from any deterioration in actual payment performance, additional emphasis must be placed on strengthening banks' analysis of the unlikelihood to pay in undertaking such credit assessments.

38. The United States is a notable exception.
39. A similar forward-looking perspective has also been introduced into the US system, under the current expected credit losses framework.

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BOX 2.1 International Guidance on Loan Classification and Problem Assets

Definition of nonperforming exposures. There is no centrally agreed international standard for loan classification and treatment of problem assets. While there are many common features, such as extensive reliance on formal loan classification schemes that bucket loans into categories (e.g., pass or standard, special mention or watch, substandard, doubtful, and loss), national approaches consequently differ (Baudino, Orlandi, and Zamil 2018). To support greater convergence, in 2017 the Basel Committee published detailed guidance on the definition of nonperforming exposures (as well as forbearance), providing a clear reference point. In addition to exposures that are in default or impaired under the accounting framework, there are two principal criteria to guide nonperformance:

- **Delinquency**: material exposures that are more than 90 days past due (i.e., unpaid); or
- **Unlikeliness to pay**: where there is evidence that full repayment on the contractual terms (original or, when applicable, modified) is unlikely without the bank's realization of collateral, regardless of whether the exposure is current and regardless of the number of days the exposure is past due.

In addition to specific actions by the bank that signal an unlikelihood of receiving full repayment, such as making a specific provision against the exposure, assessments of likelihood of payment should draw on a comprehensive analysis of the financial situation of the borrower using all available inputs. Specific indicators suggested by the Committee to aid such analysis include the following ratios for nonretail counterparties: leverage; debt/EBITDA (earnings before interest, taxes, depreciation, and amortization); interest coverage; current liquidity ratio; ratio of (operating cash flow plus interest expenses)/interest expenses; and loan-to-value ratio; and, for retail counterparties: debt service coverage ratio; loan-to-value ratio; credit scores; and any other relevant indicators. The Committee also provided guidance on the potential recategorization of nonperforming exposures as performing, namely in the event that the counterparty's situation improves such that full repayment of the exposure is likely and that the borrower has successfully made repayments when due for a probationary or cure period.

Forbearance. The Committee also provided definitional guidance that forbearance applies to cases where there is:

- **Financial difficulty**: a counterparty is experiencing financial difficulty in meeting its financial commitments; and
- **A concession**: a bank grants a concession that it would not otherwise consider.

There are many types of concession, including extending maturities, rescheduling payment profiles, providing grace periods, lowering interest rates, and forgiving or deferring principal or interest. Forbearance may be granted on performing or nonperforming exposures. Not all concessions lead to a reduction in the net present value of the loan, and therefore a concession does not necessarily lead to the recognition of a loss by the lender.

Guidance in the pandemic. The Basel Committee (2020) provided guidance on the application of the above criteria in the pandemic, clarifying that payment moratoria periods relating to the COVID-19 outbreak (whether public or granted voluntarily by banks) can exclude the days past due and that assessments of the unlikeliness to pay should be based on whether the borrower is unlikely to be able to repay the rescheduled payments (specifically the likelihood of payment of amounts due after the moratorium period ends). This approach applies both to the definition of nonperforming exposures and to the treatment in the capital framework. The Committee also highlighted that borrower acceptance of a payment moratorium or other relief measures, such as guarantees, should not automatically lead to the loan being categorized as forborne. Supported by statements from the IASB (2020), the Committee also highlighted that when estimating expected credit losses (and applying IFRS 9 or alternatives), banks should not apply the standard mechanistically. The flexibility inherent in IFRS 9, for example, to give due weight to long-term economic trends should be used.

Building on reliable data and clear definitions, supervisors are tasked with ensuring that banks apply appropriate policies and standards to identify and manage problem assets. The Basel Core Principles for Effective Banking Supervision (Basel Committee on Banking Supervision 2012) set out clear expectations and best-practice international standards to guide the supervisory approach. The principles were comprehensively reviewed and strengthened from the 2006 version in light of the lessons from the global financial crisis. Principle 18 focuses specifically on problem assets, provisions, and reserves and sets out 12 essential criteria for supervisors to fulfil, covering, inter alia, the quality, timeliness, accuracy, and prudence of bank loan classification schemes and provisioning policies while also confirming that supervisors have been granted, and where necessary apply, powers and remedial measures to ensure that loan classification is appropriate and that provisioning, reserves, and capital are sufficient (see Box 2.2). In practice, this entails conveying powers for the supervisor to require higher provisions that enable the supervisor, for example, to put in place a prudential backstop for provisions over and above accounting requirements when judged necessary (Gaston and Song 2014; D'Hulster, Letelier, and Salomao-Garcia 2014; Caruso et al. 2021),[40] as well as to set additional capital requirements to cover the risks of high levels of NPLs where remediation strategies appear weak.[41]

40. Backstops of various kinds are applied, for example, in the European Union, Singapore, and Thailand (see Caruso et al. 2021). In recommending that prudential supervisors should consider prudential backstops on provisioning, Caruso et al. argue that "IFRS 9 amplifies management judgment and might give rise to undue discretion when dealing with model choices. To preserve adequate coverage of NPLs, supervisors in EMDEs could implement prudential backstops."
41. For example, under Pillar 2 of the Basel Framework.

> > >

BOX 2.2 **Basel Core Principle 18: Problem Assets, Provisions, and Reserves**

The Basel Core Principles for Effective Banking Supervision (2012) set out clear expectations for the supervisory treatment of problem assets and reserves. Principle 18 specifies that:

"The supervisor determines that banks have adequate policies and processes for the early identification and management of problem assets, and the maintenance of adequate provisions and reserves."

To guide this determination, Principle 18 specifies 12 essential criteria outlining international best-practice requirements. In summary, these require the supervisor (or laws) to determine that:

1	Banks formulate policies and processes for identifying and managing problem assets;
2	Policies and processes for loan classification and provisioning are adequate;
3	Off-balance-sheet exposures are included;
4	Provisions and write-offs are timely and accurate;
5	Banks have appropriate policies, processes, and organizational resources for the early identification of deteriorating assets; ongoing oversight of problem assets; and collecting on past-due obligations;
6	Banks have adequate documentation to support classification and provisioning, and supervisors have access to regular, detailed information;
7	Classification of assets and provisioning is adequate for prudential purposes (and if not, that the supervisor has the power to require changes to loan classification and increases in provisions, reserves, or capital and, if necessary, to impose other remedial measures);
8	Banks have appropriate mechanisms for regularly assessing the value of risk mitigants, including guarantees, credit derivatives, and collateral, and that the valuation of collateral represents the realizable value, taking into account prevailing market conditions;
9	Criteria are established for assets to be identified as problem assets and reclassified as performing;
10	Bank boards obtain timely and appropriate information on the condition of the bank's asset portfolio;
11	Valuation, classification, and provisioning are conducted on an individual item basis, at least for significant exposures; and
12	The supervisor regularly assesses trends and concentration in risk and risk buildup across the banking sector in relation to banks' problem assets, taking into account risk mitigation strategies, and considers the adequacy of provisions and reserves at the bank and banking system level in the light of this assessment.

Other core principles set out requirements on critical accompanying policies that buttress and reinforce the effective management of problem assets and of credit risk more broadly. Of particular relevance are the following: Principle 17 (Credit Risk, which highlights the critical importance of managing credit risk over the full credit life cycle); Principle 27 (Financial Reporting and External Auditing, which specifies the importance of external validation of asset classification and loan loss provisions, as well as requiring independent verification of valuation practices used by banks to assess the fair value of assets, including distressed assets and collateral, and emphasizing that accurate financial reporting is essential to provide transparency and aid market functioning); Principle 28 (Disclosure and Transparency, which outlines the requirement for banks to publish easily accessible information that fairly reflects the financial position as well as key risk management and risk metrics); and Principle 11 (Corrective and Sanctioning Powers, which sets out the criteria for effective enforcement of banking supervision policies and regulatory requirements). Together with Principle 18, and the overarching framework governing effective banking supervision provided by the entire Basel Core Principles,[42] these principles set out a solid supervisory foundation for the management and resolution of NPLs.

Although in recent years the supervisory community has strengthened frameworks for identifying and managing problem assets in light of the lessons from the global financial crisis, further progress, nonetheless, remains a priority. Detailed assessments of supervisory practices and processes undertaken as an integral part of the joint World Bank/IMF Financial Sector Assessment Program (FSAP) reveal continued significant shortfalls from international minimum standards and good practices, highlighting the importance of continuing efforts to strengthen frameworks for the early identification and management of problem assets and maintenance of adequate provisions and reserves. A recent review of the lessons from FSAPs (Dordevic et al. 2021) showed that Principle 18 is among the five least well observed of the 29 Basel Core Principles, with over 30 percent of the assessments judged as materially noncompliant or noncompliant with the principle.[43,44] For example, significant weaknesses in asset classification and provisioning frameworks were noted in around 65 percent of the 29 detailed assessments of EMDEs conducted during FSAPs since 2012, while practices for valuing collateral and upgrading restructured loans, supervisory definitions, and supervisory oversight also fall well short of expectations in some 25 to 40 percent of the same assessments. Noting that the framework for the management of problem assets needs urgent improvements, common priority areas identified in the review for improvements to meet the agreed standards include:

- Strengthening criteria for the classification of assets, as well as processes to avoid the evergreening of loans;
- Buttressing implementation of loan classification and provisioning by more frequent supervisory reviews;
- Providing clear definitions of NPLs, loan restructuring, and forbearance, to support transparency, market discipline, and reporting; and
- Strengthening policies and processes for the valuation of collateral to improve bank provisioning (including independent verification of the valuation approach).

Applying these supervisory principles clearly and consistently is important to ensure consistency and comparability across banks and jurisdictions, as well as over time. The pandemic has placed additional pressures on supervisors to dilute definitions and weaken the application of credit risk management and asset quality requirements. While an easing of standards may lower measured NPLs, it weakens the comparability and consistency of reported data, increasing opacity on the financial position of borrowers and banks. Such a relaxation would thus hamper the analysis and understanding of emerging asset quality problems and hinder their resolution. The majority of supervisors have consequently maintained a consistent regulatory framework and have typically provided helpful guidance on its application during the pandemic, taking account of moratoria and other measures. In some countries, however (e.g., Argentina and Turkey), this pressure has led to relaxation in regulatory definitions and to divergence from international standards, including stretching the 90-days-past-due criterion commonly applied to identify NPLs. In other cases, supervisors have been under pressure

42. The Basel Core Principles are a framework of minimum standards for sound supervisory practices and are considered universally applicable. Powers, responsibilities, and functions of supervisors (including key issues such as mandate, independence, legal powers, and protections) are set out in Principles 1 through 13, while the second group (Principles 14 through 29) focuses on prudential regulations and requirements for banks.
43. In a detailed assessment report of the application of the core principles, often conducted as part of an FSAP, assessments are made for each principle using one of four categories (in addition to Not Applicable): Compliant, Largely Compliant, Materially Non-Compliant, or Non-Compliant (Basel Committee on Banking Supervision 2012).
44. Of the principles highlighted above, Core Principle (CP) 11 (Corrective and Sanctioning Powers) and CP 27 (Financial Reporting and External Auditing) are also among the 10 least well-observed principles of the 29. Observance of CP 17 (Credit Risk) and CP 28 (Disclosure and Transparency) was somewhat stronger, although around 20 percent of the assessments were nevertheless judged as materially noncompliant or noncompliant with both of the principles (Dordevic et al. 2021).

to treat restructured, forborne NPLs as new performing loans without going through the normal probationary period of successfully meeting rescheduled payments for one year.[45] Shortening or eliminating this period enables banks to release provisions and thus present a stronger financial position on the surface. But it also runs high risks, which justified the need for the one-year cure period in the international regulatory guidance. More broadly, in cases where standards have been relaxed during the pandemic, clarifying that the weakening of the classification system is temporary and developing and implementing clear plans to restore international prudential standards of asset quality will help guard against a loss of confidence in the supervisory framework and in the integrity of financial data.

C. Backed by Supervisory Guidance and Action

Building on solid regulatory and supervisory foundations, providing intensive, intrusive supervision of problem assets is the third key building block of effective NPL identification and management. In several areas additional guidance, reinforced by supervisory scrutiny and challenges, may be particularly valuable:

- **Loan classification schemes**. Supervisors play a key role in ensuring that loan classification schemes are clear and effective and are applied rigorously by banks. As moving between classification categories is likely to have implications for provisioning levels and risk weights, it is important to guard against the incentives for banks to preserve the existing categorization and avoid downgrading.
- **Monitoring and reporting frameworks**. Strong asset quality monitoring frameworks are needed within banks to underpin effective responses by management and oversight by the bank's board, as well as to ensure that supervisors have the necessary information. It is important that banks collect information on a broad set of indicators signaling both current and prospective borrower financial health to guide assessments of payment capacity and of incipient performance problems.
- **Nonperformance and unlikeliness to pay**. A key element of the identification and management of NPLs is the assessment of the borrower's payment capacity and the likelihood the borrower will meet contractual obligations. Supervisors play an important role in ensuring that banks use strong analytical systems to make such assessments and also take a forward-looking view. In particular, supervisors should ensure that banks do not simply focus on loan delinquency metrics, such as the days scheduled payments are past due, which are backward-looking and which have also been heavily impacted, and in some cases distorted, by payment moratoria.[46]
- **Viability assessments**. Assessments of the unlikeliness to pay are closely related to judgments on the economic viability of the borrower, in particular, on whether the borrower is deploying a business model that can generate sustainable profits and meet debt service requirements over an extended period. Supervisory scrutiny of bank viability assessments and the underlying methodology is important to guard against incentives for banks to continue lending to zombie firms.
- **Write-offs**. Supervisors must ensure that banks fully provision against exposures with no realistic prospect of recovery and determine that banks have policies that subsequently write off the loans from the balance sheet in a timely manner.[47,48] Holding the board responsible for disclosing accessible and fair financial and risk data will avoid the risk of misrepresentation of financial statements and associated misinterpretation.
- **Provisioning practices and recognition of losses**. Guidance and close monitoring by the supervisor are important to ensure that provisioning policies are sufficiently prudent (with the supervisor stepping in to require additional provisions if not) and that banks recognize losses on a timely basis. Provisioning should take account of the effectiveness of the domestic framework for debt enforcement and insolvency, as discussed in more depth in Chapter 3. For example, if debt recovery rates in a jurisdiction are typically low, higher provisions are likely to be needed.[49]

45. This applies to restructured loans that were nonperforming, either on grounds of delinquency or unlikeliness to pay, and that were granted a concession and thus classified as forborne. On the other hand, some restructured loans at the end of the payment moratoria may simply reflect a rescheduling or retiming of payments with no change in the net present value of the loan. In the latter case, the loans continue to perform, and as no concession is granted, the loans are not forborne, as per the Basel Committee 2020 guidance.
46. Temporary moratoria on debt payments switch off the signal on asset quality from payment delays and days past due, thus placing additional weight on the importance of rigorous assessments of the unlikeliness to pay based on a broad set of indicators of borrower financial health and economic and business prospects.
47. Basel Core Principle 18 essential criteria 4 states: "The supervisor determines that banks have appropriate policies and processes to ensure that provisions and write-offs are timely and reflect realistic repayment and recovery expectations, taking into account market and macroeconomic conditions." As noted above, write-offs may also be influenced by the accounting and tax regime.
48. Several supervisory authorities have taken specific measures to strengthen write-off policies. For example, Malawi introduced a new regulation in 2017 to force banks to step up loan recovery and write off NPLs from their balance sheets, which helped to lower NPLs from 15.7 percent at the end of 2017 to 3.6 percent in September 2019 (Eyraud et al. 2021).
49. As highlighted in Chapter 3, the World Bank Doing Business Report provides information on creditor recovery rates under insolvency. The chapter also notes that significant variation occurs across countries and regions, reflecting the strength of the arrangements (World Bank Group 2020).

- **Collateral valuation**. To guard against the risk of overoptimism, supervisors should require that banks apply appropriate approaches to the valuation of collateral, taking into account prevailing market conditions and delivering a realistic assessment of the realizable value. This includes substantiating that banks' valuation approaches are subject to independent verification and validation through the external audit process. Guidance that sets out clear supervisory expectations will help to ensure that banks adopt rigorous valuation approaches.

- **Consolidated reporting and supervision**. Given spillovers, contagion, and reputation risks across banking groups, it is essential that banking supervisors take a comprehensive and consolidated approach that embodies all aspects of the business conducted by the banking group worldwide and set prudential standards accordingly.[50] Ensuring that banks report positions accurately on a consolidated basis across the whole group, including affiliated entities, is an important precondition to support effective supervision as well as management of group-wide risks. For banking groups operating across borders, strong coordination and cooperation between home and host country supervisors is vital to ensuring the smooth sharing of information and effective supervision of the group and group entities.[51,52]

Targeted use of specialist resources can help strengthen the effectiveness of supervision and the resolution of NPL problems. For example, in cases where the supervisory authority detects a mushrooming NPL problem within a particular bank, it is important that the on-site supervisory team include staff with expertise in NPL resolution. Equally, in cases where there are significant doubts about the magnitude and extent of NPLs across a banking system, bringing in independent experts to conduct a detailed asset quality review can provide a valuable option for the supervisory authority to help diagnose the problem. Such experts may also provide loan loss forecasts to be used as inputs to stress tests, which are often undertaken as a complementary diagnostic tool following an asset quality review (Gutierrez, Monaghan, and Piris 2019).

IV. Dealing with NPLs: Bank-Led Strategies and Public Policy Interventions

Under the direction of the board, bank senior management is responsible for the prudent day-to-day management of the bank. Banks should have NPL resolution strategies and effective internal arrangements in place to implement them. While banks carry the main responsibilities for working out bad loans under supervisory oversight, more direct public intervention might be warranted should rising NPLs become a threat to financial stability.

A. Private Action: Ensuring Bank Readiness to Manage NPLs

Managing payment performance problems is a core activity for commercial banks. Loans are underwritten and priced to reflect credit risk, thus acknowledging and expecting that some borrowers will face adverse shocks and be unwilling or unable to meet their contractual obligations. When payment problems do arise, banks have systems and processes to manage the relationship with the borrower and to maximize the recovery of the claim. Implementing effective systems is a core responsibility for bank boards and management—as highlighted above, bank supervisors play a key role in ensuring that processes for managing problem assets and setting provisions are thorough and rigorous.

Systems designed to manage payment problems on a case-by-case basis may, however, be ill-equipped to handle a simultaneous surge in NPLs. In particular, systems may become overloaded, and specialist expertise may be spread too thin, leading to bottlenecks and holdups in decision-making, as well as risking the application of inconsistent, piecemeal, and ineffective remedies. Supplementary policies and complementary approaches may be needed in such circumstances.

50. Basel Core Principle 12 specifies criteria to deliver effective consolidated supervision (Basel Committee on Banking Supervision 2012).
51. Basel Core Principle 14 addresses home-host supervisory relationships (Basel Committee on Banking Supervision 2012).
52. Where banking groups operate regionally, cooperation though regional supervisory groups may be helpful in strengthening frameworks for information exchange, supervision, and crisis management.

Experience has shown the importance of four basic building blocks that enable banks to successfully tackle sizable numbers of impaired assets:

- **Clear recognition of the problem**. Strong monitoring systems facilitating early identification and timely recognition of deteriorating asset quality are a prerequisite for effective resolution. Recognition of the problem must be backed by provisioning that takes full account of expected losses.

- **Setting up dedicated workout units**. Specialist expertise is required to manage NPLs, and it may initially be in short supply. Concentrating expertise and building up well-resourced, dedicated workout units,[53] separated from the day-to-day operation of the bank and with direct reporting to senior management and the board, has proven to be the most effective strategy to address bulk NPL problems.[54] Reliable information systems are essential to support the workout process. Addressing any major information deficiencies is consequently likely to be a priority.[55]

- **Segmentation of the impaired asset portfolio**. Policies and approaches to addressing payment performance problems are likely to differ depending on the cooperation and financial health of the borrower. As outlined in more detail below, if the borrower is actively engaging with the bank and has a viable business model, then seeking a negotiated agreement on rescheduling or restructuring payments may offer the best approach. Recourse to legal procedures is likely to be needed in cases where the borrower is not cooperating and/or is not judged to have a viable medium-term future. Underpinned by assessments of borrower viability, segmentation of impaired assets into categories by whether borrowers are cooperative or uncooperative and whether the business is viable will help guide the NPL reduction strategy (see Table 2.1).

- **Development and implementation of an NPL reduction strategy**. Faced with a major buildup of NPLs, banks should set a clear strategy and timeline to address the loan quality problems and clean up the balance sheet. The strategy should be approved and subsequently closely monitored by the bank supervisor to ensure effective implementation. Measures to address NPLs may be grouped into four broad categories: loan restructuring; legal actions to recover claims; write-offs of loans; and sales of distressed assets to third parties (Bauze et al. 2020; Baudino and Yun 2017).[56] These measures are not mutually exclusive and may be used in sequence (or even, in some cases, in parallel), guided by the objective to maximize the recovery in terms of net present value, which takes account of the time value of money.[57] In more detail, the measures are as follows (see also Table 2.1):

  > **Loan restructuring**. This approach may be used in cases where the borrower is cooperating with the bank and is viable. There are two broad subcategories; both are likely to be used extensively as payment moratoria and other support measures to cushion the impact of the pandemic are lifted. The first applies when the borrower is suffering from a purely temporary squeeze on cash flow and liquidity, with little or no impact on long-term payment capacity. In this case, agreement may be reached on a rescheduling or reprofiling of the timing of payments with no impact on the net present value and thus no loss for the bank. In other cases, the borrower may face greater distress, but the bank judges, from a detailed assessment of affordability, that viability can be restored by agreement to grant a concession on loan payments in some form in terms of net present value (such as a lower interest rate, a partial write-down of principal, a grace period, or an extension of maturity without full compensation for the

53. For example, by recruiting and training supervisory staff.
54. Separation of NPL resolution into a dedicated unit distinct from day-to-day supervision also enables line supervisors to focus on ongoing issues and eliminates any potential conflict of interest between the originating officer and the troubled borrower; it also builds and concentrates expertise and experience within specialist workout staff and management. As a recent example, the Bank of Tanzania required banks to set up separate workout units as part of a broader strategy to lower NPLs (Bank of Tanzania 2018).
55. For banking groups operating across borders, it is important to ensure that the flow and sharing of information is effective and captures risks across the whole group.
56. Although each approach reduces NPLs on bank balance sheets, in some cases the NPL problem is resolved when the bank and the borrower reach agreement (in some cases, with the assistance of the court); in others, the responsibility for resolution is transferred by the bank to a third party to resolve with the borrower.
57. The time value of money reflects the point that US$100 today is worth more than US$100 in a year's time given the capacity for the US$100 to earn positive interest over the year. Net present value takes account of the need to adjust (discount) future payments by the rate of interest to derive an estimate of how much they are worth today.

time value of money). A concessional restructuring may offer the best solution in such circumstances, given the costs of, and likely recoveries from, using alternative measures.[58] Where there are multiple creditors involved, such an approach may be followed as part of a CDR package, as highlighted in Chapter 3. It is important that supervisors closely monitor the processes within the bank guiding loan restructuring decisions and terms, including governance, risk management, and internal controls, as well as the subsequent management and performance of the restructured loans. That will help ensure that banks develop and implement effective policies, procedures, and practices to manage asset quality problems and thus avoid the risks of evergreening and of overly optimistic assessments of payment capacity and resultant under-provisioning and overstatement of capital.

> **Legal action**. In cases where the borrower is uncooperative or the bank judges that the borrower does not have a viable business model, legal action may be taken by the bank to protect and maximize the recovery of its claim. In cases where loans are secured, the bank may seek to enforce its rights over the collateral (if necessary, through court processes if claims are disputed). More broadly, the bank may also utilize the insolvency framework to reach a settlement, either through an out-of-court procedure or by initiating proceedings against the borrower to protect its claim by forcing either reorganization or liquidation. In some cases, the borrower may choose to file for bankruptcy protection, in which case the bank will need to register and promote its claim through the bankruptcy process.

> **Write-offs**. In cases where the bank is unsuccessful in obtaining remediation through alternative approaches and has provisioned fully against the exposure, the bank may seek to write off the claim from its financial statements on the grounds that the loan is uncollectible.[59] While full provisioning ensures that the approach meets regulatory objectives, given the interaction with the tax system, the bank may have to provide evidence to the tax authorities that all avenues have been pursued and exhausted before obtaining full tax relief from this option.

> **Sales**. The final option for reducing NPLs is to sell the distressed assets together with the creditor rights (including security protections such as claims on collateral) to a third party that has developed specialist expertise in debt workout. In addition to requiring an enabling legal framework that permits such sales without undue obstacles,[60] this option depends on the depth and development of a market for distressed assets. Information barriers can be inhibitory, so mechanisms that support information availability and facilitate due diligence by potential investors (such as hedge funds, private equity, and specialist distressed debt funds) are important. For this reason, distressed debt markets have often been used for unsecured products such as consumer loans and credit card debt that are typically relatively straightforward to work out and that can be valued relatively easily given the absence of collateral, although markets for distressed corporate debt have also been developed in some countries, with sales to specialist funds and distressed debt companies. A key challenge is information asymmetry between the seller and the buyer, with the latter concerned it may be sold only poor-quality assets. Encouraging the development of standardized, audited "data tapes" may be helpful to lower the asymmetry. In some cases, to overcome information barriers and bridge a gulf between the price the seller is seeking and the price an investor is willing to pay for distressed assets, the seller may retain a partial claim and share future collections with the investor. Many different financial instruments have been used in private markets for distressed debt, including bilateral sales, auctions, and securitization. Nevertheless, given the preconditions and challenges, distressed debt markets have yet to get off the ground in some countries and regions.[61] The World Bank is working actively through technical assistance and mobilization of funds under the International Finance Corporation's (IFC's) Distressed Asset Recovery Program to support and stimulate the growth and development of such markets (World Bank Group 2019).[62]

58. Bank assessments, weighing the relative merits of restructuring versus legal actions, will depend on the efficacy of the insolvency framework and judicial process, which provide a backstop alternative and buttress to creditor/debtor negotiations. Weak protection of creditor rights from an ineffective legal backstop creates incentives for correspondingly weak restructuring agreements that often do not solve the underlying problem. See Bauze et al. (2020) and Chapter 3 of this report (especially lesson 17 of the 20 lessons for designing CDR frameworks).
59. The bank is unlikely to formally forfeit its claim to avoid creating adverse borrower incentives, absent a further decision to provide debt relief.
60. The ability to transfer claims and creditor rights to specialist firms, and to undertake such transfers without the prior approval (or veto power) of the debtor, is a key precondition for a distressed debt market.
61. For example, distressed debt markets are mostly nonexistent or marginal in Sub-Saharan Africa at present (Eyraud et al. 2021).
62. For example, IFC is currently assessing secondary markets for NPLs in Angola, Côte d'Ivoire, Kenya, Mozambique, Nigeria, Senegal, and Uganda.

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TABLE 2.1 **NPL Reduction Strategies**

Instrument	Subcategory	Description	Borrower Eligibility Requirements	
Loan restructuring	Rescheduling	Deferment of borrower's debt service obligations to a future date, usually in a net present value-neutral manner.	Borrower is experiencing short-term liquidity difficulties. Borrower is cooperative.	"Workout"
	Concessional restructuring	Loan restructuring that entails a net present value reduction.	Borrower is distressed but viability can be restored with restructuring that entails debt relief. Borrower is cooperative.	
Legal actions	Collateral enforcement	Enforcing the collateral or guarantee pledged against the loan in or out of court.	None.	"Collection"
	Insolvency process	Initiation of an insolvency petition against the debtor to force a reorganization or liquidation of the borrower. In other cases, the debtor may voluntarily file for insolvency, in which case the bank will need to prove its claim.	None.	
Write-offs	Write-off	Fully provisioned NPL moves to the off-balance-sheet records; borrower's debt remains.	Banks may need to demonstrate that all measures have been exhausted.	"Disposal"
Sale	To a third party	Sale of NPL on commercial terms to an investor; investor continues collection effort.	None.	
	To a public asset management company	Transfer of NPLs to a centralized agency that manages recovery efforts; used in some systemic crises, complementing individual banks' efforts.	None.	

Source: Bauze et al. (2020).

B. Public Action on NPL Reduction

There may be challenges in applying some measures in the event of a major system-wide rise in NPLs that threatens financial stability. For example, in such circumstances, there may be huge pressures on judicial capacity and no ready market for distressed debt. Moreover, actions taken by individual banks in their own interest to reduce NPLs may have an adverse impact and spill over on the functioning of the broader financial system. In particular, such actions may precipitate fire sales of assets, lowering asset values and forcing further asset sales in a downward spiral, as well as reining back credit provisions as banks lower leverage to preserve capital, raising attendant risks of a harmful credit crunch (Baudino and Yun 2017). Additional public action may be needed to facilitate a more coordinated system-wide resolution of NPLs.

Drawing on past experience, several public policy interventions may be considered to help address a system-wide increase in NPLs:

Audit of asset quality. Given the various incentives to underestimate NPLs and to understate NPL provisioning, an important first step to develop a system-wide strategy is to confirm the magnitude of the problem to be tackled. While more intensive supervision of asset quality is helpful, an in-depth independent review across the system in the form of an asset quality review (conducted by independent experts using standardized methodology approved by the supervisor and conducted under supervisory oversight) may be required in some cases to provide a more rigorous assessment (Gutierrez, Monaghan, and Piris 2019). Careful consideration should be given to the potential timing of an asset quality review, as such exercises are costly and are designed to provide a point-in-time assessment of the accuracy of the carrying value of the banks' assets.[63] Given the fundamental uncertainties generated by the pandemic, an asset quality review may not be an immediate priority, but it may become useful at a later stage in some jurisdictions when there is greater clarity on the longer-lasting economic impact (Bauze et al. 2020).

63. Asset quality reviews may also provide inputs to, and subsequently be combined with, stress tests designed to assess the likely asset quality trends under potential adverse macroeconomic scenarios.

Policy coordination. Multiple agents are likely to be involved in resolving major NPL problems, including the following: governments (including fiscal, judicial, and taxation arms); financial authorities (supervisory authorities, central banks, bank resolution agencies, and deposit insurers); banks and other creditors; borrowers; insolvency practitioners; legal experts; courts; auditors and valuation experts; consumer and investor protection advocates; and investors in distressed debt markets. Enhancing coordination among the various stakeholders, for example, by establishing a committee or working group, can help the authorities develop coordinated strategies for NPL resolution as well as obtain buy-in and inject impetus into the chosen approach. Bringing together the key stakeholders also facilitates the development and application of policies to overcome potential stumbling blocks. For example, this approach was successfully applied at the national level in a number of jurisdictions in Eastern Europe that were burdened with major NPL problems following the global financial crisis.[64] Domestic coordination can also be complemented by strengthened international coordination in cases where there is heavy foreign bank participation, as was the case, for example, with the Vienna Initiative following the global financial crisis (Bauze et al. 2020).

Asset management companies. In cases of major system-wide NPLs, authorities may consider the respective arguments for setting up a public asset management company (AMC)[65] to take on the responsibility for the resolution. AMCs typically form part of a broader package of reforms to support financial stability and the continued provision of credit. The broad aim is to generate momentum and focus for the solution as well as to maximize NPL recoveries by concentrating specialist resources and expertise. AMCs have been used both to work out and to liquidate assets from failed financial institutions (e.g., the Resolution Trust Company in the United States and Securum in Sweden), as well as to work out assets purchased from open banks that continue to operate (e.g., the Korean Asset Management Company (KAMCO), Danaharta in Malaysia, and, more recently, SAREB (Spain) and NAMA (Ireland)). Some EMDEs, such as Vietnam (in 2013) and Angola (in 2016), have more recently set up AMCs to help address NPL problems. AMCs do not provide a silver bullet, however.[66] Historical experience has revealed weaknesses that have bedeviled the operation of many AMCs: poor governance, including unclear objectives, combined with extensive political interference; inflated acquisition prices, which effectively provide public subsidies to sellers of distressed debt, rendering it impossible for the AMC to generate a return and create contingent fiscal liabilities; and difficulties attracting high-quality staff.[67]

Bank resolution frameworks. Some banks may have insufficient capital to absorb a major spike in NPLs or may fail to meet minimum regulatory standards. In some such cases, banks may be able to develop a viable medium-term capital restoration plan that gains supervisory approval, enabling implementation under strict supervisory oversight. But where this is not feasible, the authorities should have the capability to place the bank into a tailored bank resolution process that provides the authority with the necessary powers and tools to undertake an orderly resolution that preserves financial stability while minimizing any need for taxpayer support.[68] Following the lessons from the global financial crisis and other financial crises that corporate insolvency frameworks are ill-suited to handle bank failures, considerable progress has been made toward developing and implementing special resolution regimes for banks, drawing on the key attributes of such schemes as that developed by the Financial Stability Board (2014). Further progress remains crucial, nonetheless, as surveys by the International Association of Depositors show that, in relation to low-income countries, only about half of the reporting sample currently have instruments other than liquidation available within their toolkit (Dobler, Moretti, and Piris Chavarri 2020). Moreover, progress in implementing the key attributes remains uneven among the larger EMDEs that are members of the Financial Stability Board—no EMDE reported full compliance as of September 2020.[69] Strengthening the toolkit and requiring major banks to develop recovery plans and provide the necessary information to underpin workable resolution plans[70] are important preparatory steps to managing potential bank failure.

64. Bauze et al. (2020) highlight the experience of Albania and Serbia.
65. The assumption in this subsection is that the AMC is fully or largely publicly owned. Private asset management companies are also present in some countries.
66. Cerutti and Neyens (2016) review the experience of nine public AMCs, highlighting their strengths and weaknesses. Overall, the nine cases show a mixed track record. The authors note some challenges, for example, in the operation of the AMC (AMCON) in Nigeria relating to mission creep, transparency, and governance. Drawing on the lessons from these nine case studies, Cerutti and Neyens put forward a toolkit for AMC operation.
67. Based on this evidence, Dobler, Moretti, and Piris Chavarri (2020) set out seven design features or preconditions necessary to operate an AMC successfully: (i) mandate; (ii) governance; (iii) independence; (iv) sunset clause; (v) valuation of assets; (vi) transparency and accountability; and (vii) funding.
68. Such tools include powers to undertake a partial transfer of assets and liabilities to another bank (often known as "Purchase and Assumption" or "P and A"); use of a bridge bank; powers to "bail in" loss-absorbing liabilities (writing down and converting loss-absorbing liabilities of the bank in resolution into equity); and liquidation of all or part of a bank's book. All are subject to safeguards such as preservation of the hierarchy of creditor claims and a provision that no creditor will be worse off from deploying the tools than under the fallback default of liquidation (Financial Stability Board 2014).
69. See Annex 1 of the FSB Resolution Report for 2020 (Financial Stability Board 2020b).
70. Recovery and resolution plans should be informed by regular resolvability assessments that evaluate the feasibility of resolution strategies and their credibility in light of the likely impact of the firm's failure on the financial system and the overall economy.

V. Conclusions and Policy Recommendations

The risk is high that a major surge in corporate debt problems will follow the pandemic, given the record levels of corporate leverage in many countries and the magnitude and depth of the adverse shock. Although payment moratoria and government support mechanisms have successfully blunted the impact and helped prevent unnecessary economic scarring, it is prudent policy to strengthen preparations for managing a sharp rise in corporate distress should it occur. Historical evidence shows significant incentives for banks to underestimate deteriorating asset quality, thus stalling necessary corrective actions. History also reveals that such delays can be very costly, as bad loans typically become worse over time if not addressed. Moreover, weaknesses in legal and supervisory frameworks can also hamper the effectiveness of the response to burgeoning NPL problems, which in turn distorts credit allocation and dampens economic growth.

Against this background, the following policy recommendations are suggested to prepare for the potential financial shock from rising corporate NPLs. As countries prepare plans for an orderly withdrawal of government support measures and ending payment moratoria, they are encouraged to implement the following:[71]

- **Undertake detailed reviews of the respective policy frameworks and their practical application that impact the resolution of NPLs, identifying and remedying deficiencies**. Such reviews will also facilitate the development of a coordinated and holistic national approach to the resolution of NPLs, given the strong interactions and interconnections between them. Specific actions may include the following:
  - **Supervisors**. Review and, where necessary as a result, take immediate steps to strengthen the supervision of problem-asset classification and provisioning, drawing on Basel Core Principle 18 as a best-practice guide.[72] In particular, ensure that banks uphold rigorous standards of asset classification, undertake detailed assessments of payment capacity and borrower viability, and create accurate and prudent provisions.
  - **Banks**. Develop strategies and policies for managing a sharp rise in NPLs; set up adequately staffed and resourced dedicated workout units; and enhance analytical and information systems. Supervisors should actively engage with banks in the near term to review their operational readiness and to require speedy remedial action to address any deficiencies found.
  - **Legal framework**. Review the effectiveness of the framework and implement improvements, for example, by developing and strengthening out-of-court processes to handle bulk claims quickly and efficiently, increasing judicial capacity through training, and removing any legal impediments that hamper the development of markets for distressed debt. Review and, where necessary, enhance the information infrastructure underpinning the legal framework, in particular, the registration of credit, businesses, and collateral (especially land and real estate). Actions to strengthen the legal framework are likely to take time to implement—authorities are encouraged to initiate a rapid time-limited review to inform and underpin an implementation plan with clear priorities and deadlines that recognizes the importance of quick wins.
  - **Early intervention and bank resolution**. Review the policy framework for bank resolution against the Financial Stability Board's key attributes and take action to address any shortfalls in tools and procedures. Again, some actions may require changes in regulations or laws that may take time—as for the legal framework, initiating a speedy review and developing a clear action plan to strengthen the resolution framework offers a good way forward. An immediate step is to encourage active recovery and resolution planning for major banks. Where recovery and resolution plans are not currently available, authorities can promote the development of recovery plans by major banks under the oversight of supervisors and resolution authorities and develop resolution plans. Once initial plans have been prepared, a process of regular resolvability assessments will enable authorities to assess the feasibility and credibility of the recovery and resolution plans.

71. Although such measures have been very helpful, they are also costly and distort market functioning. In addition, fiscal pressures are high in many countries, with the authorities facing difficult balancing acts and trade-offs on (i) whether to continue temporary support to firms that are viable but face a severe liquidity squeeze, and (ii) the timing, and process, of exit (Kongsamut, Monaghan, and Riedweg 2021). In many countries, support policies are becoming narrower and more targeted as a precursor to full withdrawal.
72. A self-assessment by the supervisory agency against the performance criteria for Basel Core Principle 18 may be a helpful first step if no recent external assessment is available.

> **Coordination in the resolution of NPLs**. While respecting the independence of different stakeholders, authorities are encouraged to develop a coordinated, holistic approach to avoid potential policy conflicts and to provide momentum to solve the problem, as well as to actively monitor and review progress and follow up where needed. National authorities are best placed to develop the coordination structure—one possibility is that the national financial stability authority could take charge of putting the coordination framework together; if there are potential fiscal implications, another option is for the finance ministry to take on this function.

- **Take action quickly and decisively to reinforce the enabling framework where deficiencies are found, as well as to ensure that the NPL problem is actively managed and not allowed to fester**. Building on the specific components above, consider the case for developing and implementing a national strategy for reducing and resolving NPLs to clean up bank balance sheets and thus promote efficient credit allocation to support sustainable economic growth. Such a strategy can provide a helpful spur to the necessary policy and management actions.

Swift action to implement these recommendations and strengthen the policy framework to address potential failure has broader benefits beyond the current conjunction of high corporate debt and severe adverse shock from the pandemic. Such frameworks can be used to address future periods of financial stress. Importantly, they also help market functioning in normal times. The knowledge that there is an effective failure mechanism that can and will be used reinforces market discipline and reduces adverse incentives. Preparations for failure can thus be an important ingredient of the recipe for success.

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Addressing Insolvency Risk Through Corporate Debt Restructuring Frameworks

I. Introduction

Corporate debt restructuring tools are key for dealing with a significant debt overhang in firms. As emphasized in Chapter 1, nonfinancial corporate debt in EMDEs has been accumulating since the global financial crisis—from 56 percent of GDP in 2008 to 103.5 percent of GDP in 2020Q4. Chapter 1 also highlights how, when firms become overleveraged, they face financial stress and may be forced into inefficient decision-making. This debt overhang may lead them to forgo value-enhancing projects (Myers 1977) and engage in risk-shifting behavior (Jensen and Meckling 1976). In addition, overindebted businesses may be unable to obtain additional financing or to refinance existing credit facilities. Ultimately, such firms face a lower ability to service debt, face higher risks of default and insolvency, and could potentially become nonviable. Informal and formal CDR tools—as part of the larger insolvency toolkit—are key mechanisms to help address the debt burden and mitigate wasteful resource allocation typically associated with financial distress.

Despite the importance of corporate debt restructuring, systematized evidence is scarce concerning the existence and features of CDR frameworks at a global level. The evidence in this chapter addresses this gap and demonstrates the need to implement these restructuring mechanisms. Specifically, the chapter shows that informal tools for restructuring are lacking in 67 percent of the economies studied, while more formal tools—both hybrid and formal—tend to be more prevalent. Moreover, this chapter describes the low uptake of special restructuring procedures—hybrid or formal—geared toward MSMEs (existing in 10 percent of the economies in the sample). In addition, it shows that separate-entry systems (i.e., insolvency systems with separate, parallel procedures for reorganization or liquidation) are associated with a mean creditor recovery rate that is 36 percent higher than that of single-entry systems (i.e., insolvency systems with a single, common entry point that may develop into either a reorganization or liquidation). Finally, where banks regularly use informal restructuring tools, economies tend to have higher levels of access to credit, and banks' use of the tools is positively related to the existence of guidelines or a framework agreement for out-of-court workouts.

The effectiveness of CDR frameworks is largely dependent on the broader enabling environment and the suitability of the selected tools and their effective implementation. Practical experience from a number of countries around the globe, in both crisis and noncrisis contexts, provides critical lessons learned in developing CDR frameworks. These include understanding that a robust restructuring culture, incentives (for both the creditor and debtor), and removal of regulatory impediments are critical for successful restructurings. Informal out-of-court tools might need to be enhanced by regulatory support, particularly in crisis situations, or complemented with hybrid tools involving both out-of-court negotiation and a degree of court supervision. Effective implementation support includes the need for a local champion, stakeholder access to robust information, and confidential treatment of negotiations to avoid exacerbating a debtor's distress.

In addition to this introduction, this chapter contains four main sections. Section II reviews the unique features and benefits of each tool and its place in resolving corporate distress. Sections III and IV present a novel dataset created from a survey of insolvency professionals from 114 economies that provides descriptive and exploratory analysis to help better understand the tools available to address financial distress and debt overhang at a global level. Finally, Section V sets out some key lessons learned from putting these frameworks into practice; these lessons are offered with the goal of enhancing reform effectiveness and assisting policy makers in preserving viable firms in their economies.

II. The Purpose of CDR Frameworks

A. Benefits of Effective CDR Frameworks

CDR frameworks can take many different forms. Generally, the restructuring of an enterprise means a financial restructuring (adjusting the liabilities of the enterprise in a fundamental way, also referred to as a debt restructuring or balance sheet restructuring) and/or an operational restructuring (a significant adjustment to the assets or operations of the enterprise, also referred to as a turnaround). Corporate debt restructuring can refer to either the procedure or its outcome. For the purposes of this chapter, it is interpreted broadly to include all of these aspects.

CDR frameworks are an integral part of the overarching insolvency and creditor/debtor regulatory systems. Inclusive insolvency and creditor/debtor rights systems comprise the following elements: (i) a credit information system; (ii) a framework for secured lending and debt enforcement; (iii) a framework for informal corporate workouts; (iv) commercial insolvency laws; and (v) implementing institutions. These elements all work in synergy with each other. Legal and regulatory frameworks providing for adequate credit reporting systems and the protection of secured lending help countries reduce information asymmetries and help address legal uncertainties that increase risk to lenders and limit the supply of finance to the corporate sector. At the same time, effective corporate workout and insolvency regimes deal with the insolvency risks of distressed debtors by saving viable businesses, maximizing collective recovery for creditors, and ensuring that nonviable businesses quickly exit the market, allowing the deployment of assets to more productive uses. Supporting this legal and regulatory environment are transparent, independent, and predictable institutions, which are needed for effective implementation of the legal frameworks and oversight of stakeholders.

Empirical evidence shows that effective CDR frameworks are associated with many economic benefits, including better access to credit, job preservation, and the promotion of entrepreneurship. These benefits help ameliorate the insolvency risks of distressed debtors by saving viable businesses and maximizing collective recovery for creditors. Effective CDR environments prevent value destruction by averting unnecessary liquidations and asset fire sales. This, in turn, reduces the failure rates for businesses and preserves jobs while at the same time improving creditor recovery. Empirical studies show that insolvency regimes that include effective judicial reorganization and out-of-court restructuring processes are associated with lower cost of credit, increased availability of credit, improved creditor recovery, job preservation through reorganization and business rescue, promotion of entrepreneurship, and other economic benefits (Menezes 2014). For example, the 2005 bankruptcy law reform in Brazil aimed at striking a greater balance between reorganization and liquidation and introduced a new out-of-court reorganization system for prepackaged restructuring plans (Araujo, Ferreira, and Funchal 2012). After the reform, a statistically significant increase in the Brazilian private credit market was noted, with a 10 to 17 percent increase in total debt and a 23 to 74 percent increase in long-term lending (Araujo, Ferreira, and Funchal 2012). Another study quantified the benefits and costs of corporate debt restructuring by looking at the example of the Republic of Korea (Chung and Ratnovski 2016). It concluded that corporate debt restructurings "pay off" with faster GDP growth due to increased corporate investment and the creation of more jobs (Chung and Ratnovski 2016). On the other hand, higher barriers to restructuring have been found to be associated with "zombie congestion" in high

turnover industries, and with a misallocation of capital and lower productivity (McGowan, Andrews, and Millot 2017; see also Andrews and Petroulakis 2019).

A functional CDR framework is important for financial sector stability. As part of the larger insolvency and creditor/debtor rights framework (World Bank 2021), CDR tools can help mitigate the rise in NPLs and resolve existing NPLs, thereby strengthening overall financial sector stability and limiting credit misallocation (Menezes et al. 2021). As was learned from the global financial crisis, and as described in Chapter 1, they are integral to any effective NPL resolution strategy (Menezes and Gropper 2021; Menezes et al. 2021). An analysis of NPL data from the European Union (EU) member states for the period 2007–2012 shows that well-designed pre-insolvency restructuring tools helped stabilize NPL levels in the aftermath of economic shocks (Menezes et al. 2021, citing Carcea et al. 2015). By reducing the risks of debt overhang in the nonfinancial corporate sector, maximizing the value of recoveries by creditors, and helping avoid unnecessary liquidations of viable firms, CDR frameworks play an important role in lessening the impact of economic shocks and are necessary for a well-performing financial sector and financial stability (Leroy and Grandolini 2016).

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BOX 3.1 The World Bank Principles for Effective Insolvency and Creditor/Debtor Regimes (ICR Principles)

The World Bank ICR Principles, together with the recommendations from the UNCITRAL Legislative Guide on Insolvency, represent the international consensus on best practices for evaluating and strengthening national insolvency and creditor rights regimes.

Following the Asian Financial Crisis in the late 1990s, the Financial Stability Board mandated that the World Bank Group and the United Nations Commission on International Trade Law (UNCITRAL) identify and develop internationally recognized best practices for assessing effective insolvency and creditor rights systems. In response, in 1999, the World Bank Group organized the Insolvency & Creditor/Debtor Regimes Task Force (ICR Task Force), which informs the World Bank Group's role as a joint standard-setter.

The ICR Principles were first published in 2001. These principles have been periodically revised and updated to reflect evolving best practices and new or emerging areas of insolvency of concern to the World Bank Group's member nations. The principles, together with the recommendations from the UNCITRAL Legislative Guide on Insolvency,[73] are now internationally recognized benchmarks for insolvency and creditor/debtor regimes.[74]

Both the principles and the Legislative Guide recognize the importance of CDR frameworks within the insolvency and creditor/debtor rights systems. As stated in the World Bank Principles, "The rescue of business preserves jobs, provides creditors with a greater return based on higher going concern values of the enterprise, potentially produces a return for owners, and obtains for the country the fruits of the rehabilitated enterprise" (World Bank 2021). The World Bank Principles and the Legislative Guide establish best-practice benchmarks to help countries design modern business rescue procedures, including formal (judicial reorganization) and informal (workouts).[75]

73. The UNCITRAL Legislative Guide on Insolvency is available at https://uncitral.un.org/en/texts/insolvency/legislativeguides/insolvency_law.
74. Financial Stability Board, https://www.fsb.org/2011/01/cos_051201/.
75. See World Bank Principles for Effective Insolvency and Creditor/Debtor Regimes, Part B, "Risk Management and Corporate Workouts, Principles B3 to B5" and Part C, "Legal Framework for Insolvency"; and UNCITRAL Legislative Guide on Insolvency, Part One, Chapter II.B, "Voluntary Restructuring Negotiations," and Part Two, "Core Provisions for an Effective and Efficient Insolvency Law."

B. Different CDR Frameworks Address Different Levels of Corporate Distress

There is a wide range of CDR processes that differ in design and degree of formality. Country experience shows that there is no "one-size-fits-all" approach when it comes to CDR. Well-developed CDR frameworks offer a "toolbox" of procedures that can be used to address differing needs of business debtors, including for different levels of corporate financial distress for either noninsolvent or insolvent debtors. Accordingly, as shown in Table 3.1, CDR processes cover a spectrum of procedures. They vary in levels of formality from informal, out-of-court workouts, to enhanced workouts with the involvement of an administrative authority, to hybrid and preventative hybrid workouts with some court involvement, to formal traditional reorganization procedures.[76]

The various approaches to CDR should be understood in the context of countries' specific legal, institutional, and commercial environments at the time of their adoption. Noteworthy changes to corporate legal regimes have taken place worldwide over the past several decades. Below is a brief overview of the different CDR frameworks as they have emerged and matured in several jurisdictions.

1. Out-of-Court Workouts and Enhanced Workouts

A new, out-of-court workout and voluntary approach to CDR (known as "the London Approach") was developed by the Bank of England during the recession of the 1970s. Before the adoption of the administration procedure in the United Kingdom, a new CDR tool emerged outside the formal insolvency system. A voluntary, collective approach to CDR was developed by the Bank of England during the recession of the 1970s to "help [the] financial community preserve value" (Kent 1993). The London Approach, adopted in the London corporate banking market (Kent 1993), has served as a model of informal banking-sector coordinated workouts in other jurisdictions. The London Approach, as described in the 2022 World Bank Toolkit for Corporate Workouts, comprises a set of nonbinding general principles and guidelines on how banks and other creditors should collectively respond to news that a company to which they are exposed faces serious financial problems.

> > >

TABLE 3.1 **Spectrum of Insolvency and Corporate Debt Restructuring Processes**

CDR processes

Level of formality

Workouts				Formal insolvency procedures	
Out-of-court workouts (OCW) A privately negotiated restructuring between the debtor and all or some of its creditors	**Enhanced workout** A workout with the involvement of an administrative authority but with no provision for a court to play a role	**Hybrid workout** A procedure that involves private negotiation of a restructuring agreement and provides for a court role short of supervision of the full procedure	**Preventative hybrid workout** Hybrid procedure aimed at restructuring, while under court protection, of a debtor's business that is in financial distress but not yet in a technical state of insolvency	**Judicial reorganization** A court-supervised restructuring process aimed at restoring the financial well-being and viability of a debtor's business	**Liquidation** A court-supervised process by which assets are sold and disposed of for distribution to creditors, in accordance with a ranking of claims established by law
E.g., the London Approach; INSOL Principles	*E.g., Republic of Korea's Corporate Restructuring Agreement; Thailand's CDRAC; Istanbul Approach*	*E.g., US Chapter 11 prepackaged bankruptcies; French conciliation*	*E.g., Germany's pre-insolvency scheme ("StaRUG"); French safeguard procedure*	*E.g., France's judicial reorganization; US Chapter 11 reorganization; UK administration*	*E.g., UK liquidation; Republic of Korea's bankruptcy proceeding*
Level of distress: financial difficulty or imminent insolvency				**Level of distress: imminent or actual insolvency**	**Level of distress: actual insolvency**

Source: World Bank Insolvency & Debt Resolution Team.

76. The World Bank's (2022) A Toolkit for Corporate Workouts includes a detailed description of different forms of restructuring procedures and their benefits and addresses practical considerations relevant to workouts.

Variations of the London Approach were implemented in countries affected by the Asian Financial Crisis of 1997 and the global financial crisis of 2007–2008. During this period, a new generation of informal CDR frameworks emerged, adapting the London Approach. Where necessary, they were often enhanced with intercreditor agreements, including binding elements, such as a mechanism under which agreements reached among a majority of financial institutions could be imposed on dissenting financial institutions and the use of formal arbitration to resolve disputes, as well as penalties for failure to meet deadlines. Some of the examples include the Republic of Korea's Financial Institutions' Agreement for Promotion of Company Restructuring of 1998; Thailand's CDRAC Framework of 1999; and Turkey's "Istanbul Approach" in the early 2000s (see Table 3.1).

2. Hybrid and Preventative Hybrid Workouts

Hybrid and preventative hybrid workouts effectively complement informal workouts and formal insolvency procedures. Prepackaged, prearranged, and preventive restructuring procedures all fall within the spectrum of workouts, although with variable levels of formality (see Table 3.1). Compared to formal restructuring procedures, less formal or hybrid workouts are often characterized by less stringent access requirements (no need to meet the insolvency test) and minimal or reduced procedural formalities, including limited reliance on court systems or administrative authorities. The UNCITRAL Legislative Guide describes informal and hybrid workouts as a "means of introducing flexibility into an insolvency regime" that reduce the burden on courts, encourage early action by debtors and creditors, and reduce the stigma associated with the publicity of the formal procedures.[77] Since the adoption of the US prepackaged and prearranged bankruptcy procedures (in the context of the Chapter 11 reorganization procedure), the rise of hybrid restructuring procedures[78] globally has erased the dividing line between the judicial (formal) reorganizations and out-of-court restructurings. Variations of hybrid processes have been adopted in Colombia, France, the Netherlands, Peru, Singapore, the United Kingdom, and other countries.[79]

Recently, the European Union placed the focus on preventive restructuring procedures following the guidance of the 2014 Recommendation by the European Commission[80] and the 2019 Restructuring and Second Chance Directive.[81] The procedures prescribed by the directive can be considered "formal procedures aimed at restructuring viable enterprises that are not in a technical state of insolvency, with a stay on creditor action from initiation of the procedure (if requested by the debtor, and subject to limitations) but a limited role for the court" (Menezes et al. 2022).

3. Formal Reorganization

Corporate reorganization procedures have their roots in the nineteenth-century United States, when the first major restructurings of railroads engaged in interstate commerce were attempted. (For more information, see, for example, Lubben 2004 or Craven and Fuller 1936.) Equity receiverships that involved adjustments to railroad companies' financial structures were commonplace at that time, although their effectiveness was questionable (Lubben 2004). In 1933, during the Great Depression, the value of business rescue procedures was formally recognized by incorporating more orderly, court-supervised business restructuring procedures into the US Bankruptcy Act of 1898.[82] Business rehabilitation became the key feature of US bankruptcy legislation and laid the groundwork for the Chapter 11 reorganization procedures as we know them today.

In the United Kingdom, a significant transformation toward rehabilitative procedures took place in the 1980s. In 1982, a review committee on insolvency law and practice published a report referred to as the "Cork Report" (Finch 2009). The report proposed groundbreaking reforms to the UK insolvency regulation, including the introduction of business reorganization procedures and the concept of an administrator with the role of managing companies' affairs during the initial grace period (Finch 2009). The recommendations of the Cork Report were transposed into UK legislation four years later with the passage of the Insolvency Act of 1986 (Finch 2009). Unlike the US Chapter 11 reorganization procedure, in which a corporate debtor usually retains control over the operations of its business (the "debtor-in-possession"), in the United Kingdom, a licensed insolvency practitioner usually takes over the management of the debtor company's business.

77. The UNCITRAL Legislative Guide on Insolvency is available at https://uncitral.un.org/en/texts/insolvency/legislativeguides/insolvency_law; see pages 21–22.
78. As defined in Table 3.1, "hybrid" broadly refers to any CDR procedure that involves private negotiation of a restructuring agreement and provides for a court role short of supervision of the full procedure.
79. For more detailed descriptions of these examples, see Menezes et al. 2022.
80. European Commission, "Commission Recommendation of 12.3.2014 on a New Approach to Business Failure and Insolvency," (EU) 2004/1500; available at http://ec.europa.eu/justice/civil/files/c_2014_1500_en.pdf.
81. Directive (EU) 2019/1023 of June 20, 2019, on preventive restructuring frameworks, discharge of debt and disqualifications, and measures to increase the efficiency of procedures concerning restructuring, insolvency, and discharge of debt, and amending Directive (EU) 2017/1132; available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32019L1023. In addition, Article 3(1) of the directive requires member states to "ensure that debtors have access to one or more clear and transparent early warning tools which can detect circumstances that could give rise to a likelihood of insolvency and can signal to them the need to act without delay."
82. US Bankruptcy Act, section 77, 47 Stat. 1474 (1933), as amended, 11 U. S. C. section 205.

> > >

BOX 3.2 CDR Frameworks for Micro and Small Enterprises (MSEs)

Financially distressed MSEs face specific challenges in accessing formal and informal restructuring procedures. In many parts of the world, easy-to-access, flexible, fast restructuring procedures are unavailable to MSEs, whereas formal reorganization procedures are prohibitive due to their complexity and cost (see, e.g., McGowan and Andrews 2018). MSEs, the majority of which are sole proprietorships and single-employee businesses, face many other specific challenges that hinder their restructuring prospects. These include the inability to detect financial distress at an early stage, social stigma, information gaps due to the informality of MSEs, and lack of access to post-filing and post-commencement financing (Martinez and Uttamchandani 2017).

Specific restructuring procedures are needed to deal with MSE financial distress. Recognizing the magnitude of the challenges faced by MSEs, in 2021, the World Bank Principles were updated to include specific principles for the insolvency of micro- and small-sized enterprises, in addition to the principles aimed at both small businesses and large corporate debtors.[83] Principle C18 (Key Objectives and Policies) states that effective insolvency systems for micro- and small-sized enterprises should aim to lower the barriers to access and encourage early use of out-of-court restructuring procedures, hybrid procedures, and in-court simplified insolvency proceedings (World Bank 2021, Principle C18). Principles B4.1 (Informal Workout Procedures) and D5.4 (MSEs Simplified Proceedings) further promote the use of mediation, conciliation, and other alternative dispute resolution techniques when dealing with MSEs' financial distress or insolvency (World Bank 2021, Principles B4.1 and D5.4). In practice, the use of alternative dispute resolution tools to support negotiations between debtors and creditors has been growing.[84] The EU Directive on Insolvency and Second Chance also promotes adoption at the national level of small-business-specific, low-cost, and low-complexity debt restructuring procedures and early warning tools to enable debtors to act early.[85]

83. In World Bank Principles for Effective Insolvency and Creditor/Debtor Regimes (2021), see especially, Principle C18 (Key Objectives and Policies); Principle C19 (Simplified Insolvency Proceedings); Principle C20 (Discharge); Principle D1.6 (Small and Micro Enterprises Insolvency Proceedings); and Principle D5.4 (Simplified Proceedings).
84. For more information on the use of alternative dispute resolution in pre-insolvency and insolvency situations, see Pavlova and Shah 2017.
85. European Commission (2019), EU Directive on Preventive Restructuring Frameworks and Second Chance; available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019L1023.

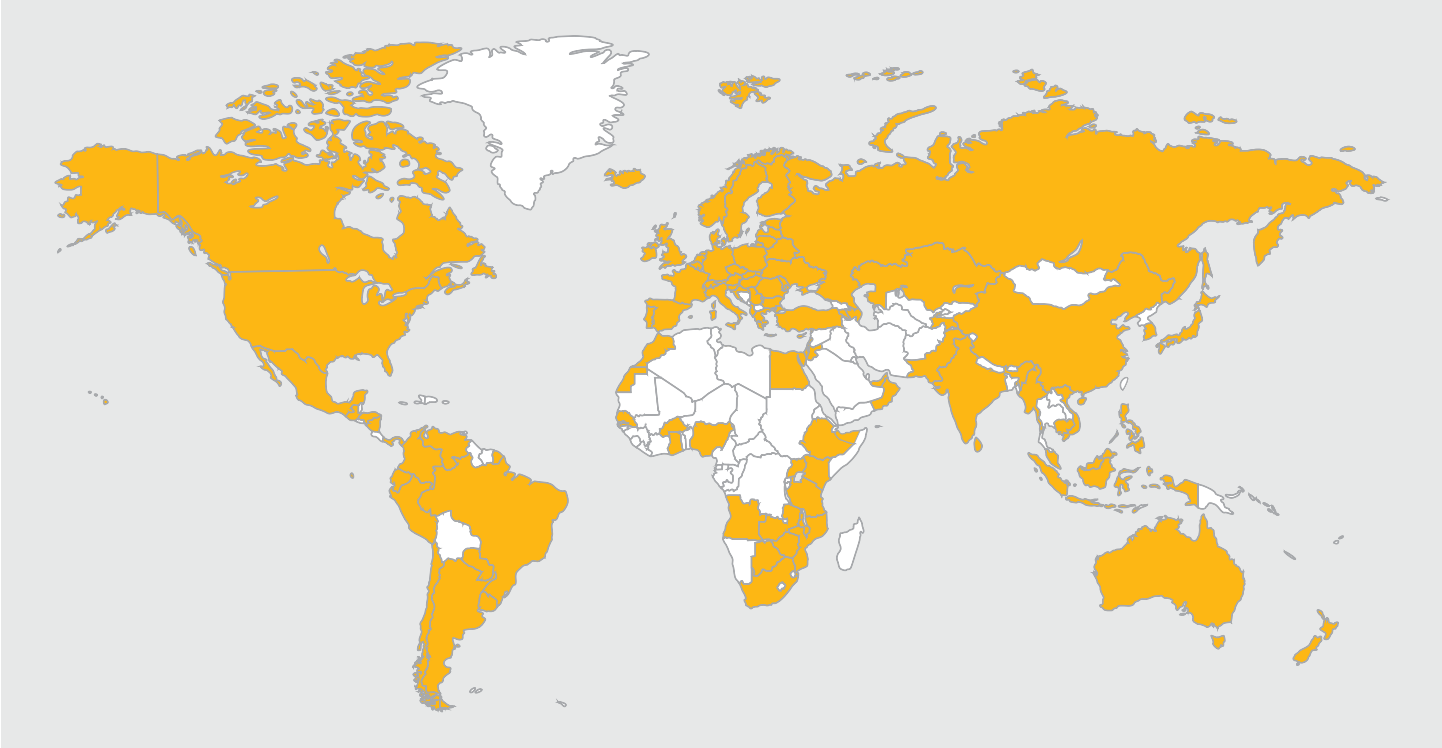
III. An Empirical Description of Legal Frameworks for CDR

A survey was designed to better understand the availability and characteristics of CDR frameworks globally. As discussed above, CDR frameworks are important to a well-functioning economy, especially during times of crisis, such as the current pandemic. Yet, CDR systems vary widely from country to country (and sometimes within a country). To further understand the tools available to firms in distress in different jurisdictions, as well as their main features, a survey of CDR tools was designed, primarily examining what is provided in a jurisdiction's laws and regulations. The survey was conducted during March and April 2021 and focused on the following three types of restructuring mechanism: (i) out-of-court workouts, including enhanced ones; (ii) restructuring procedural tools for noninsolvent debtors, such as the hybrid tools described above; and (iii) formal reorganizations.[86]

The World Bank worked with INSOL International[87] and the International Association of Insolvency Regulators (IAIR)[88] to distribute the survey to experienced insolvency professionals around the world, who were asked to provide answers for their countries. Contributors from 135 economies were contacted,[89] with at least three independent contributors contacted in a hundred jurisdictions. Responses were obtained from 114 economies,[90] including multiple responses in 71 percent of those economies (see Figure 3.1).[91] When multiple responses were provided for a single jurisdiction and discrepancies were found, direct communication clarified the matters of contention. The analysis that follows is based on the answers provided in the survey.[92]

> > >

FIGURE 3.1 **Jurisdictions Covered by the Survey (in yellow)**



Source: World Bank-INSOL-IAIR CDR Survey.

86. See the annex below for definitions of the terms as used in the survey.
87. INSOL International is a worldwide federation of national associations of accountants and lawyers who specialize in turnaround and insolvency, with over 10,500 members around the world. For more information, see https://www.insol.org/.
88. The International Association of Insolvency Regulators (IAIR) is an international body of government insolvency regulators from jurisdictions around the world. For more information, see https://www.insolvencyreg.org/.
89. The experienced insolvency professionals were identified through their membership in INSOL International or IAIR or through their prior experience collaborating in insolvency-related World Bank Group projects.
90. For a full list of the jurisdictions from which contributions were received, see Annex 3A.
91. In all but one jurisdiction, a private sector insolvency professional submitted a response.
92. The authors have not independently verified the contributors' answers.

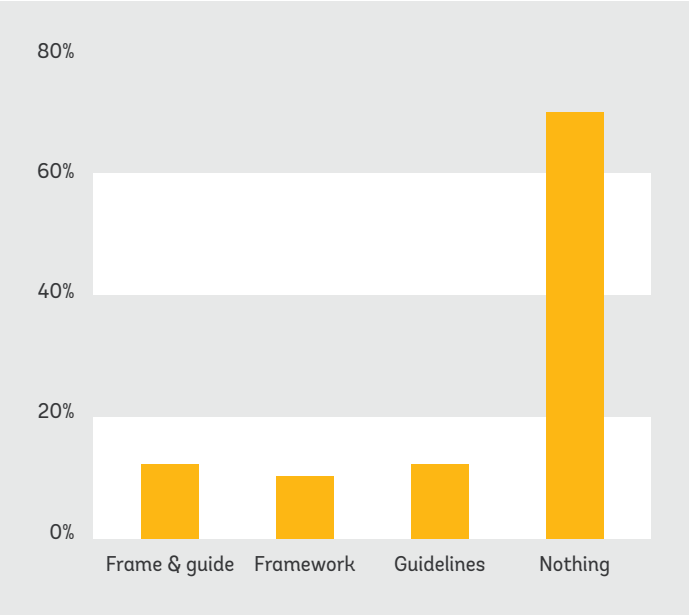
While the survey's coverage is wide in terms of GDP and population, more responses tended to come from economies with more robust insolvency systems. The CDR mechanisms described below are from economies that represent over 84 percent of global GDP and 86 percent of the global population.[93] In terms of existing evaluations of the insolvency systems of these jurisdictions, the sample in this study includes 87 percent of the economies with an outcome of "going concern"—that is, not liquidated piecemeal—in the resolving insolvency indicator of the Doing Business Report 2020.[94] The average recovery rate of the economies included in this study (46.4 cents on a dollar) is close to twice that of the economies that were left out (24.7 cents on a dollar).[95] These facts suggest that economies from which reports were not returned may have weaker CDR mechanisms in place.

A. Out-of-Court Workouts and Enhanced CDR Frameworks

The survey shows that out-of-court workouts remain relatively uncommon. For the purposes of this study, out-of-court workouts were defined as private agreements with limited or no judicial involvement between a debtor and creditors, with the aim of easing the debtor's debt burden so that it can maintain its operations. The existence of an out-of-court workout framework agreement,[96] indicative of enhanced workouts and/or out-of-court workout guidelines such as the London Approach, is reported in only 33 percent of the economies in our sample (see Figure 3.2). Of those jurisdictions, 77 percent report having banks that participate regularly in out-of-court workouts. Banks are reported to also regularly participate in out-of-court workouts in a few jurisdictions (see Figure 3.3).[97] In these cases, sophisticated banking sectors with "repeat players" (e.g., in Canada or the United States) or experience from previous crises (e.g., in Argentina or Iceland) may suffice to develop an informal out-of-court workout practice. Tax authorities also often participate as company creditors in many countries. While their role can be important to restructuring efforts, tax authorities are reported to regularly participate in out-of-court workouts in only 12 percent of the economies in this study's sample, a result most likely affected by government preferences and legal or regulatory restrictions.[98]

> > >

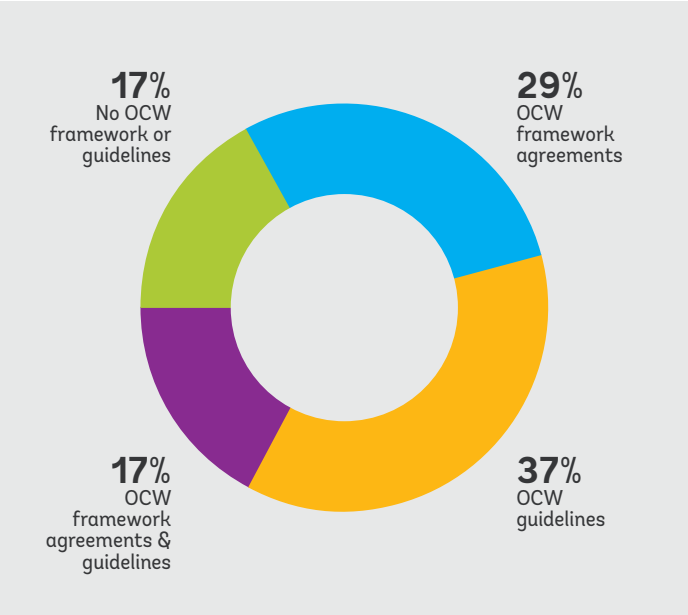
FIGURE 3.2 **Out-of-Court Workout Framework Agreements and Guidelines Around the World**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

> > >

FIGURE 3.3 **Economies Where Banks Reportedly Participate Regularly in Out-of-Court Workouts**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

93. The sample contains information on 21 percent of low-income economies, 44 percent of lower-middle-income economies, 52 percent of upper-middle-income economies, and 83 percent of high-income economies.
94. See https://www.doingbusiness.org/en/doingbusiness.
95. These figures also come from the Doing Business Report 2020.
96. By an OCW framework agreement, we mean an agreement between participating creditors seeking to establish the terms governing collective out-of-court restructurings with a set of debtors.
97. Of the economies where no out-of-court workout framework agreement or guidelines exists, only 33 percent report regular bank participation in multi-creditor out-of-court workouts.
98. Contributors' responses show that in only a quarter of the jurisdictions in our sample does the legal and/or regulatory framework allow tax authorities to participate in out-of-court workouts where a haircut of the principal owed to them is permitted.

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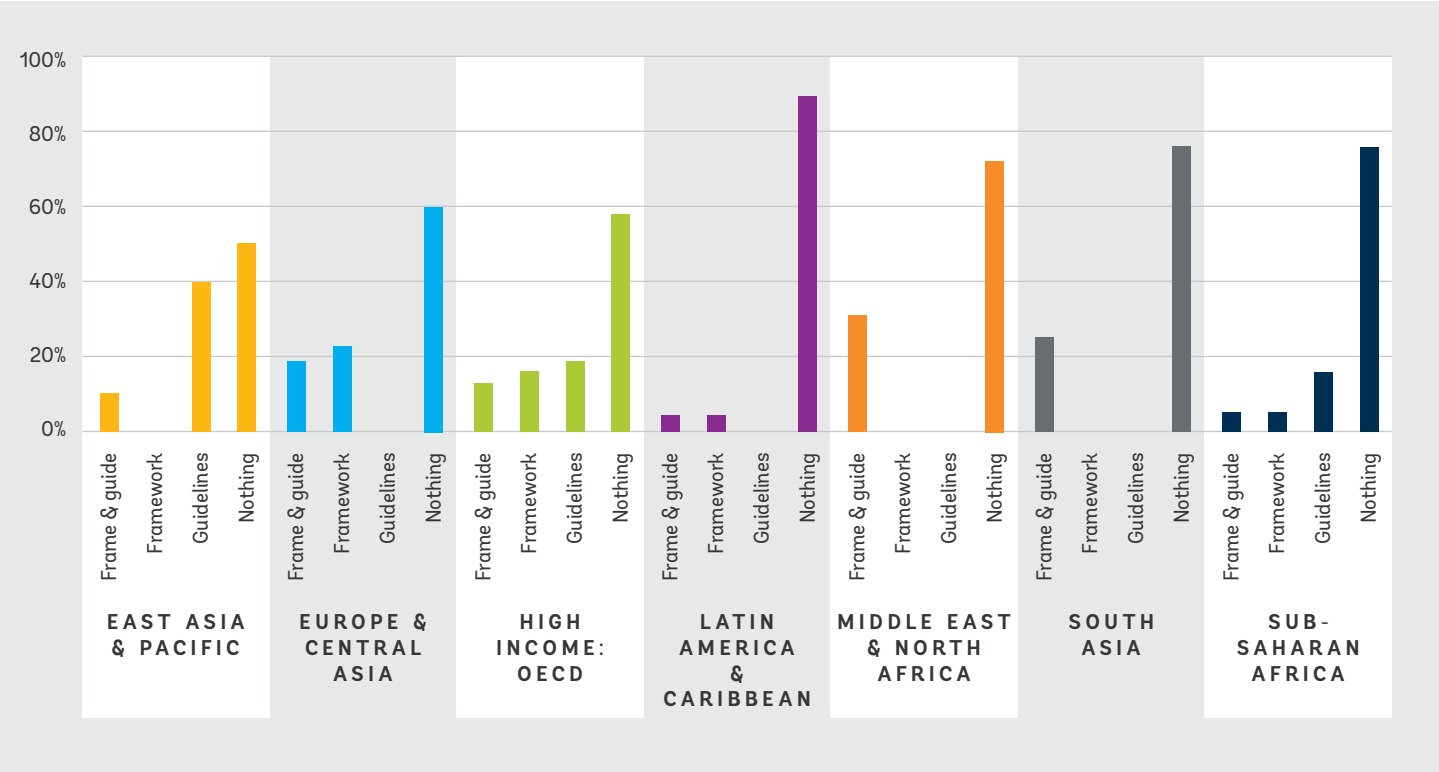
FIGURE 3.4 **Out-of-Court Workout Framework Agreements and Guidelines by Region**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

Out-of-court workout framework agreements and out-of-court workout guidelines are distributed across all regions (Figure 3.4). Out-of-court workout guidelines tend to be relatively more prominent in the East Asia and Pacific region, perhaps given their development during the Asian Financial Crisis, while they tend to appear together with out-of-court workout framework agreements in the Middle East and North Africa and South Asia regions (though the sample size is relatively small for the latter regions).[99] Latin America and the Caribbean appears to be the region where out-of-court workout infrastructure is least common, as over 80 percent of the economies in this study's sample are reported to lack guidelines or framework agreements.

Out-of-court workout framework agreements provide potential participants with further certainty of what to expect if they engage in a multi-party workout. As such, it is not uncommon for banks in developing countries to see these types of frameworks as a necessary condition before they can evaluate participating in any specific multi-creditor workout. While out-of-court workouts are often focused on large debtors, only 4 percent of out-of-court workout framework agreements reported on appear to preclude the participation of small- and medium-sized enterprise debtors. Nonbank creditors, in turn, were precluded from participating in 17 percent of the jurisdictions in this study.

The most commonly reported feature of out-of-court workout framework agreements (Figure 3.5) is the possibility to bind dissenting creditors (83 percent of the economies in this study). Other common features of the out-of-court workout framework agreement are the availability of a mandatory standstill (63 percent) and the support provided by a government office, such as the central bank or the Ministry of Finance (58 percent). The feature reported to be included in the fewest cases was the appointment of a lead creditor (35 percent). These figures suggest that there is justified emphasis on providing tools to address potential holdout problems, though the tools to facilitate obtaining out-of-court workout agreements differ importantly.

99. The sample size of economies in South Asia is four, while in the Middle East and North Africa it is seven. The next lowest sample size is from East Asia and Pacific, with 10 economies. The sample in the rest of the regions consists of at least 18 economies.

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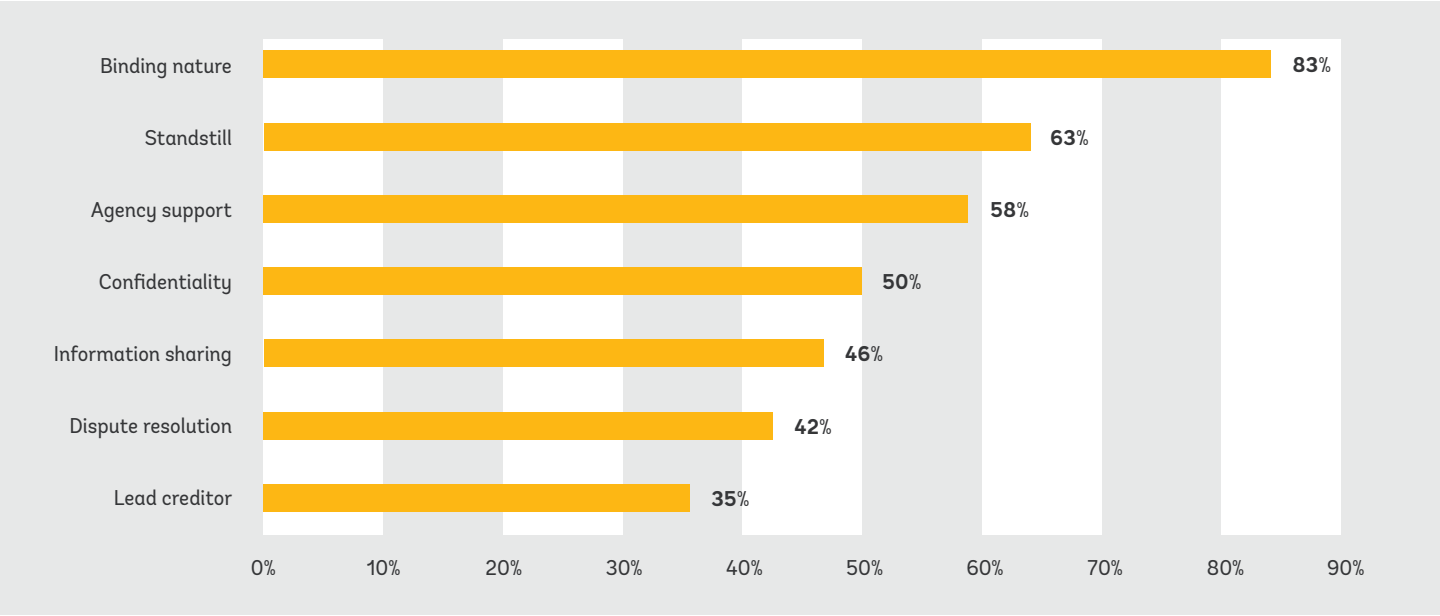
FIGURE 3.5 **Relative Frequency of Features in Out-of-Court Workout Framework Agreements**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

Informal means of restructuring often run into difficult hurdles. Even where out-of-court workout framework agreements are in place, breakdowns in negotiations can occur for a myriad of reasons. Empirical evidence suggests that the probability of completing out-of-court workouts can be lower when the proportions of intangible assets and secured debt are smaller.[100] Further, out-of-court workouts tend to be less prevalent when debtors have more distinct classes of debt outstanding and a smaller proportion of bank debt relative to long-term debt.[101] In these situations, other means of restructuring, either hybrid or even fully formal ones, can be helpful. The next subsection deals with hybrid restructuring procedures available for noninsolvent corporate debtors.[102]

B. Hybrid and Preventative Hybrid Procedures Addressing Noninsolvent Debtors

To analyze the CDR options accessible to noninsolvent debtors, contributors were asked about two mechanisms: prepackaged restructurings and preventive restructurings (otherwise known as hybrid and preventative hybrid workouts). As these tools differ from jurisdiction to jurisdiction, the former was defined as a procedure that allows for court ratification of a plan agreed on by a debtor and its creditors prior to the initiation of formal proceedings.[103] The latter was defined as a type of pre-insolvency procedure that affords a debtor with protection while negotiating with its creditors on an agreeable path forward to avoid insolvency. Taken together, procedures for noninsolvent corporate debtors are more prevalent than out-of-court workout framework agreements or guidelines. Indeed, 65 percent of the jurisdictions in this study's sample are reported to have at least one of these procedures, with about 15 percent having both in their insolvency regimes (Figure 3.6).[104]

100. See Gilson, Kose, and Lang (1990) and Asquith, Gertner, and Scharfstein (1994). This evidence is consistent with greater value depreciation in firms having more intangible assets.
101. Gilson, Kose, and Lang (1990); Asquith, Gertner, and Scharfstein (1994). In those situations, conflicts of interest among creditors would tend to be less manageable, and the main creditors (banks) would have less and worse information. Potential holdout problems would also tend to be larger.
102. For the purposes of this study, insolvency refers to a situation in which a debtor is generally unable to pay its debts as they mature and/or where its liabilities exceed the value of its assets. See also World Bank 2021.
103. Prepacks were developed as a way to bind dissenting creditors that could not be bound out of court.
104. Specifically, contributors were asked if there was a special provision, section, or title in the bankruptcy legislation containing any of these procedures.

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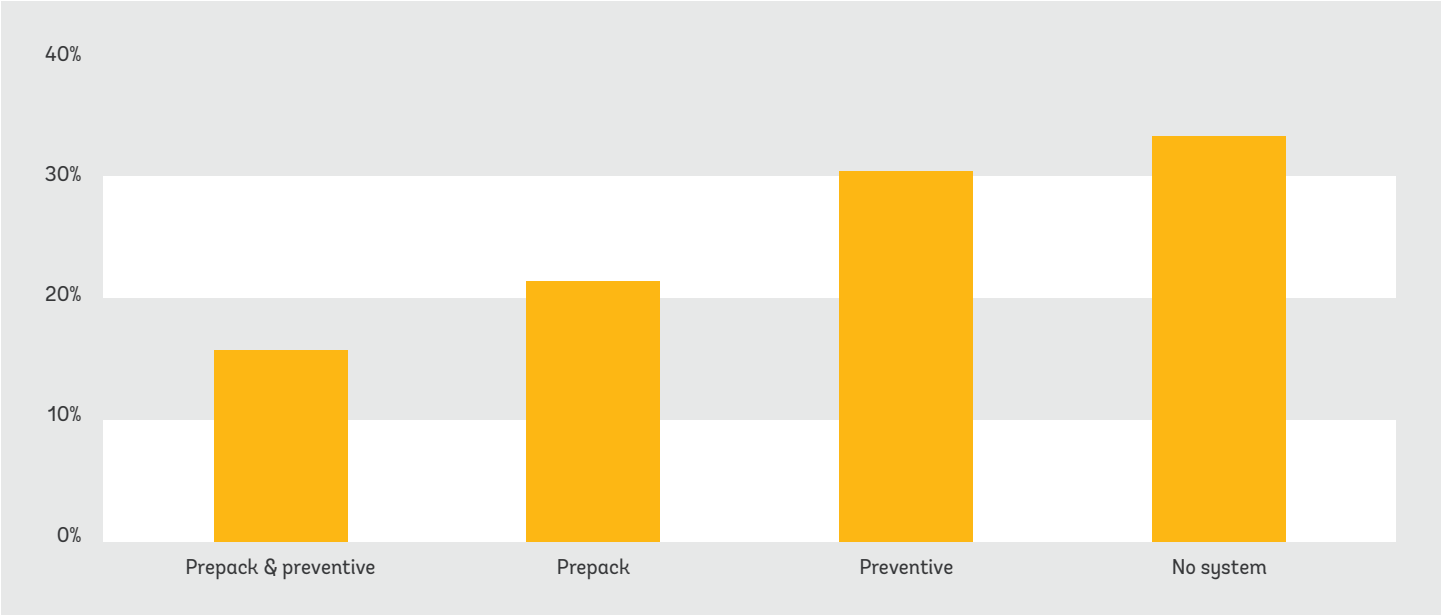
FIGURE 3.6 **Procedures for Noninsolvent Corporate Debtors**

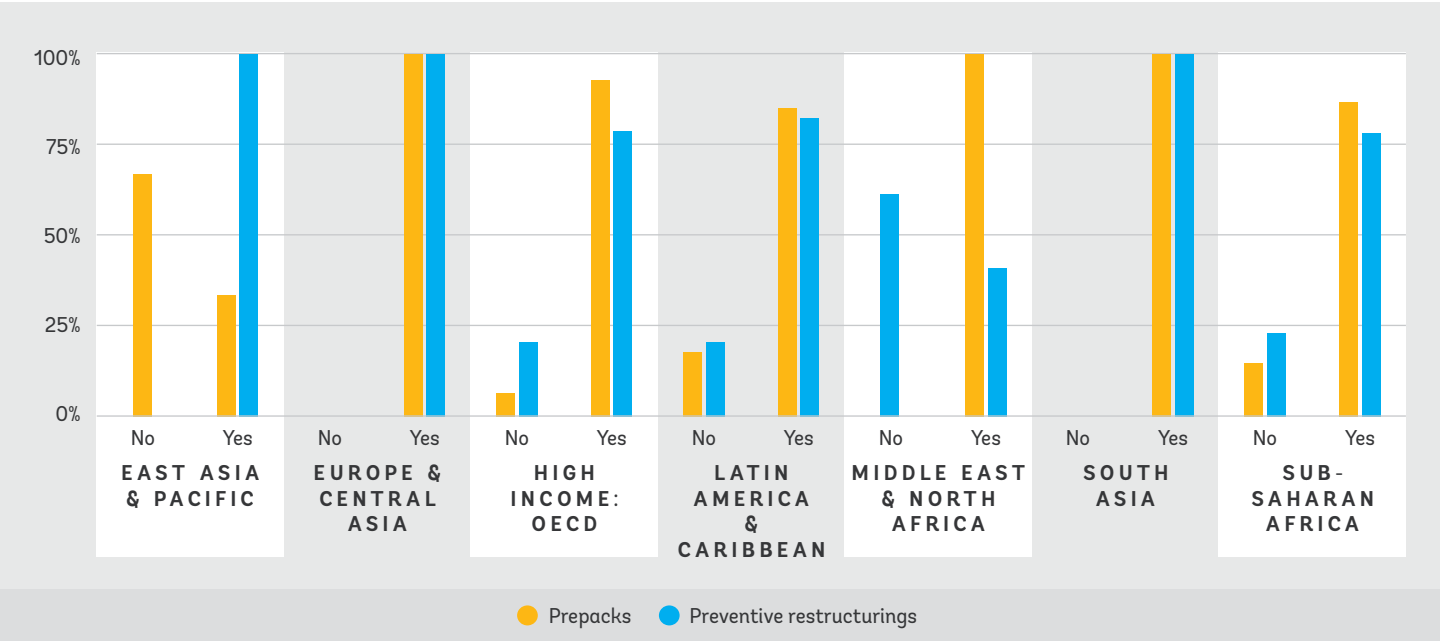


Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

CDR mechanisms must address the specific needs arising from the underlying business and financial environment. While in many countries cash flow-based finance can be an option, asset-based finance is the prevalent form of financing available in most countries. Even when cash flow finance is available, different forms of security are often used to facilitate operational and financial transactions. Given the ubiquity of collateral-based financing, contributors were asked if secured creditors are allowed to vote in the procedures for noninsolvent debtors without previously renouncing their collateral.[105] Focusing on the economies that have these procedures, Figure 3.7 shows, by region, a high rate of positive responses to this question in both prepackaged (86 percent) and preventive restructuring procedures (77 percent).

> > >

FIGURE 3.7 **Secured Creditor Participation in Prepacks (in yellow) and Preventive Restructurings (in blue) Across Regions**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.
Note: Economies without a prepack or preventive restructuring procedure appear as Not Applicable.

105. Such an option may allow for flexibility in reaching different types of agreements with a firm's creditors, and it may pave the way for finding workable solutions to financial distress problems.

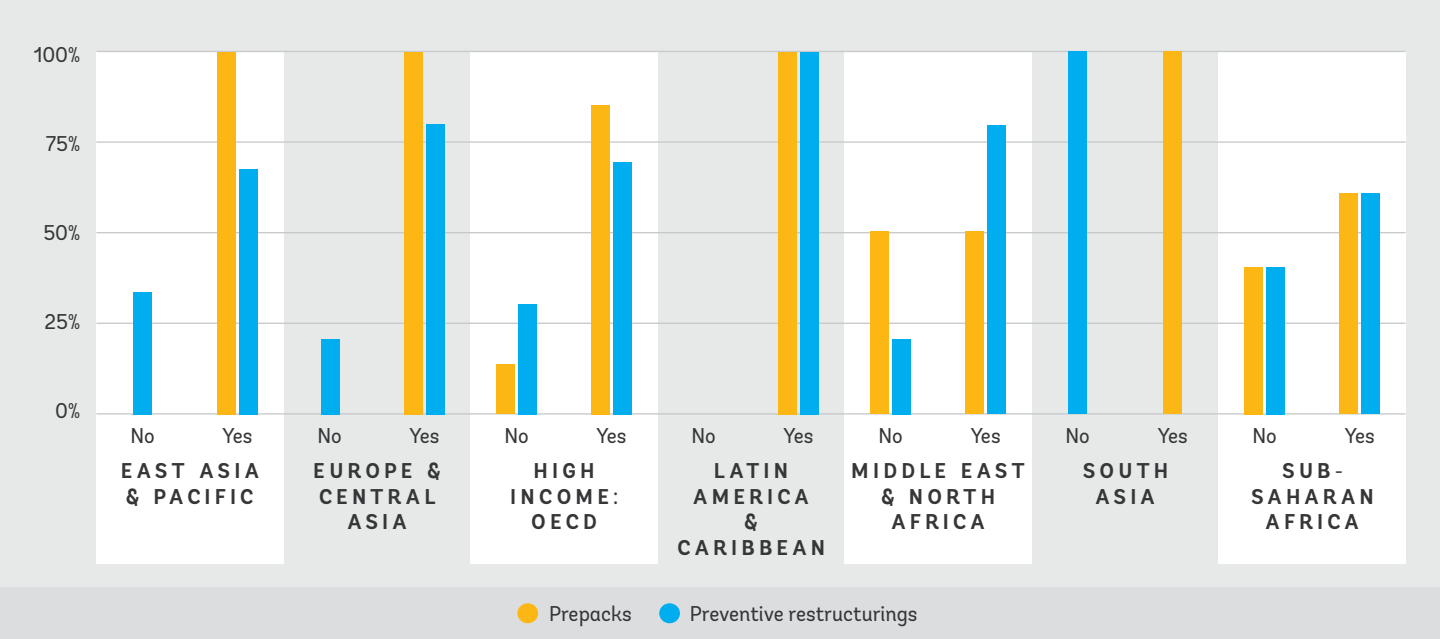
While room is often made to incorporate secured creditors within these hybrid procedures, the availability of special procedures for noninsolvent MSME debtors appears to be a bit of a rarity. Indeed, only in 11 percent of cases do contributors report the availability of a separate section containing an MSME prepackaged procedure. In turn, a separate section containing an MSME preventive restructuring procedure is reported in only 2 percent of the economies in this study's sample.

For those jurisdictions where CDR procedures for noninsolvent debtors exist, entry into the system can be a contested matter. Contributors report that in about three-quarters of the economies where prepackaged or preventive restructuring procedures are in place, a filing by a debtor triggers a procedure to verify that substantive commencement standards—not merely formal requirements—have been met (see Figure 3.8).[106] These preliminary procedures implicitly raise the barriers to entry.[107]

In terms of the frequency of the feature, prepacks and preventive restructuring show similarities (Figure 3.9). The most common feature included in prepackaged and preventive restructuring procedures is reported to be allowing the debtor to remain in control of the business (i.e., debtor-in-possession) while undergoing the proceeding (89 and 79 percent, respectively). Requiring a minimum payoff to unsecured creditors as a requirement for a plan to be approved/ratified was the least reported feature (14 and 10 percent, respectively). The low frequency of this feature implicitly raises flexibility in the agreements to be reached.[108]

> > >

FIGURE 3.8 **Substantive Review to Initiate Prepacks (in yellow) and Preventive Restructuring (in blue) Procedures by Region**

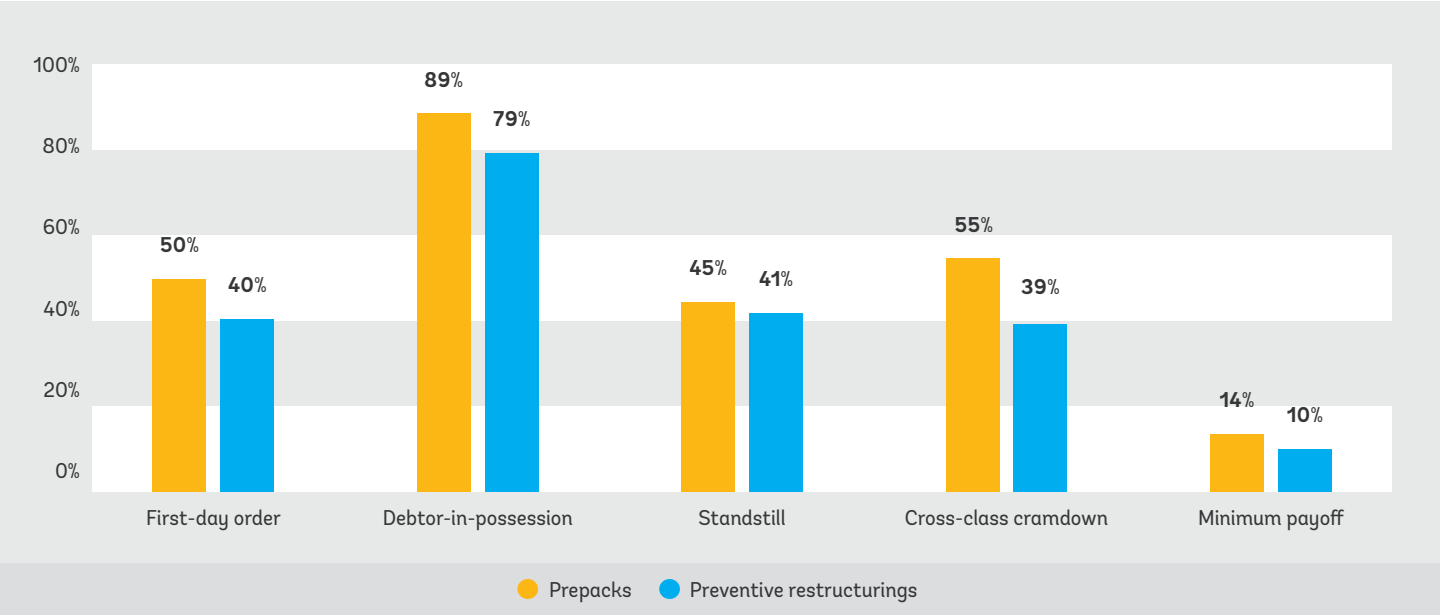


Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.
Note: Economies without a prepack or preventive restructuring procedure appear as Not Applicable.

106. Formal commencement requirements refer to the set of affidavits and other documents required to initiate a case, for instance, a balance sheet and other financial statements of the debtor or a list of known creditors. Substantive commencement standards refer to the legal tests that must be met for a debtor to be eligible for a given procedure, for instance, that the debtor is not insolvent.
107. The figures are 83 percent in the case of prepacks and 72 percent in the case of preventive restructurings.
108. The other features included in the graph are first-day orders (defined as court orders requested immediately after filing to facilitate the management of the case as well as the operations of the debtor), a standstill of actions and executions against the debtor on a prepack or preventive restructuring filing, and cross-class cramdown (the imposition of a restructuring plan on dissenting creditors despite the dissent of a class of creditors).

> > >

FIGURE 3.9 **Features in Prepacks and Preventive Restructuring Procedures**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

C. Formal Reorganization Mechanisms

The central role formal reorganization procedures play has led most jurisdictions in each region to incorporate them in their insolvency systems (Figure 3.10). Nevertheless, contributors report that 11 percent of the jurisdictions in this study's sample lack formal reorganization procedures.[109] Some of the economies lacking formal reorganization procedures are at an early stage in the development of their insolvency systems. Others have various reasons for the absence of such procedures. Greece, for instance, recently repealed its formal reorganization procedure in favor of a procedure referred to as a prepack rehabilitation.[110]

Formal reorganization procedures vary significantly from jurisdiction to jurisdiction, with one important difference arising in terms of structure. So-called unitary systems provide a unique initiation mechanism to a procedure that later may become a reorganization or a liquidation. Separate-entry systems, in turn, provide for separate reorganization and liquidation procedures. In this study's sample, 72 percent of the jurisdictions are said to have separate-entry systems. Jurisdictions also differ in terms of procedural specialization in formal reorganization. Separate procedures geared toward the formal reorganization of MSME debtors, in turn, are available in only 10 percent of the economies in this study's sample. While the survey did not enquire into the quality of such MSME reorganization procedures—that is, whether they are compliant with international standards—it highlights the ample opportunity for reform in this area, especially for those economies lacking specialized procedures.[111]

Variation in procedural features is also common in formal reorganization. To complement information already available from other sources,[112] contributors were asked about management and plan approval features in formal reorganization (Figure 3.11). The results show a similar pattern to that observed for procedures addressing noninsolvent debtors. Indeed, debtor-in-possession is the most common feature in formal reorganization procedures, though it is less prominent (66 percent). Requiring a minimum payoff to unsecured creditors as a requirement for a plan to be approved/ratified was the least reported feature (18 percent), allowing for flexibility in the agreements to be reached.

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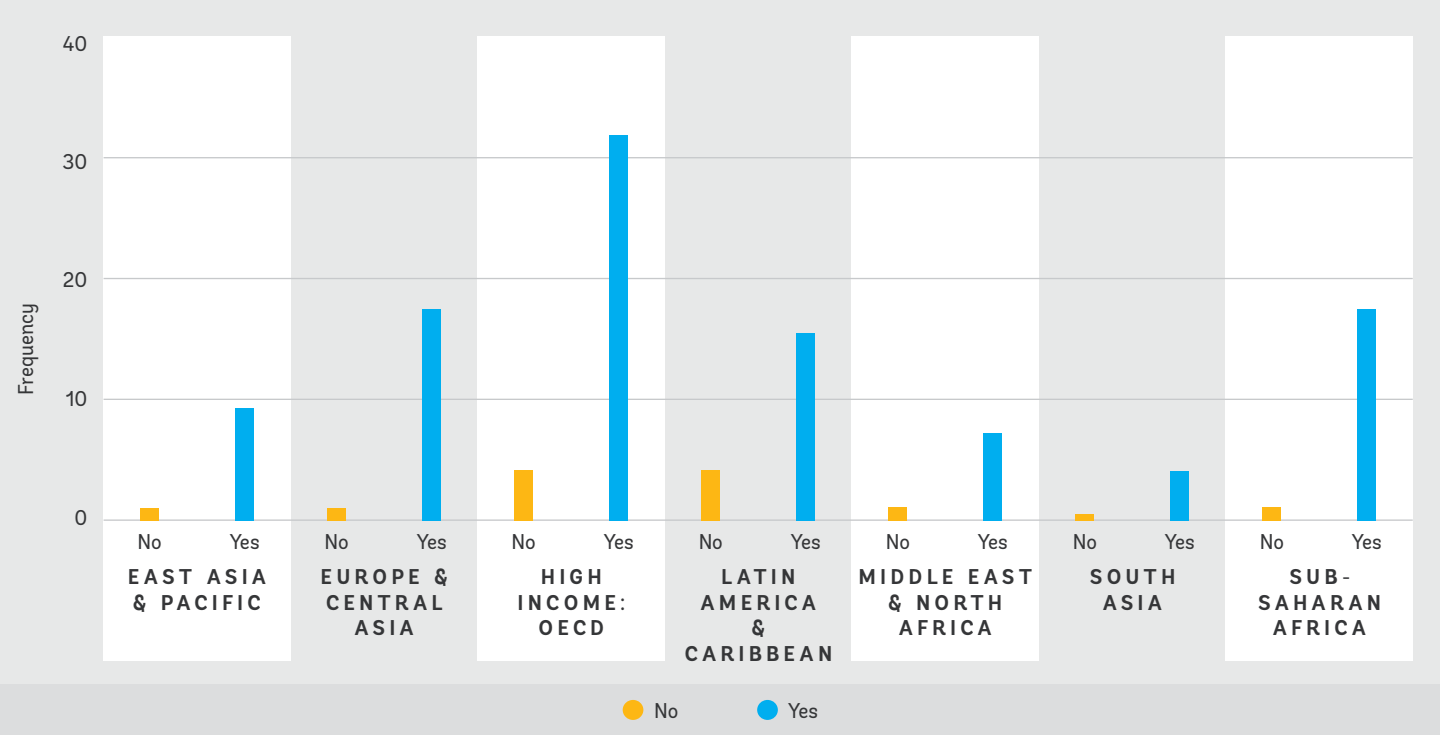
FIGURE 3.10 **Availability of Formal Reorganization Procedures**

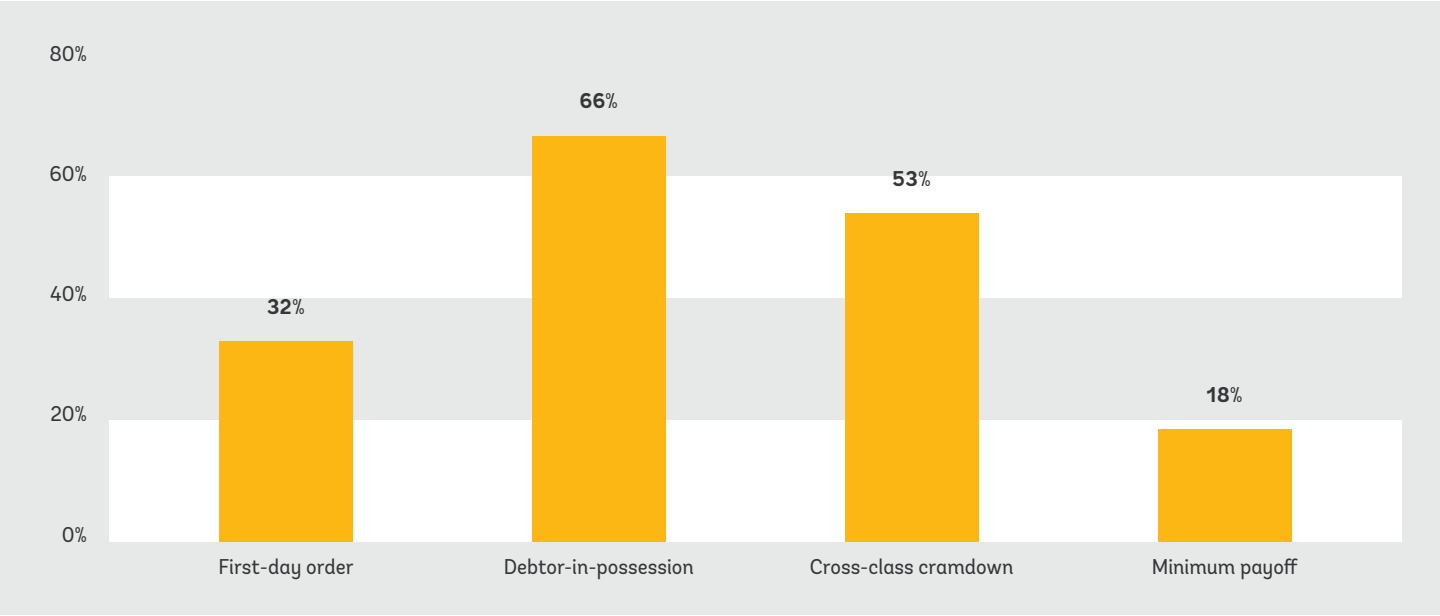


Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

109. For the purposes of this report, "reorganization" refers to a process through which the financial well-being and viability of a debtor's business may be restored so that the business can continue to operate, through means that may include debt forgiveness, debt rescheduling, debt-equity conversions, and sale of the business (or parts of it) as a going concern.
110. See Greek Law 4738/2020.
111. Particularly for micro- and small-sized enterprise insolvency, see World Bank 2021, Principles C18 to C20.
112. For instance, the Doing Business Strength of Insolvency Framework reports on the availability of several formal insolvency features for a large sample of economies.

> > >

FIGURE 3.11 **Features in Formal Reorganization Procedures**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

IV. Survey Data and the Role of CDR Frameworks

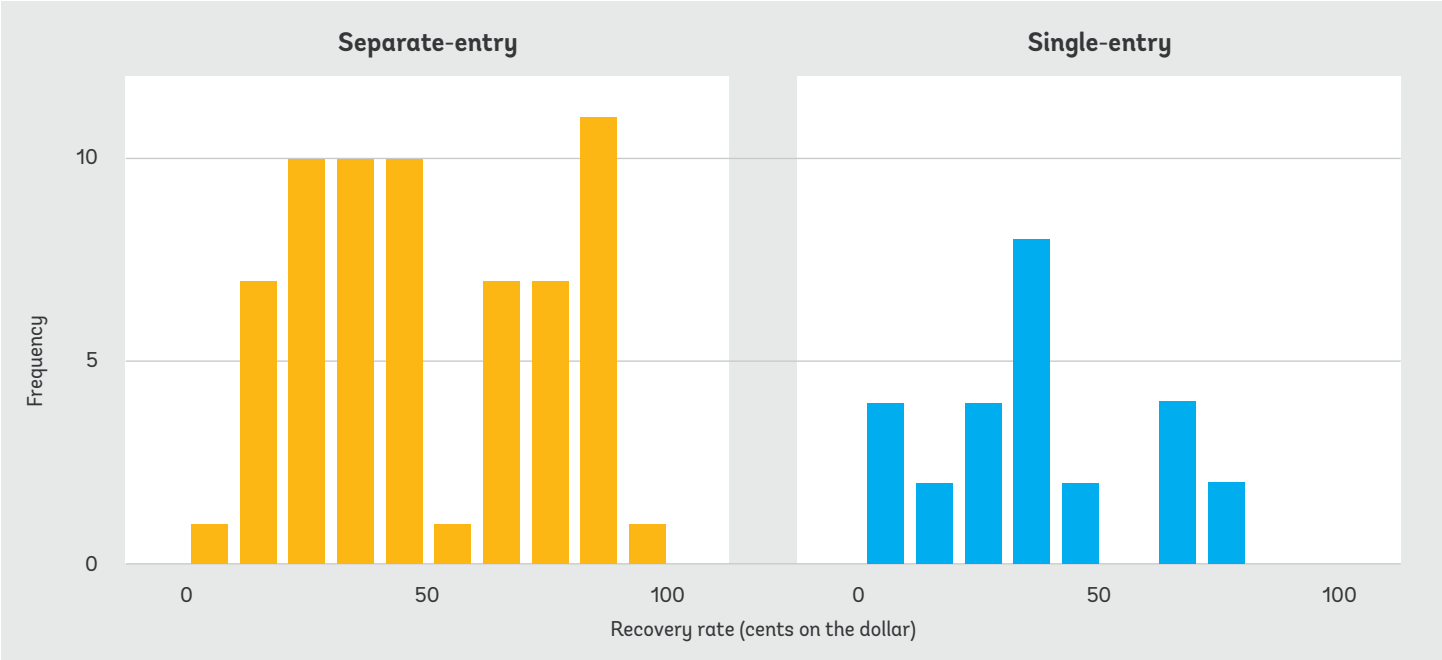
Insolvency systems face the challenge of taking into account diverse stakeholders' interests within a procedure and providing efficient outcomes. Robust systems protect debtors' and creditors' rights and facilitate an efficient resolution of financial distress. As mentioned above, evidence suggests that robust insolvency systems are associated with increased recovery rates, increased access to credit, higher levels of entrepreneurship, and improved resolution of NPLs.[113] Yet in cross-country analysis, the CDR evidence has been largely restricted to the very useful yet limited insolvency measures provided by Doing Business.[114] In this section, the additional procedures and features covered by the newly constructed dataset are used to further explore some of these relationships.

How creditors fare in an insolvency proceeding is a key indicator of the system's performance and its ability to facilitate CDR. The broadest measure of creditors' recovery rates in different countries comes from Doing Business. It assesses how secured creditors fare after a debtor becomes insolvent.[115] Specifically, it measures creditors' ability to recoup their claims through the use of the local legal system—by foreclosure, formal reorganization, or liquidation. We used this measure to explore recovery rates under single- and separate-entry insolvency procedures. Bivariate analysis suggests that separate entry procedures are associated with higher recovery rates (50.6 cents versus 37.1 cents on a dollar, on average). While this difference is noteworthy, Figure 3.12 shows important variations in recovery rate distributions by type of procedure, with separate-entry distribution appearing to be bimodal. Future multivariate analysis may provide insight on this issue.

113. See, among others, Menezes 2014 and Menezes and Muro 2020.
114. Doing Business provides the most comprehensive information at a global scale and has been repeatedly used in comparative insolvency empirical studies (Consolo, Malfa, and Pierluigi 2018; McGowan and Andrews 2018; Fu, Wennberg, and Falkenhall 2020; among others). While it has proven fruitful, this data—by design—is limited to insolvent debtors and asks about the procedures most likely to be used in such situations, as well as about some of the features of the formal insolvency system. As such, important elements relevant to assessing the breadth and robustness of a CDR framework—such as the existence of informal or hybrid restructuring tools—are outside its scope.
115. See https://www.doingbusiness.org/en/methodology/resolving-insolvency.

> > >

FIGURE 3.12 **Recovery Rate by Type of Reorganization Entry System**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

To further explore the relationship between the recovery rate and the strength of the reorganization system, a new variable—strength of formal reorganization—was created. This new variable was constructed by combining insolvency framework answers from Doing Business[116] and reorganization answers from the survey. Specifically, the strength of formal reorganization variable incorporated responses to the survey questions on procedural barriers to entry, management of the case, and reorganization plan requirements and approvals.[117] The new variable was then normalized to take values between 0 and 1, with 0 representing the weakest reorganization system and 1 the strongest. Figure 3.13 shows a positive association of this novel measure with recovery rate (as measured by Doing Business Report 2020)—despite high dispersion—a relationship that is statistically significant at the 0.1 percent level.[118] The results under this expanded measure of good international practices provide further evidence of the positive relationship between robust insolvency frameworks and efficient creditor outcomes. Moreover, they emphasize the ability of robust CDR frameworks to mitigate some of the negative effects of a debt overhang by attenuating creditors' losses.

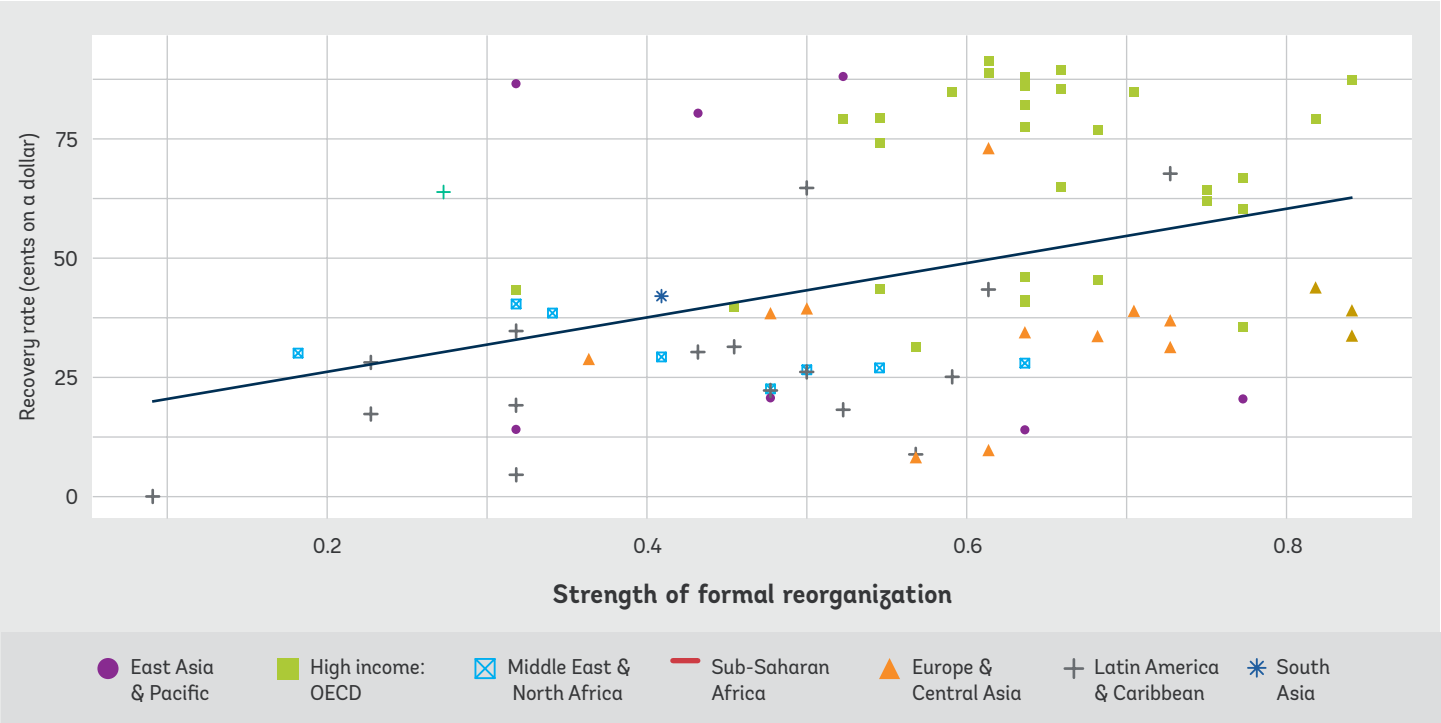
Access to credit suffers when insolvency and creditor rights are weak. Credit constraints can lead to borrower discouragement and, in turn, to large negative effects on investment, employment, and asset growth. (See Ferrando and Mulier 2015; García-Posada Gómez 2019 (though it finds no effect of credit constraint on employment); and Kuntchev et al. 2013.) Robust CDR mechanisms, as a subcomponent of insolvency and creditors' rights, can ease access to credit by improving creditors' prospects in bad scenarios (Armour et al. 2015).

Regular bank use of out-of-court workouts is strongly related to higher levels of access to credit. To further explore the relationship between CDR and access to credit, this section examines the link between banks' regular participation in out-of-court workouts and the share of domestic credit to the private sector (as a percentage of GDP).[119] Figure 3.14 shows that the share of domestic credit to the private sector in economies where banks are reported to participate regularly in out-of-court workouts is substantially larger (median of 72 percent) than in the economies where banks do not (median of 46 percent). This difference is statistically significant at the 1 percent level.

116. Specifically, the score on the strength of insolvency framework from the Doing Business Resolving Insolvency Index was added to the value of the questions on automatic stay and priority in insolvency (taking value 1 if yes and 0 if no) from the Doing Business Getting Credit Index.
117. That is, two questions were added on first-day orders and cross-class cramdown from our survey (taking value 1 if yes and 0 if no), and two questions were added on substantive commencement review after a debtor files for reorganization and on whether there is a minimum amount that needs to be offered to unsecured creditors for a plan to be approved/ratified by the court (taking value 0 if yes and 1 if no).
118. The variables show a moderate correlation: 0.39.
119. This information was obtained from https://data.worldbank.org. For this exercise specifically, we used data from 2019.

> > >

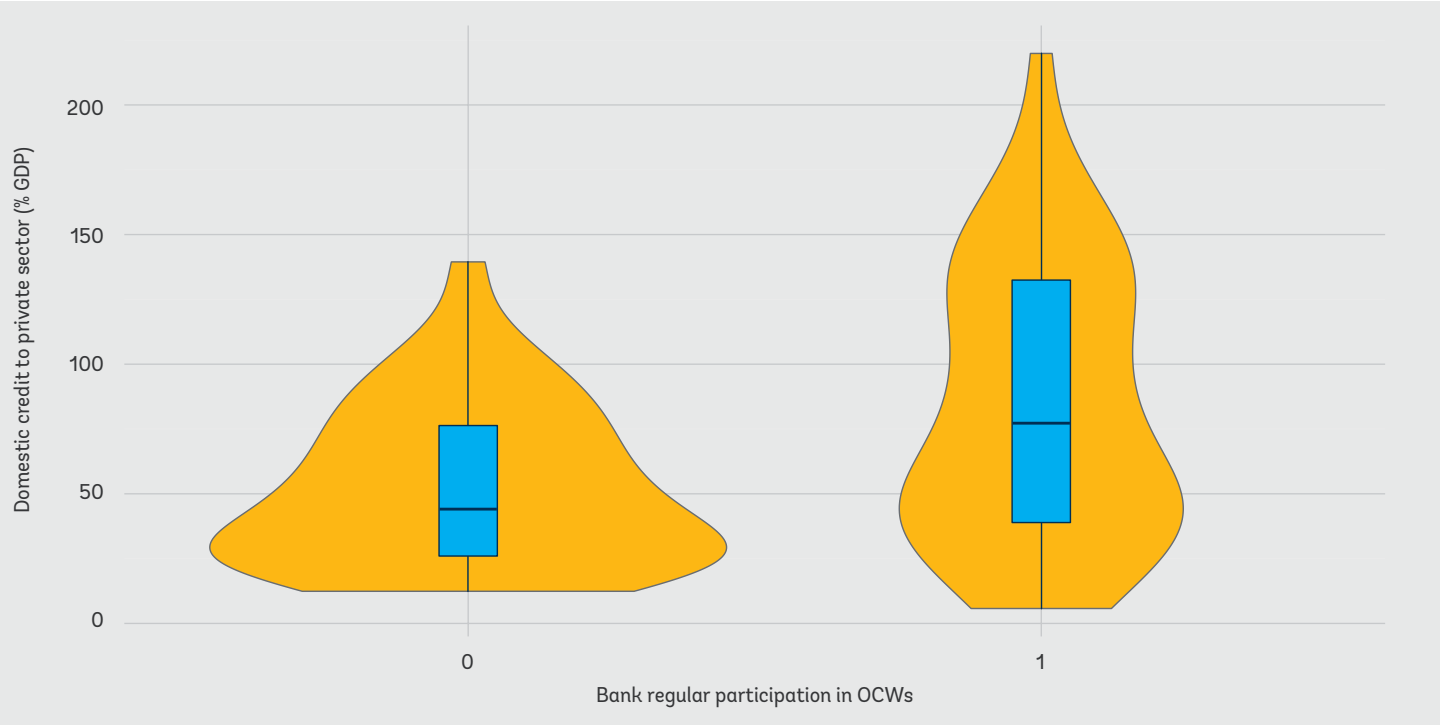
FIGURE 3.13 **Strength of Formal Reorganization and Recovery Rates**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

> > >

FIGURE 3.14 **Distribution of Domestic Credit to Private Sector (as percentage of GDP), by Banks' Regular Participation in Out-of-Court Workouts**



Source: World Bank-INSOL-IAIR CDR Survey; authors' calculations.

Banks' regular use of out-of-court workout agreements is associated with having supportive tools within a given legal system. To understand banks' regular use of out-of-court workouts, binomial (logit) regression models were developed. Table 3.2 shows the results, with banks' regular use of out-of-court workouts as the dependent variable. The existence of either an out-of-court workout framework agreement or guidelines—appearing as OCW frame or guide in the table—is positively associated to banks' regular use of out-of-court workouts, a result that is highly statistically significant in each of the models (p-value < 0.01). The result remains even after controlling for an economy's recovery rate (also positively associated to the regular bank use of out-of-court workouts, p-value < 0.05) or the strength of its formal reorganization system. To investigate the robustness of our results, model 4 repeats model 3, but limits the sample to jurisdictions from which multiple contributions were received, giving the team the opportunity to check for any discrepancies. Again, the main results remain statistically significant (p-value < 0.05).

These novel results emphasize the importance of supporting the development of out-of-court workout agreements with the right institutional tools. Moreover, they point to the value of using flexible means for restructuring, not just under the current pandemic environment but also longer term (World Bank 2017).

These results highlight the importance of developing robust CDR mechanisms and, more broadly, insolvency systems. While the survey's limitations did not offer the opportunity to delve into other important development factors directly related to CDR mechanisms, such as entrepreneurship or the resolution of NPLs, the evidence presented in this section further supports strengthening CDR mechanisms. Policy makers must understand the impact of CDR frameworks as well as the practical considerations in implementing them and preparing for potential challenges. For that reason, the next section sets out some of the key lessons learned in implementing reforms in this area.

> > >

TABLE 3.2 **Banks' Regular Participation in Out-of-Court Workouts**[120]

	Dependent variable:			
	Bank regular OCW use = 1			
	(1)	(2)	(3)	(4)
OCW frame or guide	1.877***	1.642***	1.612***	1.635**
	(0.482)	(0.507)	(0.534)	(0.673)
Recovery rate		0.025***	0.026**	0.037***
		(0.010)	(0.011)	(0.013)
Strength of formal reorganization			0.478	0.340
			(1.628)	(2.231)
Constant	-0.738***	-1.792***	-2.174**	-2.614**
	(0.259)	(0.524)	(0.938)	(1.332)
Observations	101	95	83	60
Log likelihood	-61.083	-54.250	-46.906	-31.961
Akaike inf. crit.	126.167	114.500	101.812	71.922

Note: *p<0.1; **p<0.05; ***p<0.01. Coefficients in log-odds.

120. Table 3.2 was created using software from Hlavac (2018).

V. Lessons Learned from Implementing CDR Frameworks in EMDEs

Having CDR frameworks in place does not necessarily mean they will work successfully in practice. It is essential that these frameworks be effectively implemented with wide stakeholder support and buy-in. The following lessons aim to provide policy makers with a better understanding of how to develop and implement CDR frameworks in practice. The lessons are based on experiences and observations from more than 20 years working in the development of insolvency systems in EMDEs. For reasons of confidentiality and the sensitivity of some topics, the names of the country or countries implicitly referred to in each lesson are not mentioned in most cases.

> > >

TABLE 3.3 **Lessons Learned from Implementing CDR Frameworks**

	Lessons
Designing a CDR Framework	1. A CDR framework should respond to the specific needs of each country. 2. Evaluating the degree of development of the business rescue culture of each country is indispensable. 3. Mitigating the stigma associated with financial difficulties or business insolvency is essential for developing a CDR culture. 4. It is important to address financial difficulties in a timely and effective manner. 5. Effective insolvency procedures promote the extensive use of CDR mechanisms, as well as related tools and incentives. 6. Legal and regulatory impediments that affect corporate debt restructurings should be identified and removed. 7. Tax claims' super-priority and the ability of tax authorities to compromise debt must be carefully considered by policy makers. 8. In most EMDEs, improving insolvency legislation is essential but may not be sufficient for effective implementation. 9. Absent a robust business rescue culture, informal workouts based on nonbinding guidelines and lacking regulatory support and other incentives often face an uphill challenge. 10. In countries with effective courts and the ability to "cram down" creditors, hybrid and preventive restructuring procedures are often key to successful corporate debt restructuring. 11. CDR frameworks with an out-of-court component could also benefit financially distressed SMEs.
Implementing a CDR Framework	12. CDR reforms must be supported by an authoritative local champion. 13. The quality of financial information and easy access to it are crucial elements to effectively implement corporate debt restructuring. 14. Confidentiality facilitates informal restructurings. 15. Tax policy plays a key role in facilitating and incentivizing financial restructurings. 16. Excessive formalities and unnecessary court involvement should be avoided in informal and hybrid restructuring procedures. 17. Formal insolvency frameworks must be strengthened because out-of-court restructurings are more effective "in the shadow of the law." 18. Creating a legal priority to protect new money is important, but it does not ensure that financing in the context of a restructuring will flow easily. 19. Results of CDR frameworks are difficult to assess. 20. Corporate debt restructurings rely on sound institutional frameworks.

A. Designing a CDR Framework

Many factors determine whether workouts will be achievable and efficient. These include not only legislative and regulatory frameworks but also many intangible elements. The latter include a good faith negotiation culture and use of a framework that addresses the level of distress and is appropriate for the institutional fabric in the country (as discussed in Section II). The following are some lessons learned from developing an enabling environment that facilitates workouts.

LESSON 1

A CDR framework should respond to the specific needs of each country. Due to numerous legal, institutional, and cultural differences, CDR procedures work differently across countries: there is no "one-size-fits-all" approach. Countries address restructuring in different ways, according to the various choices embedded in legislative policy. For example, in countries such as Mexico and Peru, some provisions of the national constitution condition the restructuring of labor claims. Because these claims enjoy significant constitutional protection, their restructuring is severely restricted: either they cannot be included in general restructuring plans, or the plans must establish super-priority payments for labor credits. The evolution of laws and institutions produces a particular local juridical culture that should be understood when assessing the system and suggesting reform recommendations. Recommendations that are significantly alien to the legal culture of a country are generally counterproductive. For example, some insolvency laws adopted in the 1990s by certain countries of the former Soviet Union were perceived as partial transplants of foreign legal regimes. The results were not positive, and significant reforms—based on the experience gained—had to be introduced shortly afterwards. On the other hand, there is a noticeable focus on a harmonization of regional CDR frameworks in some countries, characterized by having strong economic ties or integrating commercial or economic unions. For instance, many countries in the Caribbean have been inspired by the Canadian proposal process;[121] all 17 countries in the OHADA trading bloc have adopted the same French restructuring model; and the European Commission has issued EU Directive 2019/1023 on preventive restructuring frameworks, discharge of debt and disqualifications, and measures to help strengthen a regional approach to restructuring procedures. This harmonization can encourage economies of scale and closer ties between countries' judiciaries.

LESSON 2

Evaluating the degree of development of the business rescue culture of each country is indispensable. Any CDR reform requires a proper diagnosis of a country's business rescue culture, including an assessment of multi-party negotiations and ease of sharing information between creditors, which could support CDR frameworks. There are several cultural aspects and business practices that must be identified up front, even before analyzing the problems or obstacles presented by the legal and institutional framework. In particular, it is key to identify if (and how frequently) debtors and creditors negotiate arrangements aimed at restructuring debts in default using out-of-court mechanisms or judicial proceedings.

LESSON 3

Mitigating the stigma associated with financial difficulties or business insolvency is essential for developing a CDR culture. If insolvency is not seen as a business contingency but rather as a moral failure or, worse, a crime, one of the biggest challenges is changing the mindset of stakeholders. This has happened in several countries in which even the name of a CDR program or legislation initially had to break the association of insolvency and fraudulent behavior. Increasingly, words with a negative connotation, such as "bankruptcy" or "insolvency," have been replaced by other terms that suggest solutions and not failure: for example, "financial difficulties," "business rehabilitation program," or "business rescue." Sometimes, the stigma is also fueled by the so-called nonpayment culture, when debtors expect solutions to their financial difficulties to come from the state and not from debt negotiation efforts with creditors. In such an environment, creditors tend to view debtors' payment difficulties—without distinction—as deliberate defaults, and consequently, they refuse to negotiate amicable debt restructuring solutions.

LESSON 4

It is important to address financial difficulties in a timely and effective manner. Debtors generally deny the seriousness of business difficulties, taking refuge in optimistic thoughts that are not conducive to solving debt problems. This has been repeatedly verified in countries that have a weak business rescue culture. The consequence is certainly negative, since no CDR mechanism has a chance of success if it is used too late to rescue a business that has lost viability due to delay. Sometimes creditors also deny the existence or underplay the

121. Grenada, Jamaica, Saint Kitts and Nevis, Saint Vincent and the Grenadines, and Trinidad and Tobago have insolvency laws inspired by the Canadian Bankruptcy and Insolvency Act.

severity of debt repayment problems (see Chapter 1). In some countries, especially at the beginning of the global financial crisis of 2008, it was observed that bank officers and directors failed to appreciate and acknowledge the magnitude and extent of growing payment performance problems, given the incentives to avoid signaling an increase in credit losses and weakening in the bank's financial position. Creditors' stances of denial exacerbate effects of debtors' inaction. Drastic restructuring measures that might be necessary, such as debt write-offs, are postponed. Instead, debt maturity is simply extended and payment profiles rescheduled. This creates an illusion of restructuring that only delays the application of CDR mechanisms until, inevitably, they may not be effective in rescuing the no longer viable insolvent business.

LESSON 5

Effective insolvency procedures promote the extensive use of CDR mechanisms, as well as related tools and incentives. In some countries, creditors' general preference for individual enforcement procedures (as opposed to collective insolvency procedures) prevents extensive use of CDR mechanisms. Extensive use of individual enforcement procedures against a financially distressed business undermines the ability to maximize asset values and impairs equitable distribution among creditors. Several factors help explain creditors' preference for individual enforcement proceedings in many EMDEs. In countries where this has been observed, negotiation and mediation are not established practices; arbitration is rarely used or has a poor reputation; and domestic judicial proceedings are lengthy and generally unattractive. Lending practices also play a role: in countries where all or most loans are over-secured, creditors typically resort to collateral enforcement and have little incentive to participate in a collective negotiation aimed at restructuring a plurality of debts from a distressed business. Ineffective reorganization procedures discourage the creation of a business rescue culture based on negotiation, reinforcing creditors' preference for individual enforcement proceedings to recover their loans. Maximizing credit recovery through stronger reorganization frameworks is necessary to change this bias toward individual enforcement and encourage the rehabilitation of viable businesses through informal and formal collective procedures.

LESSON 6

Legal and regulatory impediments that affect corporate debt restructurings should be identified and removed. Regulatory and some legal obstacles should be addressed, as they are likely to inhibit creditors' ability to participate in a restructuring. Debt-to-equity swaps are rarely used and difficult to implement in many EMDEs because bank creditors are subject to regulatory constraints that restrict them from taking shares or limit the amount of equity they are allowed to accept as payment of debts. In many jurisdictions, banks—in particular, state-owned financial entities—encounter problems in writing off debts due to statutory constraints. In a few but extreme cases, all-encompassing embezzlement provisions in the Criminal Code may affect debt write-offs, as bank officers may fear being exposed to criminal liability if write-offs are interpreted as embezzlement. Assignment of claims is also problematic in many instances. In some EMDEs, the law requires the debtor's consent when the loan to be transferred is subject to dispute in litigation. Banking regulations sometimes do not allow assignment of loans that are not fully accelerated or, worse, the transfer is allowed but the bank creditor will remain jointly and severally liable with the debtor for the payment of the debt to the assignee. Consumer protection laws may add another impediment to the assignment of a consumer debt, forbidding transfer of the borrower's data to the assignee. Tax laws may subject assignment of claims to VAT, sometimes over the face value of the debt, which acts as a disincentive for such transactions. This was the case, for example, in Montenegro, where it was unclear whether NPL assignments were subject to VAT and the Ministry of Finance had to clarify that a sale of bad debts to a third party should not be considered VAT taxable.

LESSON 7

Tax claims' super-priority and the ability of tax authorities to compromise debt must be carefully considered by policy makers. This is an area where policy change is very difficult to achieve in most countries. Outstanding tax claims can be significant—where the tax authority has outstanding tax claims for many years, this can amount to a large proportion of the debtor's liabilities. In some countries, tax claims are given a super-priority ahead of secured creditors in the waterfall payment structure. If these claims are significant, this can negatively affect the recovery of creditors, both secured and unsecured, and affects creditors' willingness to engage in a restructuring process. In fact, it often exacerbates the likelihood of creditors attempting to enforce their collateral through individual proceedings, which can impede an effective restructuring. In certain countries, tax authorities are often not able to forgive debt, not even penalties or interest rates. Even if they can legally forgive debt, tax authorities are usually risk averse and do not have incentives to compromise on their claims. In the Dominican Republic, a useful power in the law allows the tax authority to compromise on tax claims. It remains to be seen whether officials will actually make use of that power.

LESSON 8

In most EMDEs, improving insolvency legislation is essential but may not be sufficient for effective implementation. Sound insolvency and related laws, effectively implemented by efficient institutions (such as insolvency regulators or commercial courts), are the foundations that must be firmly established to build a legal environment conducive to corporate debt restructuring. However, other elements should also be taken into account when assisting a country to improve its CDR frameworks, including the following:

- Understanding how credit relationships work among the relevant players. In this regard, the effectiveness of credit information through the development of credit information bureaus, as well as credit protection and enforcement mechanisms, should be evaluated.
- Enabling the creation of security interests in movable property and implementing a reliable collateral registry.
- Strengthening the capacity of commercial courts, insolvency regulators, and associated institutions to administer restructurings efficiently, with minimal delays.
- Identifying and removing, to the extent possible, cultural, legal, and institutional obstacles to distressed debt restructuring and business reorganization.
- Creating incentives for CDR and educating the relevant players on how to use the new CDR frameworks.

LESSON 9

Absent a robust business rescue culture, informal workouts based on nonbinding guidelines and lacking regulatory support and other incentives often face an uphill challenge. The dissemination of guidelines to conduct informal debt restructuring—including the basic principles of cooperation between a debtor and its creditors, information sharing, stay of enforcement, and priority for new financing—as recommended by the London Approach, the INSOL Principles, and the Asian Bankers' Association Workout Guidelines, is a positive first step, but it often proves insufficient for creating or developing a robust business rescue culture. This development takes time, often years or even decades. The adoption of such guidelines as a code of conduct endorsed by an authority (the central bank or a ministry or other government agency) was the path chosen to improve the effectiveness of workouts by many Asian jurisdictions during the Asian Financial Crisis of 1998–2001 (e.g., Hong Kong, Indonesia, Japan, the Republic of Korea, Malaysia, and Thailand), and over the last 20 years it has helped to improve the overall business rescue culture in East Asia. Similarly, in the wake of the global financial crisis of 2008, a number of European countries (Albania, Austria, Hungary, Latvia, Montenegro, Portugal, Romania, Serbia, and Slovenia) also adopted such guidelines. The results are difficult to assess accurately as there is no recorded data on corporate debt restructuring based on guidelines endorsed by a government authority. Although this approach clearly has not been a panacea, anecdotal evidence suggests that when workouts have been provided with legal or administrative support through the creation of hybrid or enhanced procedures, their effectiveness appears to increase.[122]

LESSON 10

In countries with effective courts and the ability to "cram down" creditors, hybrid and preventive restructuring procedures are often key to successful corporate debt restructuring. Effective hybrid and preventative procedures often contemplate at least three tools: (i) a stay of enforcement for a short time period; (ii) a cramdown effect of the restructuring plan (i.e., a restructuring plan approved by a legally defined majority of creditors will bind minority creditors); and (iii) priority for new financing. In many EMDEs, it has been proved that without a cramdown provision in the legal framework, restructuring procedures can be ineffective. In hybrid procedures, cramdown typically is an effect of judicial confirmation of a preapproved agreement or plan. It facilitates informal restructuring by discouraging holding out or obstructive attitudes to negotiation by creditors. In some countries that have adopted hybrid procedures, it has not even been necessary to use them in many cases. The mere possibility that a debtor and its main creditors agree by majority to a debt restructuring plan, and that this may also bind minority creditors who did not sign it, in practice discourages creditors from adopting obstructionist attitudes during the out-of-court phase of a workout negotiation. In the wake of Argentina's 2002 crisis, out-of-court debt restructuring was encouraged and supported by a hybrid restructuring proceeding (known as APE, for its Spanish name Acuerdo Preventivo Extrajudicial). APE provides that an out-of-court restructuring plan may bind dissenting creditors, following a very short in-court procedure, once a judge approves the plan agreed to by the majority of creditors. APE was successfully used in 2003 and 2004, allowing debtors and creditors to negotiate and restructure the distressed debt of the largest corporations. Using out-of-court workouts and in some instances the new hybrid procedure, the corporate and financial sectors were able to save time and avoid costs and the destruction of value that the massive use of formal insolvency proceedings would have brought

122. These hybrid procedures add a certain amount of formality to corporate debt restructuring but allow more successful results to be obtained.

about in a systemic crisis environment. After the Argentine experience, other Latin American countries (including Brazil, Chile, Colombia, Dominican Republic, Mexico, and Uruguay) introduced provisions into their insolvency laws contemplating hybrid restructuring proceedings.

LESSON 11

CDR frameworks with an out-of-court component could also benefit financially distressed MSMEs. Purely informal out-of-court workouts are rarely used with MSMEs in most EMDEs. Several reasons may explain this minimal use: (i) MSMEs frequently borrow from one lender only, so financial difficulties are negotiated over bilateral (bank-client) discussions, and there is no need for multi-creditor workouts; (ii) MSMEs' financial information is not always reliable or readily available, so creditors prefer to negotiate in court, where the debtor's obligations are formally verified; and (iii) the costs of attempting a workout (in particular, remuneration of financial advisors, auditors, and lawyers) may be too high for many MSMEs. Increasingly, many countries are looking at implementing hybrid or formal, but simplified reorganization proceedings for MSMEs. This trend is expected to be strengthened by the World Bank's new principles on micro and small enterprises' insolvency[123] and by the upcoming text of UNCITRAL on simplified insolvency regimes. Enhanced CDR frameworks, such as Iceland's joint rules on the financial restructuring of companies, which targets SMEs with liabilities of less than ISK 1 billion (US$8 million), have also provided useful standardized models for addressing large volumes of SME debt.

B. Implementation of CDR Frameworks

LESSON 12

CDR reforms must be supported by an authoritative local champion. Ministries of finance and central banks play a central role in implementing and promoting CDR frameworks. Other influential stakeholders can play a similar role, including banking associations and chambers of commerce, although in some EMDEs with little experience with insolvency these institutions first need to be educated in basic elements of financial distress resolution through CDR mechanisms. In India, the government made the Insolvency and Bankruptcy Code the sole route for dealing with NPLs (repealing earlier measures, such as the CDR framework). This resulted in very strong take-up by the financial institutions and the corporate insolvency resolution process is now entrenched in financial creditors' approach to handling NPLs.

LESSON 13

The quality of financial information and easy access to it are crucial elements to effectively implement CDR. This is particularly relevant in informal restructuring mechanisms in which creditors must primarily rely on information provided by the debtor to properly evaluate any proposals made as part of the restructuring. A drawback of such informal mechanisms, seen in numerous jurisdictions, is that many debtors lack reliable financial information or provide out-of-date information. In some countries with unreliable credit information systems, some financial creditors refuse to share information with their competitors. These creditors reject collective workouts and prefer bilateral negotiations with the debtor.

LESSON 14

Confidentiality facilitates informal restructurings. Informal restructurings are more private processes than formal reorganization proceedings. As informal restructurings are less prone to unwanted publicity and speculation, they are perceived to cause less reputational damage and to carry less stigma than formal insolvency processes. Requirements to provide information must be balanced against confidentiality concerns. As such, this element should be preserved as much as possible. In Turkey, the so-called Istanbul Approach initially required directors of corporate groups to disclose personal assets before participating in the restructuring. This requirement was subsequently removed because it deterred companies from seeking restructuring under the framework.

LESSON 15

Tax policy plays a key role in facilitating financial restructurings. In most EMDEs, a write-off of debt is typically treated as a taxable gain for the debtor; conversely, the creditors' ability to deduct the losses when offering concessions is commonly limited. In both cases, a restructuring based on a debt write-off may become prohibitively expensive for all the participants. Ideally, the legal framework should not discriminate against debt restructuring in workouts and reorganization plans. Moreover, during periods of high levels of corporate distress or NPLs in the financial system, the law could provide tax incentives for the parties that participate in arrangements or plans that will render a restructured business viable. For example, in the wake of the Asian Financial Crisis of 1997, the Thai regime for restructuring activities established special tax provisions distinguishing between formal restructuring processes and informal, out-of-court restructurings. For any formal process, it was specified that (i) no personal and corporate income taxes are payable by debtors on income

123. The World Bank Principles for Effective Insolvency and Creditor/Debtor Regimes was revised in 2021 to include new principles on micro and small enterprise insolvency.

derived from the release of debts, a composition agreement (or negotiated creditor arrangement) under application, or a reorganization plan approved by the court in accordance with the Bankruptcy Act; and (ii) no personal and corporate income tax, value-added tax, special business tax, or stamp duty is payable by debtors and creditors on income derived from the transfer of assets, sale of goods, provision of services, or execution of instruments in consequence of implementing an application for composition or a reorganization plan as approved by the court in accordance with the Bankruptcy Act.

Regarding informal restructurings, substantially similar tax advantages have applied for debtors and creditors; but unlike the situation of formal restructurings, these have been in place only on a temporary basis for specific periods. The Uruguayan Law on Insolvency provides for two tax incentives, applicable to insolvency proceedings though not to informal debt restructuring agreements, namely: (i) from the date of the declaration of the insolvency proceeding, all credits filed against the debtor shall be considered unrecoverable for tax purposes; and (ii) the debtor may postpone up to five fiscal years the gross income generated by write-offs obtained in an insolvency proceeding. In Montenegro, the deduction of a write-off as bad debt was not allowed as there was no proof that efforts to collect the entire loan had been unsuccessfully exhausted. However, the Voluntary Debt Restructuring Law (known as the "Podgorica Approach"), among other tax incentives, allowed the creditor to immediately deduct the write-off as a loss. Although the deduction continued to be considered a taxable gain of the debtor, the practice was established of dividing payment of the resulting tax into six or 12 installments (according to the amount). Many countries may present other situations in which an unexpected taxable event complicates the restructuring operation. Therefore, all countries require a complete analysis of the relevant tax regime to identify potential obstacles to debt restructurings.

LESSON 16

Excessive formalities and unnecessary court involvement should be avoided in informal and hybrid restructuring procedures. Minimal formalities in out-of-court negotiations lead parties to reach restructuring agreements faster and at lower cost. The limitation of unnecessary court involvement also creates an environment for spontaneous negotiation between the parties and allows for a collaborative climate that simplifies the resolution of problematic debts. In Poland, a 2016 law introduced an accelerated arrangement proceeding (akin to a preventive insolvency procedure). It did not achieve wide acceptance in practice partly due to an overreliance on courts. In 2020, in the context of the COVID-19 pandemic, the Polish government introduced a new restructuring procedure under the Shield 4.0 Act. Court involvement was reduced to confirming the restructuring plan. In the new procedure, the courts are notified virtually at the initiation of the negotiations. An automatic four-month stay is applied, and new money is given priority. An insolvency practitioner facilitates the restructuring negotiations. In the first six months since enactment, at least 60 cases were processed through the new restructuring procedure (as opposed to the few cases in the accelerated arrangement proceeding since its introduction in 2016).

LESSON 17

Formal insolvency frameworks need to be strengthened because out-of-court restructurings are more effective "in the shadow of the law." Informal mechanisms do not replace, but rather complement, formal or full insolvency proceedings. In particular, informal or alternative reorganization mechanisms have generally been found to work well in countries where formal insolvency proceedings and debt enforcement pose a credible threat. The presence of the "shadow" of legislation that establishes efficient formal processes of insolvency and individual enforcement of debts is an important condition for the frequent and successful use of informal CDR mechanisms. For this reason, some countries have prioritized improving the formal insolvency framework—when it is manifestly ineffective—and leaving reforms related to informal restructuring to a later stage.

LESSON 18

Creating a legal priority to protect new money is important, but it does not ensure that financing in the context of a restructuring will flow easily. This has been repeatedly observed in many EMDEs where amendments to the law on priorities have been introduced to protect new financing. Additional work is necessary to persuade lenders—financial institutions in particular—to provide fresh money to a corporate debtor in financial distress. Brazil has recently amended its insolvency law, dedicating a detailed chapter to the protection of post-commencement financing. It remains to be seen whether this major reform will have the desired effect of increasing the supply of loans to debtors in financial distress.

LESSON 19

Results of CDR frameworks are difficult to assess. Quantitative and qualitative data on restructuring are essential for evidence-based policy making. In most EMDEs, however, getting complete and reliable data on restructurings is difficult. To some extent, the absence of data could be explained by the confidentiality with which informal restructuring negotiations are conducted. But even for hybrid or formal restructuring procedures, the data that is usually collected is scarce. When data is collected, it is generally limited to the number of

proceedings (initiated, ongoing, and concluded), the statistics of which are compiled by judicial authorities or insolvency regulators. It is very rare to find other relevant data such as the most frequently implemented restructuring measures, the average rate of recovery of secured or unsecured credits, and the percentage of enterprises that effectively resolve their financial difficulties using debt restructuring mechanisms. This was partly the rationale for conducting the survey described above. As a rare example, the Turkish Banking Association tracks monthly data on the number of debtors in restructuring and cases approved under the Istanbul Approach. Regarding formal insolvency proceedings, Latvia has a sophisticated data collection system. The Latvian Insolvency Control Service (the insolvency regulatory agency) gathers abundant data from the insolvency administrators' reports and compiles comprehensive statistical reports on the insolvency system, which are published at the Insolvency Register. The court information system provides additional information and allows for the verification of information reported by insolvency administrators. In countries where insolvency data is collected by different entities, the integration of all sources of information could further improve the data collection system.

LESSON 20

CDRs rely on sound institutional frameworks. Though institutional weaknesses take a long time to change, the success of restructuring mechanisms is often linked to appropriate institutional setup and capacity. Courts and insolvency administrators are key stakeholders in this area. Weak court systems are characterized by a number of shortcomings, including (i) inadequate selection and training of judges; (ii) appointing judges unfamiliar with financial/business practices; (iii) having an overall bench lacking judicial specialization or expertise in commercial and insolvency law; (iv) having an excessive number of cases in courts with jurisdiction on insolvency, but only a few, if any, insolvency cases at all; (v) inefficient case administration practices; (vi) a lack of transparency or inconsistency in judicial decision-making; and (vii) frequent procedural abuses. The insolvency profession is typically underdeveloped, with unqualified people acting as insolvency administrators. It needs significant improvement to or creation of institutions and procedures to license, qualify, and supervise insolvency administrators. For example, before 2015 the Dominican Republic had no professional insolvency administrators or judges with this specialization. The restructuring of corporate debt, under the old legal and institutional framework, was practically nonexistent. When a completely new restructuring and liquidation law was passed, reform of the legal framework was accompanied by two indispensable institutional developments. First, jurisdiction in insolvency matters was assigned to specialized judges in the country's two main commercial centers. Second, in 2017 the requirements to act as insolvency administrators were regulated in detail, and supervision of these professionals was entrusted to the Chambers of Commerce and Production. The World Bank and INSOL International have developed a capacity-building program to assist judges in developing technical expertise in restructuring.

VI. Conclusion

The pandemic's broad economic effects have heightened the need for robust CDR systems to help deal with the ensuing corporate debt overhang and the expected rise in the number of businesses in financial distress. This chapter has described how well-developed CDR systems often provide several different tools to facilitate saving viable businesses and resolving NPLs. Unfortunately, this chapter has also shown that most economies still lack mechanisms to facilitate out-of-court workouts, that about a third of the jurisdictions in the sample lack special tools for restructuring noninsolvent debtors, and that a few still lack mechanisms for the formal reorganization of insolvent debtors. Even when these tools are available, special rules to deal with MSMEs in financial distress—often the great majority of the firms within an economy—seldom exist and are particularly critical in contexts such as that created by the COVID-19 pandemic. Moreover, the novel analysis has shed light on the link between regular use of out-of-court workouts by banks and higher access to credit, while also providing further evidence supporting the positive relationship between robust formal reorganization systems and creditor recovery. Yet, CDR—and, more broadly, insolvency reform—is a complex exercise. Many intangible and tangible elements are needed for these frameworks to be successful, including the enabling environment, the right choice of tools, and effective implementation. In recognition of this complexity, a practical set of "lessons learned" has been distilled from significant practical experience to help guide policy makers in navigating this process.

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Annex 3A

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TABLE 3A.2 Glossary of Terms Used in the Survey

	Meaning
Automatic stay	A measure that prevents the commencement, or suspends the continuation, of judicial, administrative, or other individual actions concerning the debtor's assets, rights, obligations, or liabilities, including actions to make security interests effective against third parties or to enforce a security interest, and prevents execution against the assets of the insolvency estate, the termination of a contract with the debtor, and the transfer, encumbrance, or other disposition of any assets or rights of the insolvency estate.
Avoidance actions	A set of insolvency actions targeting the voidance of prefiling transactions detrimental to creditors or preferential to some creditors.
Collateral	An encumbered asset.
Commencement of proceedings	The effective date of insolvency proceedings, whether established by the law or by a decision of the court.
Commencement standards	The standard to be met for insolvency proceedings to be commenced.
Court	A judicial or other authority competent to control or supervise insolvency proceedings.
Cramdown	The imposition of a restructuring plan despite the dissent of a class of creditors (sometimes referred to as cross-class cramdown).
Creditor	A natural or legal person that has a claim against the debtor that arose on or before the commencement of insolvency proceedings.
Debtor	Any natural or legal person in financial difficulties that is the subject of an insolvency or pre-insolvency procedure.
Discharge	The release of a debtor from claims that were, or could have been, addressed in the insolvency proceedings.
Encumbered asset	An asset in respect of which a creditor has a security interest.
Estate	Assets of the debtor that are subject to insolvency or pre-insolvency proceedings.
First-day order	Court orders requested immediately after filing to facilitate the management of the case as well as the operations of the debtor.
Insolvency	A situation where a debtor is generally unable to pay its debts as they mature and/or where its liabilities exceed the value of its assets.
Insolvency procedures	Collective proceedings, subject to court supervision, either for reorganization or liquidation.
Insolvency representative	A person or body (including one appointed on an interim basis) authorized in insolvency proceedings to administer the reorganization or the liquidation of the insolvency estate.
Liquidation	A process through which the assets of the debtor are sold and disposed of for the collective distribution of the proceeds among its creditors.
MSME	The "national" definition of a micro-, small-, and medium-sized enterprise according to the legal framework in question.
OCW or out-of-court workouts	Private agreements with limited or no judicial involvement between a debtor and its creditors, with the aim of easing the debtor's debt burden so that it can maintain its operations.
OCW framework agreement	An agreement between participating creditors seeking to establish the terms governing collective out-of-court restructurings with a set of debtors.
Pre-insolvency procedures	A collective proceeding that enables the debtor to restructure at an early stage with a view toward preventing its insolvency. For the purposes of this study, pre-insolvency procedures are divided into prepack and preventive restructuring procedures.
Prepack procedure	A procedure that allows for court ratification of a plan agreed on by a debtor and its creditors prior to the initiation of insolvency proceedings.

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TABLE 3A.2 **Glossary of Terms Used in the Survey (cont...)**

	Meaning
Preventive restructuring procedures	For the purposes of this study, preventive restructuring procedures are a type of pre-insolvency procedure that afford a debtor protection to negotiate with its creditors for an agreeable path forward that avoids insolvency.
Priority	The right of a claim to rank ahead of another claim where that right is stipulated by the law.
Reorganization	A process through which the financial well-being and viability of a debtor's business may be restored so that the business can continue to operate; means may include debt forgiveness, debt rescheduling, debt equity conversions, and sale of the business (or parts of it) as a going concern.
Restructuring plan	A plan by which the financial well-being and viability of the debtor's business can be restored.
Sale as a going concern	The sale or transfer of a business as a whole or in substantial parts, as opposed to the sale of separate assets of the business.
Secured claims	A claim assisted by a security interest in an asset taken as a guarantee for a debt enforceable in case of the debtor's default.
Secured creditor	A creditor holding a secured claim.
Wrongful trading	Rules by which directors of insolvent companies may be made personally liable for certain acts or omissions in the lead-up to the commencement of insolvency proceedings.

4

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The Role of Capital Markets in Dealing with the Corporate Debt Overhang

I. Introduction

This chapter focuses on the role that capital market solutions can play in helping nonfinancial corporations (NFCs) in EMDEs deal with debt overhang as the COVID-19 crisis continues to evolve. The solutions covered are relevant for both NFCs already using market-based solutions[124] to fund themselves as well as those that could potentially use them as part of their funding mix. For the purposes of this chapter, the focus is on solutions that can (i) help NFCs improve their balance sheets and financial position to deal with already high levels of leverage, and (ii) help lower-leveraged NFCs improve their performance and probability of survival, given the severe adverse shock of the pandemic. Furthermore, while accessing international capital markets is an option for many large NFCs in EMDEs, the main focus is on possible local currency financing options and other market-based solutions. Given the impact of the current pandemic on MSMEs in EMDEs, the chapter also discusses the role of capital markets in helping them as the recovery takes hold.

This chapter uses the Corporate Vulnerability Index (CVI) introduced in Chapter 1 as well as a proprietary World Bank capital market development indicator to assess, at a country level, the role that domestic capital markets can play in helping NFCs manage the corporate debt overhang. In addition, the chapter assesses if domestic capital markets could play a greater role in corporate funding markets in the medium term, using another World Bank capital market indicator, the capital market potential indicator. This assessment could help policy makers decide if it is worth intensifing efforts to develop various segments of the local capital maket. Experience from previous crises, such as the Asian Financial Crisis in 1997–2000 and the dynamics in the United States and the euro area[125] after the global financial crisis in 2007–2008, underline that local capital markets can make a key contribution to supporting an economic recovery.

124. The term "market-based solutions" is used because many of the solutions presented do not fit neatly into a traditional definition of capital markets but can be considered nonbank financing alternatives that leverage financing from capital market investors.
125. A factor behind the slower recovery in the euro area after the global financial crisis was the region's underdeveloped corporate bond market.

Potential capital market solutions to the corporate debt overhang in the aftermath of COVID-19 are a complex issue. The type of financial problem differs across firms, making identifying appropriate solutions important, but also difficult. Capital market solutions for NFCs suffering from a debt overhang should focus primarily on increasing the equity base of the corporate to address its high leverage, while debt solutions may be more appropriate for firms facing liquidity problems or that are less leveraged.

The level of capital market development dictates the role that capital market solutions could potentially play in dealing with corporate debt overhang. For domestic capital market solutions, a certain level of capital market development is needed. Only a limited number of NFCs have used domestic capital markets to fund themselves, as most EMDEs' financial sectors remain bank-centric, and the basic enabling environment for a corporate bond market is not always present. These preconditions can be grouped into three main categories: (i) a stable macroeconomic environment; (ii) a relatively developed financial sector; and (iii) a solid institutional environment. The development of public equity markets requires similar preconditions. Such preconditions are necessary but not always sufficient. For example, for bond markets, the level of banks' liquidity (and consequently their willingness to lend to corporates) can affect capital market development, as well as other factors such as taxation and even the international macroeconomic environment. Figure 4.1 illustrates the level of domestic capital market development globally, with capital markets in countries displaying either a nascent or a basic level of development unlikely to be able to play a meaningful role in dealing with the corporate debt overhang.

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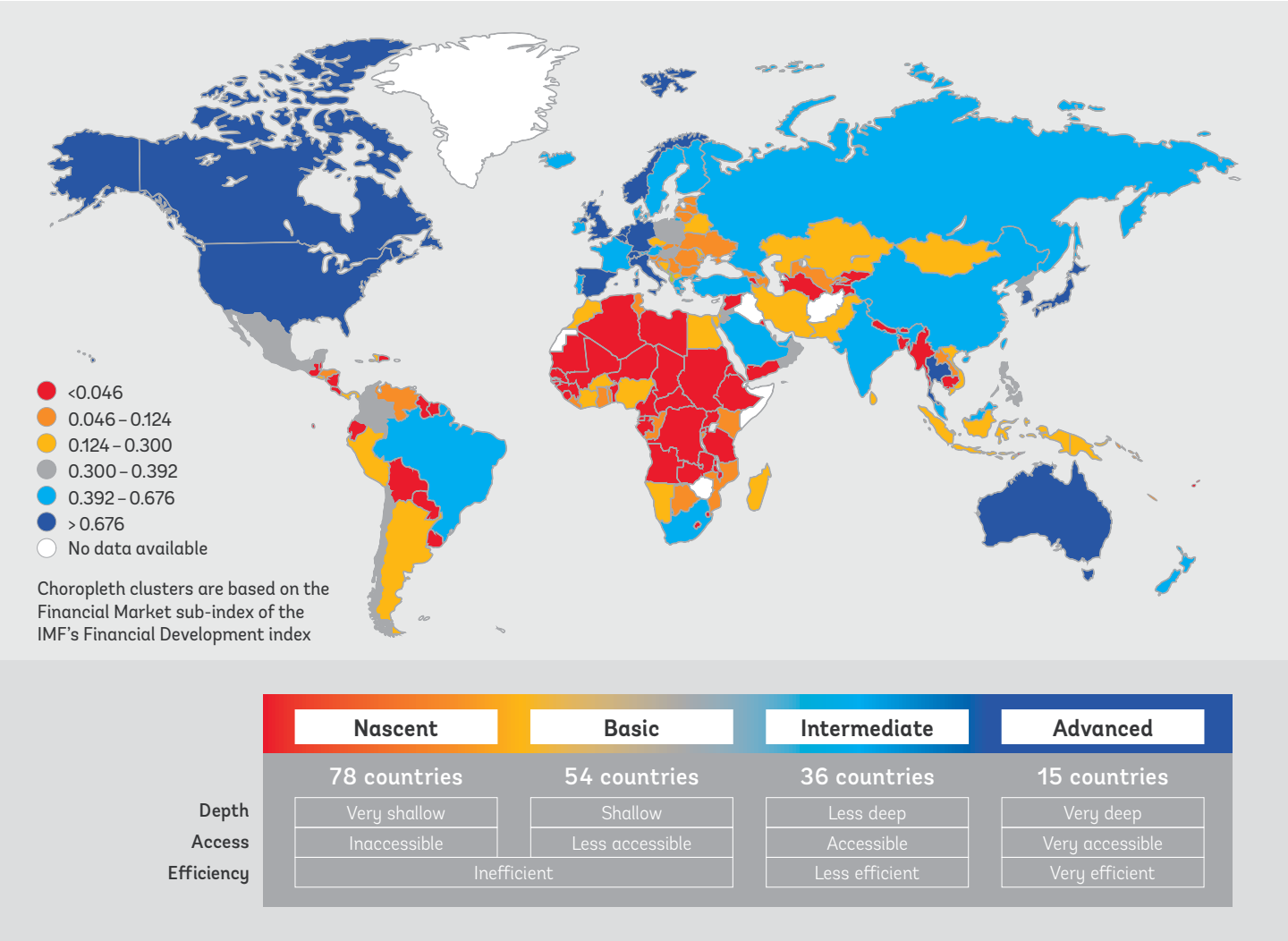
FIGURE 4.1 **Overview of Domestic Capital Market Development**



Source: World Bank.

Accessing international capital markets is an option for larger NFCs. The global policy response has supported NFCs in EMDEs in accessing international capital markets, but it is often only the larger NFCs that have the necessary capacity to issue debt or equity instruments in this way. A tightening of financial conditions could see some lower-rated NFCs lose access to international debt markets as borrowing costs become prohibitively expensive or investor risk appetite subsides. For NFCs based in countries with more developed domestic capital markets, the local market may provide a complementary funding source. But in many cases, local capital markets are not adequately developed, and some form of public sector support may be needed to ensure continued market access to the international market, particularly if the NFC in question is of systemic importance to the domestic economy. In such circumstances, governments will need to carefully weigh the fiscal implications of such support as well as any implication for sovereign borrowing costs.

This chapter proceeds as follows: Section II distinguishes between the types of problems faced by NFCs and the main capital market approaches to this problem, while Section III provides a review of the academic literature on the topic. Section IV assesses where NFCs' vulnerabilities are highest and whether capital market solutions could play a role, while Section V describes some guiding principles for policy makers assessing capital market solutions. Section VI provides an overview of public sector interventions, and Section VII sketches a non-exhaustive list of capital market solutions for dealing with corporate debt overhang. Section VIII concludes the chapter discussion. Annex 4A provides some background information, and Annex 4B provides a graphical overview of capital market solutions for dealing with corporate debt overhang.

II. The Type of Corporate Financial Problem Dictates the Solution

The appropriateness of capital market solutions depends on the type of corporate financial problem. Equity solutions are best for firms facing corporate debt overhang. Box 4.1 provides an overview of the importance of equity for dealing with this type of problem. However, although NFCs with low leverage before the pandemic do not necessarily face a threatening debt overhang, they may still experience liquidity problems, and well-designed debt solutions could suffice to address their current financial problems.

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BOX 4.1 **A Stylized Illustration of Dealing with the Debt Overhang**

Corporate debt and leverage were already worryingly high in many EMDEs going into the COVID-19 pandemic due to cheap access to finance over the past decade. This stylized example shows how a company's equity could be affected by COVID-19 and outlines two economically very different options for restoring lower leverage.

Corporate debt has increased for many companies as they have borrowed to cover losses (see (1) in the figure). Losses erode companies' equity. Higher debt and lower equity mean higher leverage. In addition, certain assets may have declined in value, for example, because of a worsened economic outlook or as a result of having become redundant due to disruptions caused by COVID-19. This is illustrated by a decline in assets (labeled (2) in the figure). A decline in assets reduces equity and increases leverage even though no cash flow is involved.

Issuing equity and equity-like assets and using the proceeds to repay debt will work to reduce the corporate leverage (see (3) in the figure). Another solution is to deleverage by shrinking the company's assets (shown in (4) in the figure). That can be a feasible approach for some companies. However, a sector- or country-wide corporate deleveraging will likely delay an economic recovery and hamper employment. Thus, raising equity where possible should generally be considered a good option to address the higher leverage following COVID-19.

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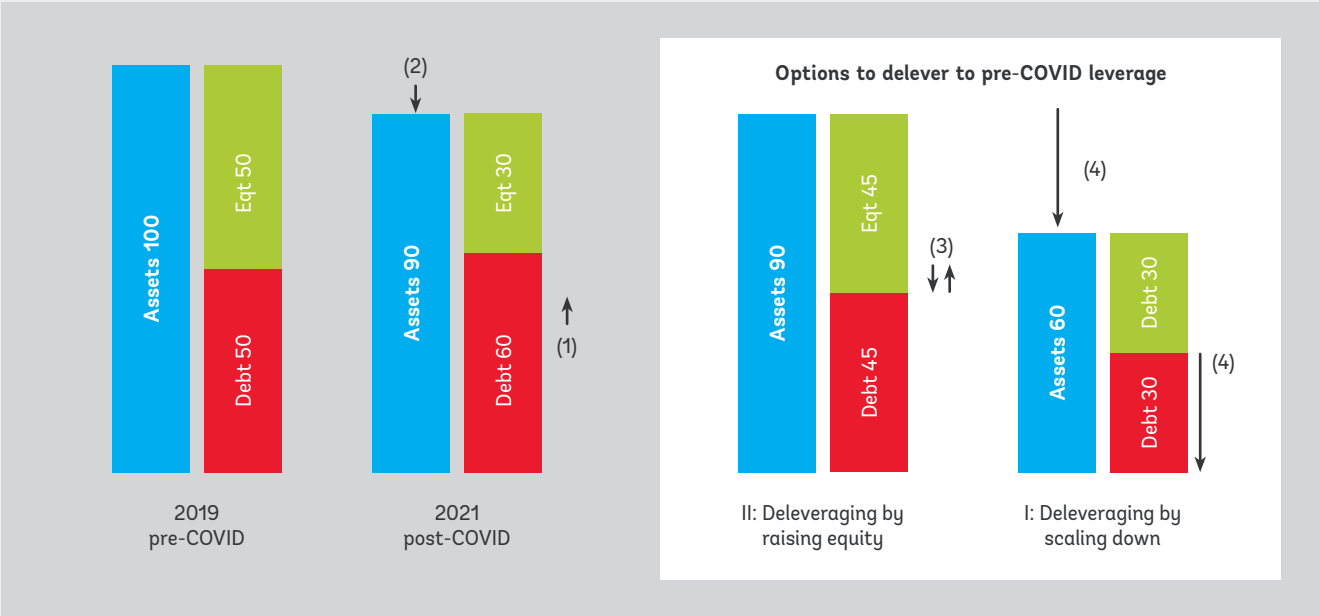
FIGURE 4.1.A **Dealing with Debt Overhang**



Source: Authors' illustration.

III. Literature Review

The role of capital markets in dealing with corporate debt overhang in EMDEs has not generated a large strand of academic literature. One reason for this may be that there are few episodes of corporate debt overhang in countries where the domestic financial markets have played a prominent role in dealing with the problem. In cases where financial markets were a part of the solution over an extended period, the episodes have not attracted much academic attention.

A well-developed capital market can sustain economic recovery. Filardo et al. (2010) note that the existence of well-developed bond markets in Asia after the Asian Financial Crisis could have mitigated the full impact of the crisis. By the time of the global financial crisis in 2007–2008, local currency Asian corporate bond markets provided an important backstop to the decline in bank-based lending. The European Central Bank (2012) analyzes the bank deleveraging in the euro area after the global financial crisis and identifies elevated funding costs for banks as one source potentially driving the disintermediation of credit supply from bank credit to market-based finance. Since then, the euro area corporate bond market has grown in importance for corporates relative to bank finance, as documented by De Fiore and Uhlig (2015). The European Central Bank (De Santis et al. 2018) shows that market-based financing increased for NFCs in the euro area in the years after the sovereign debt crisis, while bank financing contracted until 2015.

International organizations generally align on the role that debt instruments have played in supporting NFCs' liquidity, while the use of equity instruments is more important over the medium term. The IMF (2021) shows that total debt and equity raising for advanced economies and a number of large EMDEs reached record high levels in the post-COVID-19 world. It finds that the increase in corporate debt puts medium-term growth at risk and impacts the capacity of many firms to service debts. It also finds that solvency stress in several large EMDEs is prevalent across different firm sizes but is more pronounced for smaller firms that still rely heavily on policy support and bank financing. An OECD working paper (Demmou et al. 2021) highlights that the increase in leverage affects corporate debt servicing capacity and reduces the level of investment. The authors conclude that debt financing has been decisive in solving immediate liquidity problems, but that equity financing could play an important role in mitigating the debt overhang.[126] Díez et al. (2021) analyze the financial situation for MSMEs in advanced economies and policy options after COVID-19. They find that providing MSMEs with access to new credit will not address the underlying solvency problems but can address liquidity shortfalls. A large efficiency gain can be made by targeting the credit injection only to the firms with clear post-COVID-19 recovery prospects but that would face insolvency without the additional liquidity provision. Díez et al. (2021) also find that the quasi-equity injections should be complemented with a comprehensive set of MSME insolvency and debt restructuring tools.

Government efforts should focus on equity solutions and limit the use of debt. Díez et al. (2021) stress, given fiscal constraints, the importance of targeted measures for viable firms while limiting government support to situations in which a market failure would lead to an adverse outcome. For EMDEs, foreign investment could be a particularly important source of funds. The Group of 30 (2020) recommends that countries with strong banking sectors and well-developed private capital markets should use the private sector to target and deliver support. Some EMDEs have significant public sector investment capability through sovereign wealth funds and development banks that could cooperate with private financial market participants to support viable firms.

Distressed corporates find challenges in issuing new equity due to misaligned incentives between existing and new investors, but studies suggest that these impediments can be overcome. By construction, when new equity is issued, the existing owners are diluted. New investors, on the other hand, typically require a premium to inject new capital, in part to address the risk that the information provided to them is incomplete and that the problems of the company are more severe than were stated to them by the original owner. Some empirical analyses suggest, however, that equity markets can play an important role in supporting the recovery of distressed companies. Kim, Ko, and Wang (2019) find for Korea from 2000 to 2013 that equity was primarily issued to help restructure debt and recapitalize existing assets rather than for financing new assets. They propose that equity issues in general may be an important channel to facilitate debt restructuring in bank-centered EMDEs, as potential conflict between banks and public bondholders is less of an issue than in other jurisdictions, such as the United States. In practice, however, while certain types of equity injections, such as from family members or strategic investors, may be viable in many EMDEs, public equity offerings would be much more difficult.

126. Concretely, they propose a cascade approach to govern policy intervention. First, policy should aim at restoring the equity base of corporations and supporting continued development of equity markets, particularly for small firms. Second, policy should ease debt restructuring procedures. Third, liquidation frameworks should be strengthened and improved. Some of these considerations are also pertinent for more developed EMDEs.

IV. Analytical Mapping

This section maps corporate vulnerabilities of listed NFCs vis-à-vis (i) an assessment of a country's current level of domestic capital market development, and (ii) an assessment of a country's domestic capital market potential. The objective of this mapping exercise is to establish whether the local capital market displays an adequate level of development to support market-based solutions to assist firms during the recovery. The CVI introduced in Chapter 1 tracks financial conditions of the NFC sector based on four key aspects of financial vulnerabilities that have been identified by the literature as leading indicators of corporate financial distress.[127] This vulnerability index is mapped against the World Bank's proprietary capital market development indicators,[128] which are used to provide an assessment of a country's current level of capital market development as well as its capital market development potential based on an assessment of the existence of key preconditions. This is important, as any intervention supported by the government or a multilateral development bank should generally be limited to situations with the potential for a catalytic development impact. Notwithstanding this, in some cases, even if the local capital market is not developed or if the size of the economy does not support market development, accessing international debt markets or attracting foreign capital to support market-based solutions may be an option for larger, more sophisticated NFCs.

For the immediate relevance of domestic capital markets to support solutions to the current NFC debt overhang, the initial level of capital market development matters. The initial state of capital markets cannot be considered sufficiently developed to a level that is supportive of capital market solutions to NFC debt overhang on a significant scale in around 90 percent of EMDEs (Figure 4.2). The development level of a country's capital market is correlated across countries, meaning that countries with a less developed capital market also tend to have a less developed local bond market and that the NFCs in those countries also tend to issue less debt in international bond markets (Table 4.1). However, as the pairwise correlations for market developments are far from 1, there are also important exceptions where one of the markets shows a higher degree of development than others; this highlights that, while not all instruments may be available for a specific country, NFCs may still take advantage of accessing options that may be available to them despite an overall low level of market development. The development of individual markets is also closely correlated with the depth of the domestic investor base, underlining the importance of a domestic investor base for the development of domestic financial markets.

The countries with the highest corporate vulnerabilities tend to have the least developed financial markets (Figure 4.3). However, the CVI indicator does not include the debt of unlisted NFCs or MSMEs. Countries with few listed firms, and thus not included in the CVI, tend to belong to the group of countries with undeveloped markets.

Most of the vulnerable debt included in the CVI is in countries with relatively developed capital markets. This reflects that large countries tend to have more developed capital markets and that there are larger NFCs in those countries (Figure 4.4). It follows that capital market solutions could be relevant in dealing with a large part of the total listed debt at risk in these EMDEs. Countries not included in the CVI, and MSMEs or other firms with unlisted debt in the countries in the CVI, may still have challenges with corporate debt overhang, particularly from bank loans. These countries and borrower segments may have the most difficulties accessing capital in financial markets.

127. Debt service capacity, leverage, rollover risk, and profitability/market value. The Corporate Vulnerability Index (CVI) tracks financial conditions of the nonfinancial corporate sector listed on the local stock exchange. Using readily available balance sheet information of 17,284 listed nonfinancial firms in 74 countries (for 2020Q4), the CVI is based on seven indicators that capture four key dimensions of firms' financial vulnerabilities. The four dimensions are debt service capacity, leverage, rollover risk, and profitability/market valuation. The seven indicators are interest coverage ratio, leverage ratio, net debt to EBIT ratio, current liabilities to long-term liabilities ratio, quick ratio, return on assets, and market to book ratio. For methodological details, see Feyen et al. (2017).

128. The indicator is composed of four pillars: macroeconomic stability, level of financial sector development, strength of institutions, and current level of capital market development.

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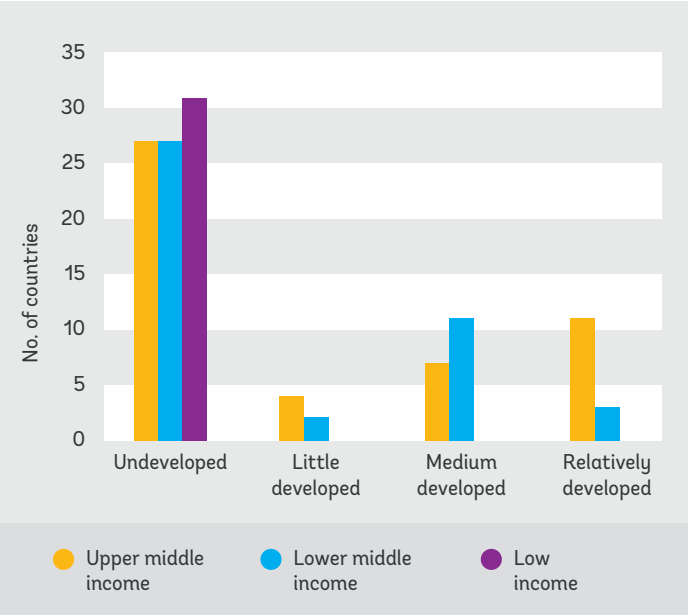
FIGURE 4.2 **Initial State of Development by Income Group of Countries**



Source: World Bank.
Note: Excludes high-income countries.

> > >

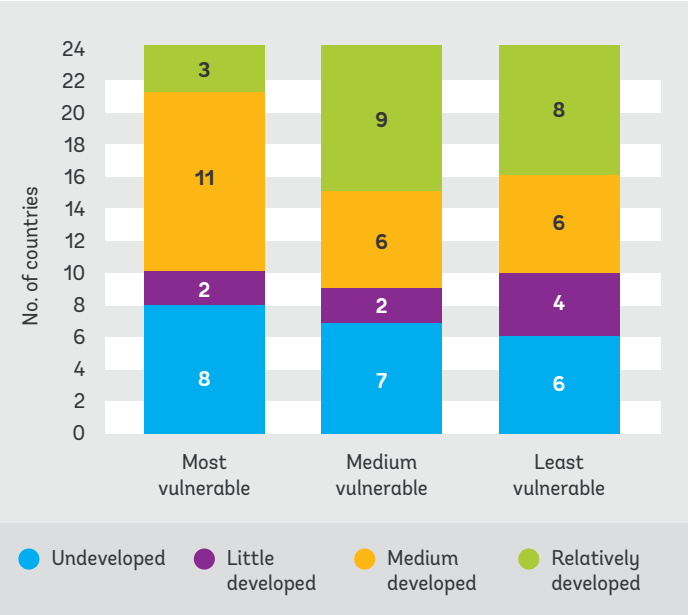
TABLE 4.1 **Correlation Matrix of Depth of Private Sector Markets and Depth of Domestic Investor Bases**

	1	2	3	A	B	C
1. Equity market capitalization	1.00					
2. Domestic debt securities	0.54	1.00				
3. International debt securities	0.63	0.54	1.00			
A. Mutual fund assets	0.57	0.61	0.55	1.00		
B. Insurance company assets	0.66	0.46	0.52	0.53	1.00	
C. Pension fund assets	0.59	0.44	0.43	0.56	0.54	1.00

Source: World Bank.
Note: Excludes high-income countries. Correlations are based on development scores for the countries for specific financial market aspects. The development scores for indicator (1), (2), and (3) are based on the level of outstanding amounts, and indicator (A), (B), and (C) are based on AUM.

> > >

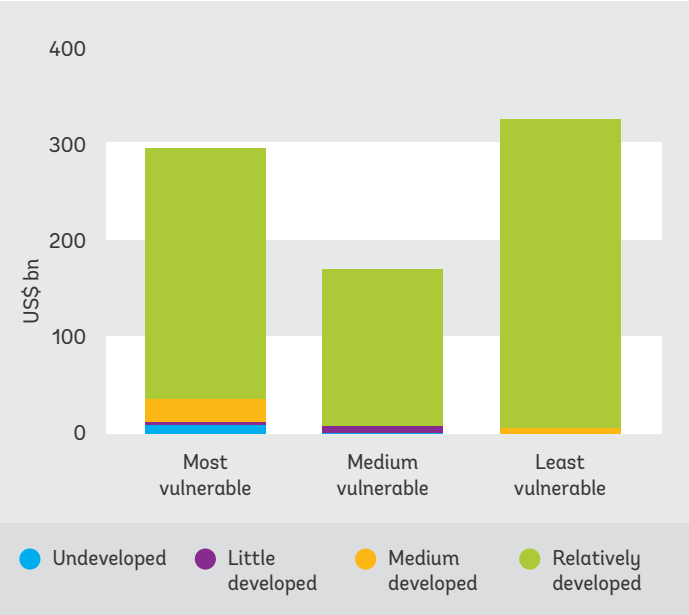
FIGURE 4.3 **Vulnerability vs. Initial Market Development—Number of Countries**



Source: World Bank.
Note: Only includes countries for which there is data for the CVI. Split of countries into thirds based on the CVI.

> > >

FIGURE 4.4 **Vulnerability vs. Initial Market Development—Debt at Risk**



Source: World Bank.
Note: Only includes countries for which there is data for the CVI. Split of countries into thirds based on the CVI.

The extent that capital market solutions can play a role in helping NFCs deal with corporate debt overhang varies significantly across countries. In some countries, capital market development is at a level where capital market solutions are already relevant to explore (Figure 4.5). In others, based on the country's institutional features, macroeconomic stability, and financial sector features, scope exists to develop capital markets. The countries with the highest debt vulnerability (names in red in Figure 4.5) are present throughout the development spectrum. Currently, a limited number of countries have the potential to achieve a stage where a capital market solution becomes promising, based on the current characteristics of the countries' preconditions. The current economic crisis has shown the value of developed capital markets, as many issuers were able to access markets despite the severity of the economic situation. As a lesson from this, countries should work on the preconditions for financial market development, helping to develop local capital markets to reduce the risks in future crises. Further, domestic capital markets with participation from local investors provide some insulation from swings in global financial markets and may help reduce the risks from reversal of capital flows, for example, from global monetary policy contractions, such as during the taper tantrum in 2013.

In geographic terms, the corporate debt of countries in Europe and Central Asia, East Asia and Pacific, Sub-Saharan Africa, and South Asia is most vulnerable. Sub-Saharan Africa stands out for having the least capital market potential, but in dollar terms also the least total value of vulnerable debt (Figure 4.6). Figure 4.7 illustrates the still high percentage of USD borrowing in several countries by NFCs. The highlighted box shows a group of countries that have a relatively high score on the capital market potential indicator and that have high USD borrowings. For these countries, developing a more stable domestic capital market would reduce vulnerabilities.

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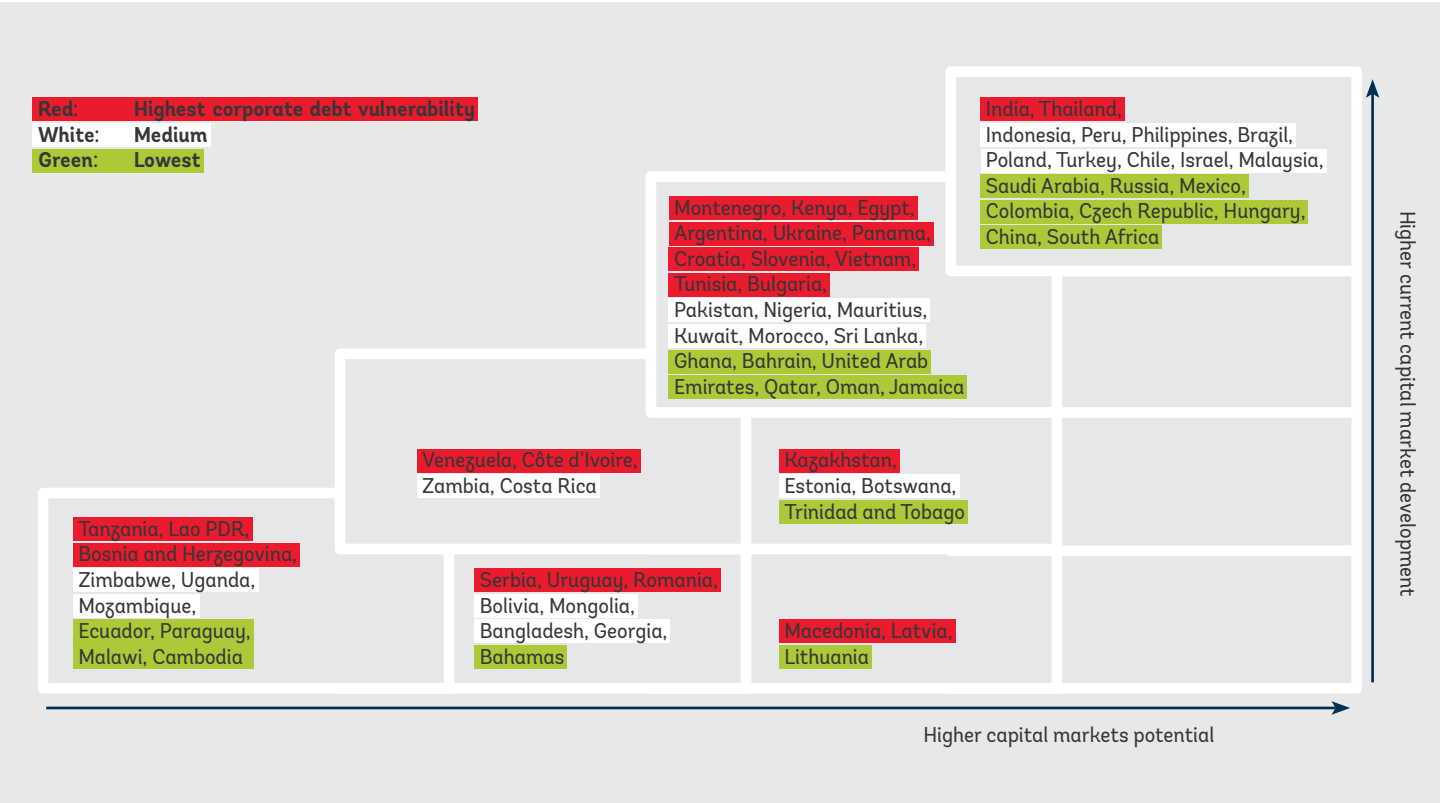
FIGURE 4.5 **The Current Level and Potential Capital Market Development and Corporate Vulnerability of Individual EMDEs**



Source: World Bank staff estimate.
Note: Based on the Corporate Vulnerability Index and the capital market potential indicator. Only includes countries included in the Corporate Vulnerability Index. Countries not included in the index tend to be small and to display a small degree of capital market development. For the x-axis, if the potential is less than the current level, the current level is used, as it is likely a good representation of the short-term potential for capital market solutions; therefore, the upper triangle is empty. Boxes from left to right and from bottom to top correspond to "Undeveloped," "Little developed," "Medium developed," and "Relatively developed" in the previous charts.

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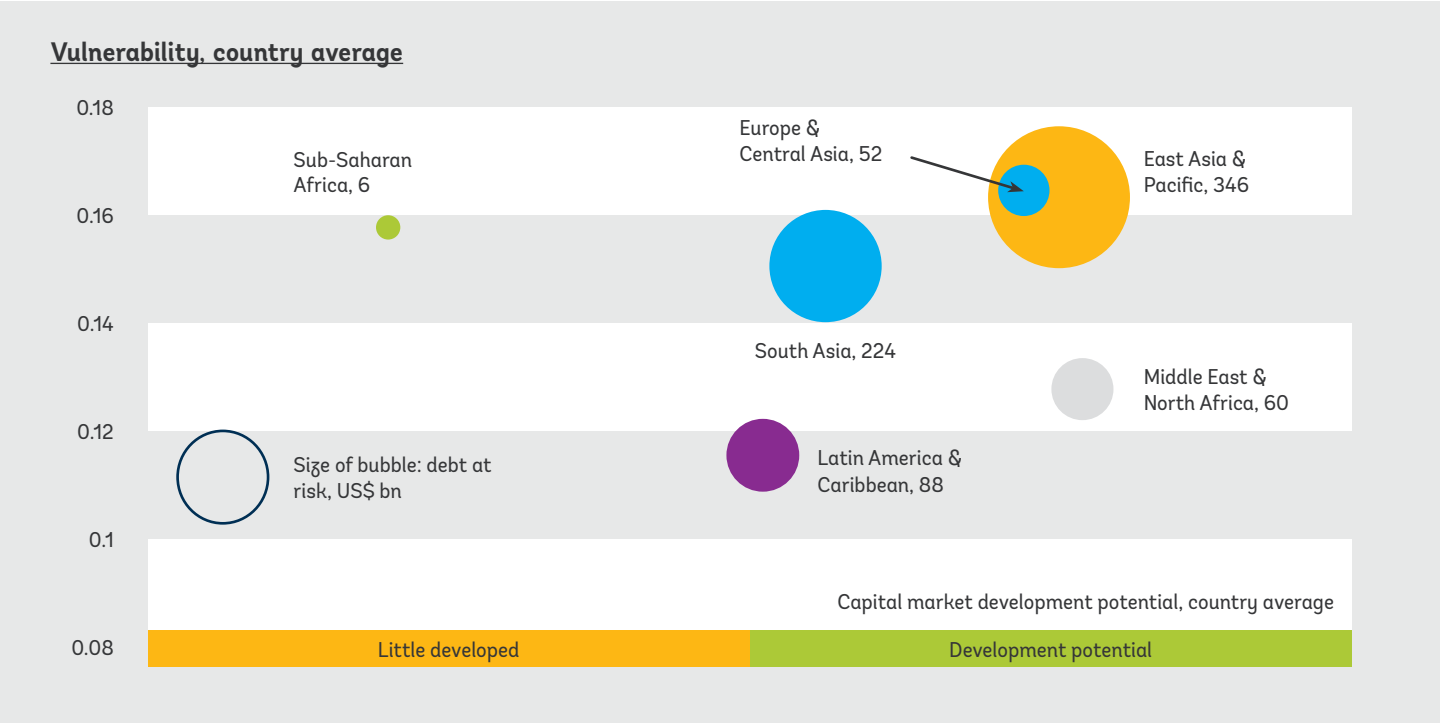
FIGURE 4.6 **Geographic Vulnerabilities and Capital Market Development Potential**



Source: World Bank.
Note: "Development potential" corresponds to "medium development" for the level of the initial indicator.

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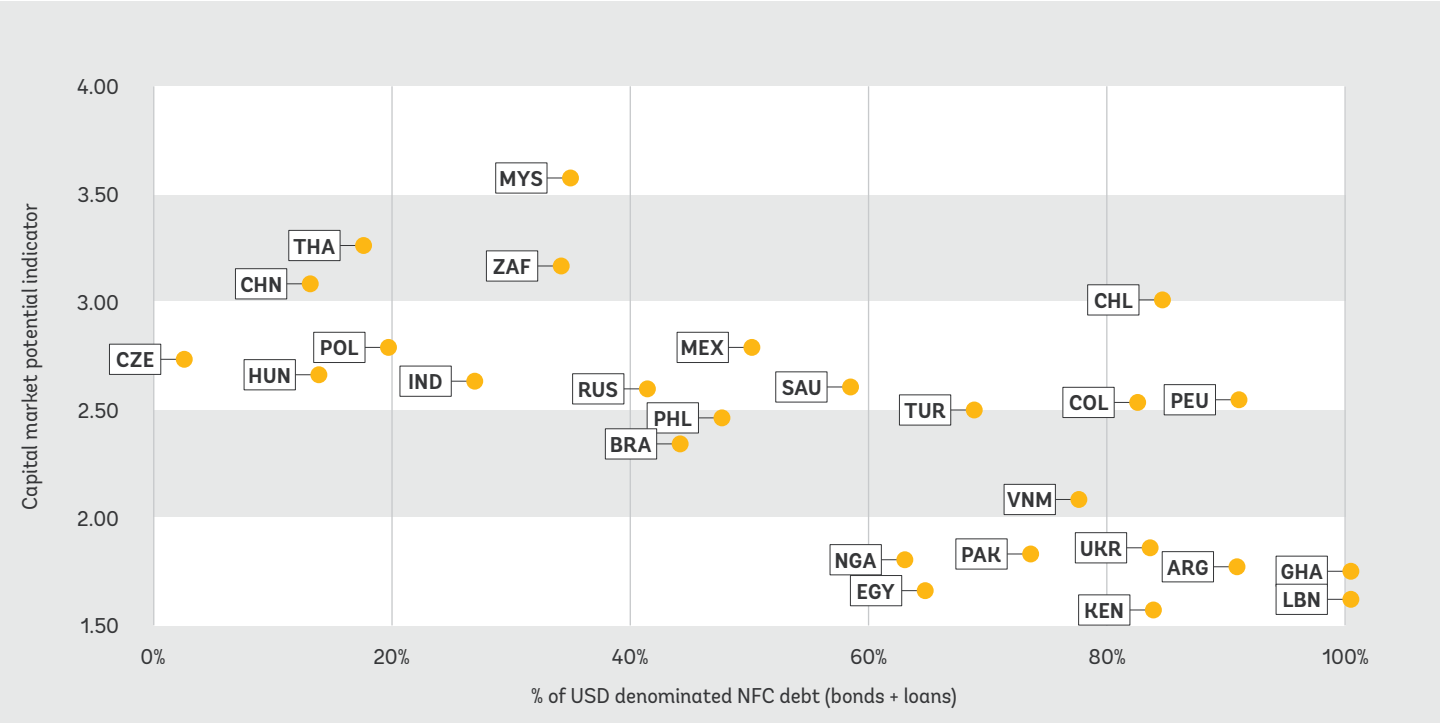
FIGURE 4.7 **NFCs in Some Countries with Higher Capital Market Development Potential Still Focused on USD Borrowing**



Source: World Bank.

V. Assessing Capital Market Solutions

The following section provides guiding principles for policy makers when considering implementing capital market tools. Appropriate and possible capital market tools depend on a large number of factors. Therefore, a decision tree directly applicable in all cases is out of scope. Instead, overall guiding principles are presented to help steer policy makers toward appropriate and possible solutions, if any.

Capital market solutions for corporate debt overhang can be grouped into three broad categories: debt instruments, equity instruments, and hybrid instruments. Before presenting a generalized discussion on these three categories, this section sets out guiding principles for assessing a solution and general principles for adequate public sector intervention, if needed. If capital market solutions are considered, they should meet the following guiding principles: feasible; appropriate; market-based, if possible; and proportionate (if any) public sector involvement (Figure 4.8).

First, any capital market solution must be feasible. Feasibility will depend on both demand and supply factors. For the former, the factors included in the capital market potential indicator are a sufficient investor base that can be attracted and having the necessary financial infrastructure in place. On the supply side, the structure of the corporate sector is equally important for the relevant types of capital market instruments. For example, firm size, sectoral specialization, corporate culture, and ownership structure will be important. For issuing debt in international markets, careful consideration should especially be given to the relative cost of the borrowing, the foreign exchange risk, and the term of the borrowing.

Second, any capital market solution must be appropriate, as liquidity and solvency problems require different solutions. Figure 4.9 suggests which type of solutions should be the primary avenue to explore to find an economically appropriate solution.

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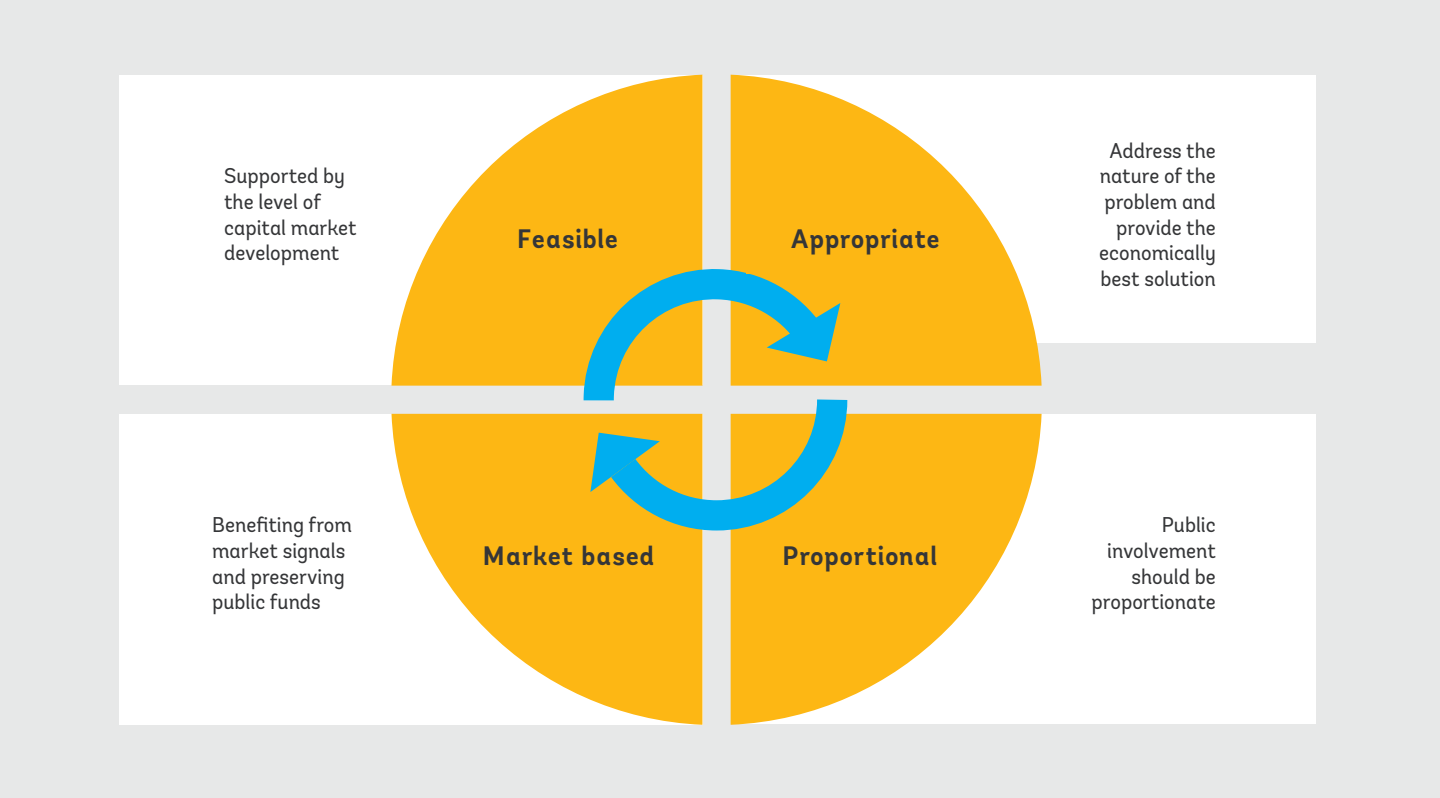
FIGURE 4.8 **Capital Market Solutions to Corporate Debt Overhang: Guiding Principles**



Source: Staff illustration.

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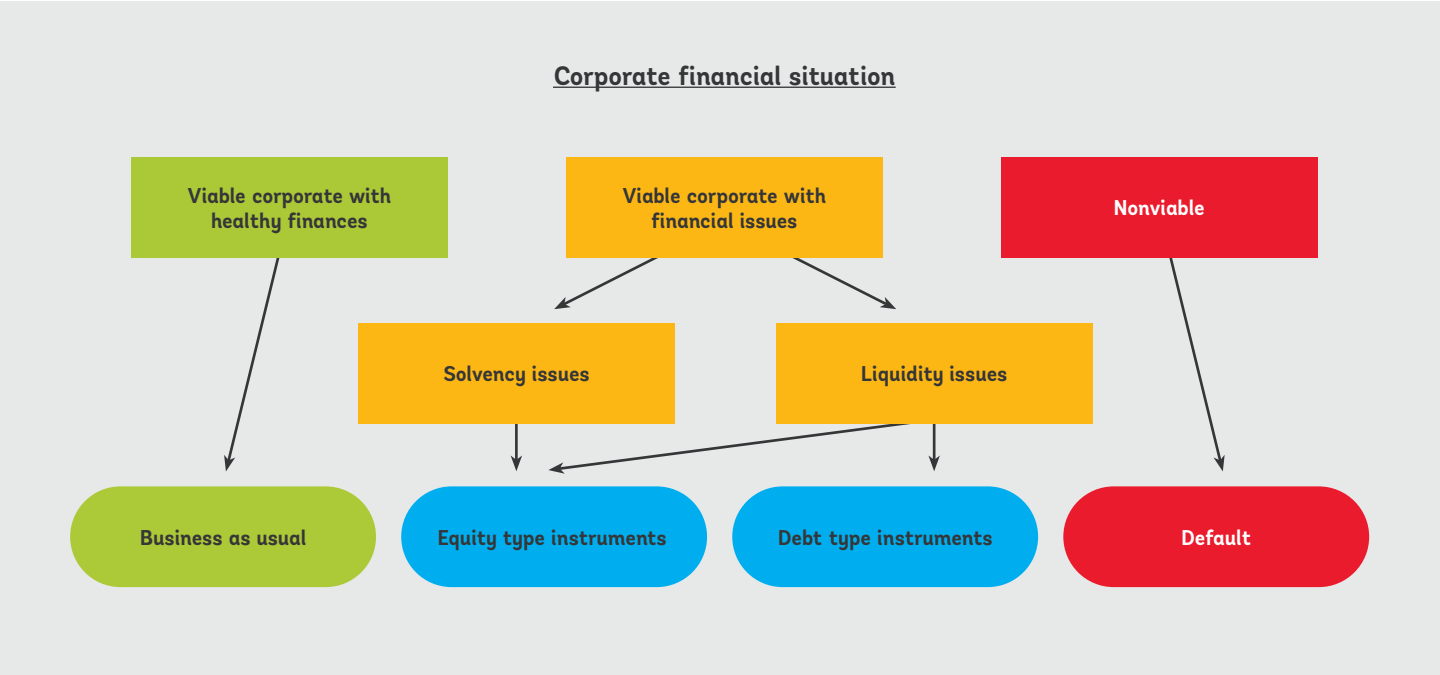
FIGURE 4.9 **Map of Economically Appropriate Solutions Depending on Corporate Condition**



Source: Staff illustration.

Increasing the equity base of a company can address solvency issues and thus provide support so the company has the financial flexibility to undertake profitable investments. The high uncertainty regarding the next stages of the COVID-19 pandemic and the strength, type, and timing of any economic recovery also favor increasing equity capital. Finally, increasing equity provides a permanent injection of funds, whereas debt is subject to coupon payments, redemptions, and potentially withdrawals. Hybrid equity solutions may also have coupon payments and a redemption date, but the full payback in cash, and thus the drain on corporate liquidity, is contingent on developments. On that basis, equity solutions are generally appropriate avenues to explore for viable firms. Hybrid solutions should also be considered and may help strike a balance between equity and debt solutions, although such solutions are likely only viable in the most developed EMDE capital markets.

Debt solutions can address liquidity issues and reduce the risk of cliff effects of widespread defaults, as well as address risks on the existing debt stock. Debt solutions may help to avoid widespread defaults of companies that risk spilling over to the financial system and the economy. Provision of liquidity both from financial markets and the banking system is therefore crucial while governments phase out liquidity support measures. For companies that only face liquidity issues and not solvency issues, debt solutions will suffice to solve their immediate problem, although equity solutions can also suffice. This could particularly be true for those MSMEs that did not have well-established access to financial markets or the banking system before COVID-19 and thus were running their business based on internally generated cash. Box 4.5 in Section VII discusses capital market solutions for MSMEs in more detail. For companies with solvency issues, positive steps include debt solutions such as extending maturity and lowering interest rates to reduce risks from existing debt (e.g., the rollover, interest rate, and foreign exchange risks), but further accumulation of debt and higher leverage is generally not advisable.

Out-of-court restructuring can be considered on a case-by-case basis as it may in some instances be a good solution to address the liquidity or solvency problem of the firm, as highlighted in Chapter 2 of this report. A special purpose AMC or distressed debt fund may play a facilitating role. Finally, if a firm is not viable in the medium or long term, equity or debt market solutions are not advisable. Instead, the advisable solution is restructuring or liquidation, depending on the severity of the financial situation and the firm's importance.

Third, market-based solutions are generally preferred. Such a solution will benefit from the market's assessment of the company's economic situation and preserve public funds for use where they are needed more. As a general principle, policy makers should let the market play its role in allocating capital to the most productive and needed places, for example, by letting the market distinguish between viable and nonviable companies. Still, there can be instances where the allocation of capital is suboptimal from society's point of view. That could be the case for certain strategic sectors if spillovers and contagion risks to other companies and the broader economy are high or in some cases if financial markets are underdeveloped. As a starting point in all these cases, the public sector strategy should focus on facilitating the companies' access to markets and addressing the market failure instead of playing the role of the market. In this way, the use of public capital is reduced, and concerns related to public interventions are lowered.

Last, public involvement should be proportionate. If public sector involvement is needed to facilitate a solution, some extra considerations should be made. Generally, public sector involvement serving as a catalyst to attract private capital on market terms can be considered in cases where there are failures preventing a market-based solution. Initiatives to support the development of markets are also generally advisable. More direct involvement, such as co-investment/guarantee solutions, should be considered carefully and evaluated against all other alternative solutions, including the option of not acting. If public intervention is indeed warranted, solutions should be designed so that the public purse is rewarded from any economic recovery. The design of public sector involvement should be carefully considered. Box 4A.1 in Annex 4A provides more detail on considerations for policy makers in providing public policy support for capital market solutions.

VI. Types of Public Sector Interventions

Credit guarantees and other risk reduction methods protect bondholders against the bond issuers' defaults or any other kind of mutually agreed "credit event." As a result, these instruments upgrade the credit quality of the bond issuer. Providers of such risk reduction mechanisms can be private companies, government agencies, or international financial institutions. Guarantees, in particular, will constitute a contingent liability for the provider. However, in most EMDEs, the economics for private insurers of providing risk reduction mechanisms to individual NFC issuers is not yet compelling,[129] and it normally requires some kind of public intervention.

Governments could set up agencies to provide risk reduction mechanisms to targeted borrowers. Box 4.2 provides an example of a government-supported credit fund. If these agencies do not use market pricing, they provide a government subsidy to the beneficiaries, that is, the local NFCs. This, in turn, raises issues of transparency, fairness, potential for corruption, and potential fiscal costs to taxpayers. In addition, while they may relieve pressure for NFC restructuring, they also delay the strengthening of the corporate sector. For issuance in international financial markets, the credit rating of the guarantor will likely have a significant effect on the market pricing of the guarantee, and as a result, guarantees issued by lower-rated sovereigns may be less efficient.

Multilateral development banks such as the World Bank Group and the Inter-American Development Bank also offer partial financial guarantees to some EMDE borrowers. The guarantee can be tailored to meet the needs of both borrower and creditors. Guarantees should be limited to the minimum amount necessary to facilitate a successful transaction. Guarantee facilities have many benefits, such as enabling corporate market access, diversifying the investor base, and contributing to capital market development. Notwithstanding these benefits, operationalizing a guarantee program in practice can be challenging, as guarantees are sometimes not efficiently priced in the market. One driver of this is the heterogeneity of terms, conditions, and coverage events. However, neither guarantees nor credit-enhanced borrowings may represent the most efficient way to use capital from multilateral development banks and would need to be evaluated on a case-by-case basis.

Debt or equity co-investments by local development banks, strategic investment funds, sovereign wealth funds, or state pension funds may be considered. Such investors are often well placed to invest in local viable corporates in strategic sectors and to help support an economic recovery, especially in circumstances where the banking system is not providing such funding. However, such public-level involvement needs to be carefully weighed by policy makers. The current unprecedented crisis calls for extraordinary measures. In some circumstances, it may make economic sense to use local pools of liquidity to support the corporate/MSME sector. Such investment could be via either debt or equity and could be on market terms.

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BOX 4.2 **Credit Funds Supported by Governments and Multilateral Development Banks**

Credit funds, supported by multilateral development banks, could (i) expand financing to mid-market companies; and (ii) help countries deal with the many problems that arise from corporate debt overhang, including lack of bank financing. The fund could be structured in various ways to attract institutional and/or retail investors. The authorities would need to define the characteristics of the fund, including:

- Type of assets that can be included in addition to direct loans (such as acquisition of loans up to a certain percentage and receivables)
- Maximum concentration per debtor to the total portfolio
- Maximum participation as financier for the total debtor's indebtedness
- Type of loans accepted (minimum and maximum amount, tenor, index, and guarantees)
- Minimum and maximum administration fees

129. In many EMDEs, the credit market infrastructure (such as credit registries and volumes of financial disclosures) is often underdeveloped, which means that there is not enough industry-specific credit information to accurately price credit risk. This results in a high premium that makes it prohibitively expensive for NFCs, and especially MSMEs, to enhance their bond issues.

In more systemic cases of corporate debt overhang of sizable NPLs that threaten financial stability, policy makers must consider the merits of establishing a public AMC to take responsibility for resolving NPLs, as outlined in Chapter 2. Such an AMC may be established by the government or with multilateral development bank support. Policy makers should be cognizant that government interventions on such a scale increase the bank-corporate-sovereign nexus and may also have implications for sovereign borrowing costs and overall country risk premium.

Government arrears to NFCs (for services provided to the government) can be a major liquidity problem in some EMDEs. While a portion of these arrears relate to the COVID-19 shock, they have been an ongoing issue in some Sub-Saharan African countries, such as Angola. In some of these countries, governments have tried to manage the arrears problem by issuing government securities to affected firms. Due to a lack of depth in the financial sector, it may be difficult for the relevant firm to sell the security in the market. One potential solution would be a debt fund supported by the private sector or a multilateral development bank. The fund would purchase the securities from the affected firms, thus alleviating their liquidity problem. The fund would then manage the debt portfolio and sell the securities to institutional investors over time. A relatively active secondary market as well as a mix of institutional investors would be required for such a proposal to work efficiently. Furthermore, as the risk of crowding out would be large, coordination between the fund and the country's debt management office would be very important as any lack of coordination would result in volatile borrowing costs for the government. Moral hazard is also high with such funds, as the government may be less willing to pay arrears, especially if there is multilateral development bank support. Given these constraints, such a fund would likely be a solution worth considering in only a small number of EMDEs. Some other formats could also be worth considering, such as changes to collateral rules or allowing corporates to offset their tax liabilities. This could also help develop a secondary market for these securities over time.

VII. Instrument Overview

This section outlines a non-exhaustive list of capital market solutions for dealing with a corporate debt overhang. Figure 4.10 provides an overview of the main types of capital market instruments. The relevance of each solution will need to be considered in more detail and adjusted to the specificities of each country, corporate, or corporate sector and to the nature of the problem at hand. Solutions should also be assessed by whether they complement or work against each other and by the extent to which public sector involvement is necessary, as well as its effect on other aspects of market functioning. Other, more innovative instruments could work in certain circumstances, but the type of instruments used will be dictated largely by the level of capital market development. The use of more bespoke instruments is likely only at the margin.

The feasibility of the solutions should be determined on a case-by-case basis guided, for example, by analysis of the current state of the market and by assessing prerequisites and enabling factors for specific solutions in a country. No recipe indicates when a capital market exists or has the potential to be developed. However, a number of enabling factors can be assessed. Many are common for different capital market solutions, although each solution may also require considering more specific prerequisites. The next section discusses three main types of instruments and highlights necessary preconditions.

A. Debt Instruments

When facing a crisis or uncertain outlook, corporates should aim to reduce inherent risks in their debt portfolios, such as overreliance on foreign currency borrowing or short-term debt. Since the onset of the COVID-19 pandemic, many NFCs have used the benign financial market environment, supported by the extraordinary policy response, to good effect by issuing debt in both the domestic and the international market (Figure 4.11).

Debt instruments are often preferred by NFCs over equity instruments. Many NFCs are more comfortable with debt instruments given the familiarity with loans and credit lines from the banking sector. Moreover, issuing debt in the domestic or international market can often be a more flexible and cost-effective funding tool than a bank loan. For example, an NFC can lock in fixed borrowing costs over a relatively lengthy time horizon, compared to a bank loan, and be subject to fewer borrowing conditions. Certain markets may have more of an equity culture, and in these cases, the domestic debt market for corporates may be relatively less developed.

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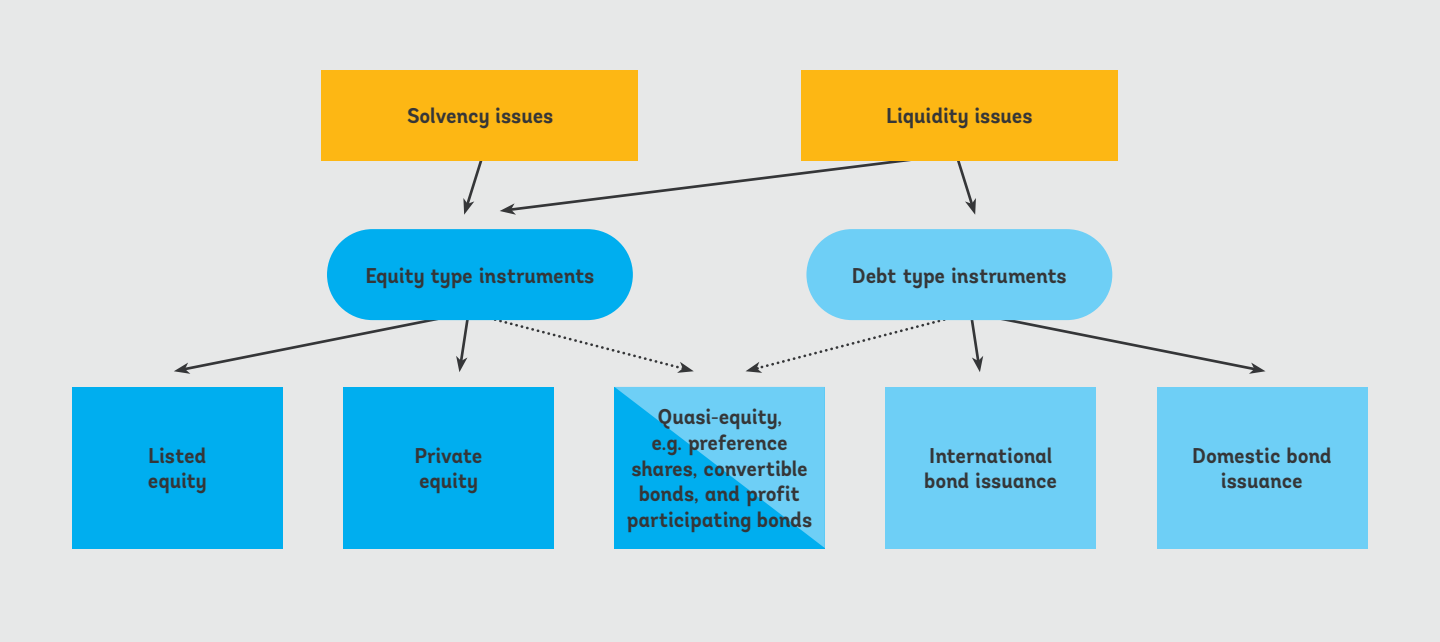
FIGURE 4.10 **Capital Market Instruments to Address NFC Solvency and Liquidity Issues**



Source: Staff illustration.

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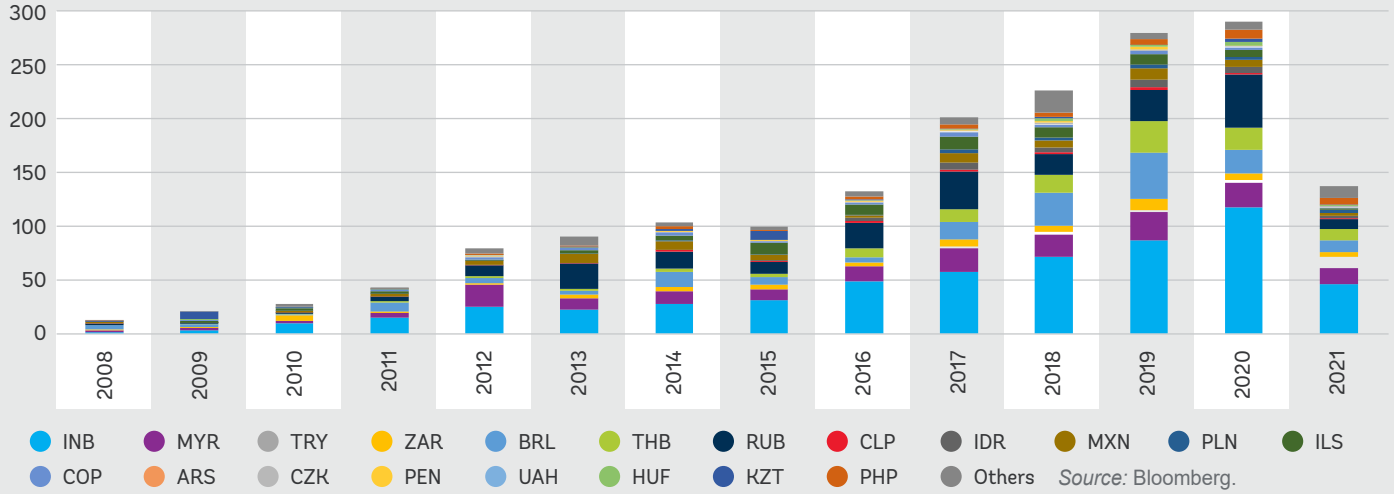
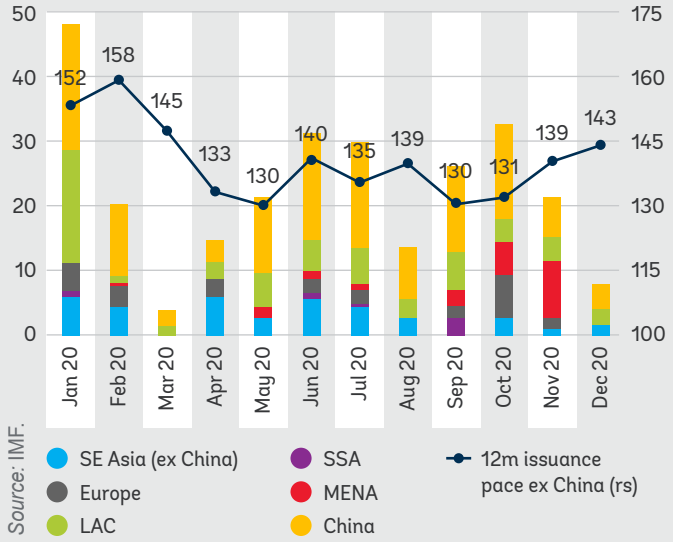
FIGURE 4.11 **NFC Issuance Trends in Domestic and International Debt Markets**

Local currency markets also saw an increase, but remain small and fragmented outside the largest EMDEs



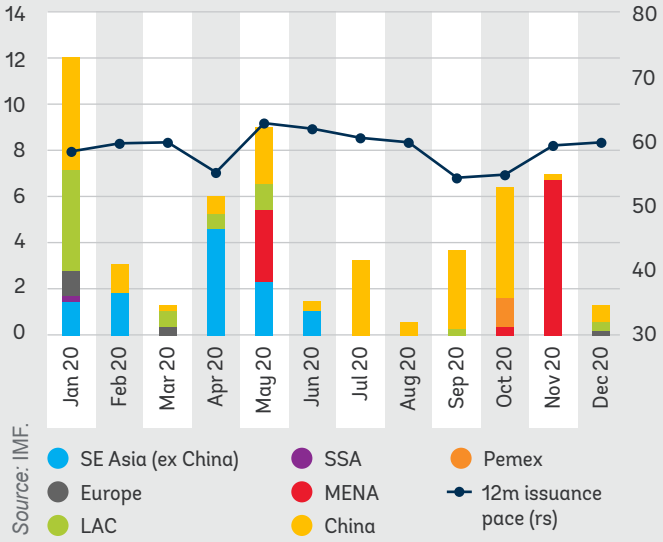
Source: Bloomberg.

Record year of NFC issuance in international capital markets dominated by China



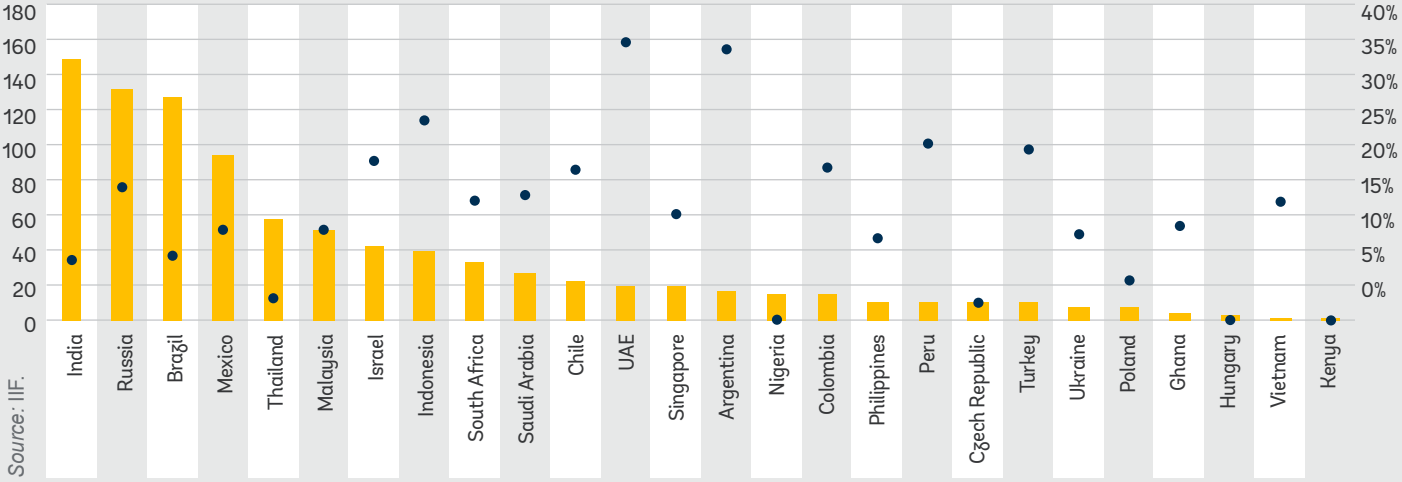
Source: IMF.

State-owned enterprise issuances contribute a large share to NFC international issuance



Source: IMF.

Some EMDE corporates have significant bond redemptions in the next three years



Source: IIF.

Issuance in the domestic market. Corporate issuance of domestic currency bonds is low in most countries with underdeveloped capital markets. This is mainly because of the lack of financial sector depth and the culture of continued heavy dependence on bank funding in many EMDEs. In many cases, issuing in the local market can be more expensive than bank funding. Foreign investor demand is also generally low. Factors such as taxation, currency risk, thin liquidity, limited access to information on the issuer, and lack of coverage by rating agencies are key barriers to increased foreign investor involvement. As a result, many foreign investors favor the more diversified and liquid international corporate bond market. Given this backdrop, it is likely that the domestic debt market can only act as an important corporate funding source in the most developed EMDE capital markets, where the institutional investor base is large. Box 4.3 explores one possible solution for public sector involvement to support local currency corporate bond markets.

In international markets, debt issuance in hard currency can cater to a broader group of investors and be more liquid. On the downside, the access to the market depends more heavily on global financial developments, and the risk perception of the investor base is often more volatile. Issuance in international markets should be of a large size to attract investors and reduce the premium that the issuer pays if the bond liquidity is low. In addition, only bonds with a certain minimum outstanding amount are included in the relevant bond indices, which is another important consideration. Corporates that issue in international capital markets are exposed to a turn in the EMDE financial cycle. Lower-rated sovereigns and NFCs are most exposed to higher interest rates and a change in international risk perceptions as the global economic recovery takes hold. A sudden reversal of capital flows, like the one experienced during the taper tantrum episode in 2013, will put access to lower-rated sovereigns and corporate issuers at risk. Furthermore, in a more systemic scenario of corporate distress, the corporates' respective sovereign market access would also likely be affected—a manifestation of the sovereign-corporate nexus (European Central Bank 2021) that could also be exacerbated by high debts in state-owned enterprises. In such cases, issuing debt in the international market would not likely be an option. International issuances are skewed toward countries with more developed markets, but less so than domestic issuance.

Liability management operations can occur in both the domestic and international capital market. A decline in the secondary market prices of existing debt presents an opportunity for the company to restructure its debt on more favorable terms. By repurchasing their debt for cash or exchanging the debt for new securities, the company can reduce its indebtedness as well as the related interest cost. A company that decides to restructure its outstanding debt securities can do so with or without the use of cash. Before a company embarks on a debt restructuring, it should carefully

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BOX 4.3 A Local Currency Corporate Bond Platform

A local currency guaranteed fund could provide a mechanism for corporates to access funding in local currency. Such a fund could be operationalized via a guarantee from a multilateral development bank, as well as by private debt funds. This public sector involvement is quite likely to prove attractive to foreign investors. The fund, modeled on the CGIF Asian Bond Markets initiative platform,[130] could invest in local currency bonds of viable nonfinancial corporates and offer investors a cost-effective way to gain diversified exposure to relatively high-yielding assets with contained risk. The CGIF provides guarantees on bonds denominated in local currency and issued by NFCs in the ASEAN + 3 region. The aim of the CGIF is to help NFCs that otherwise would have difficulty issuing in local bond markets to secure longer-term financing and reduce their dependency on short-term foreign currency borrowing to mitigate currency and maturity mismatches.

A local currency fund would be attractive to smaller NFCs that would otherwise find it difficult to access a wide investor base. However, funded NFCs would require relatively sound fundamentals to make the fund attractive to institutional investors. The bundling of assets in this way may require substantial operational and financial involvement of the sponsoring institution. Experience suggests that such an initiative may require a sustained effort over several years. It is not clear whether the fund could be expanded to a macro-relevant scale in time to make a difference in the aftermath of the COVID-19 pandemic.

130. Credit Guarantee and Investment Facility, https://www.cgif-abmi.org.

review the terms of its outstanding debt. In many situations, covenants in bank or other debt agreements will restrict the company's ability to redeem its debt securities. Waivers of these covenants may not be available while the company is in financial distress. In most situations, there will be some limited exceptions to this restriction, and the company will need to ensure that the terms of any proposed restructuring fit within the limited exceptions. Companies also need to consider the tax consequences of debt buybacks and exchange offers. Figure 4.12 illustrates common corporate liability management techniques.

Issuers of bonds trading at distressed prices may find that none of these methods are realistic because each requires a significant amount of cash, which is generally in short supply for troubled corporates. In addition, most senior credit agreements limit or prohibit repurchases of junior debt (whether unsecured, subordinated, or secured on a junior lien basis) ahead of its scheduled maturity. As a result, often the only viable option outside bankruptcy for many distressed low-rated issuers is an exchange offer, typically coupled with an exit consent that removes most of the protective covenants from any non-exchanged bonds. Annex 4A considers some of the approaches to restructuring corporate debt.

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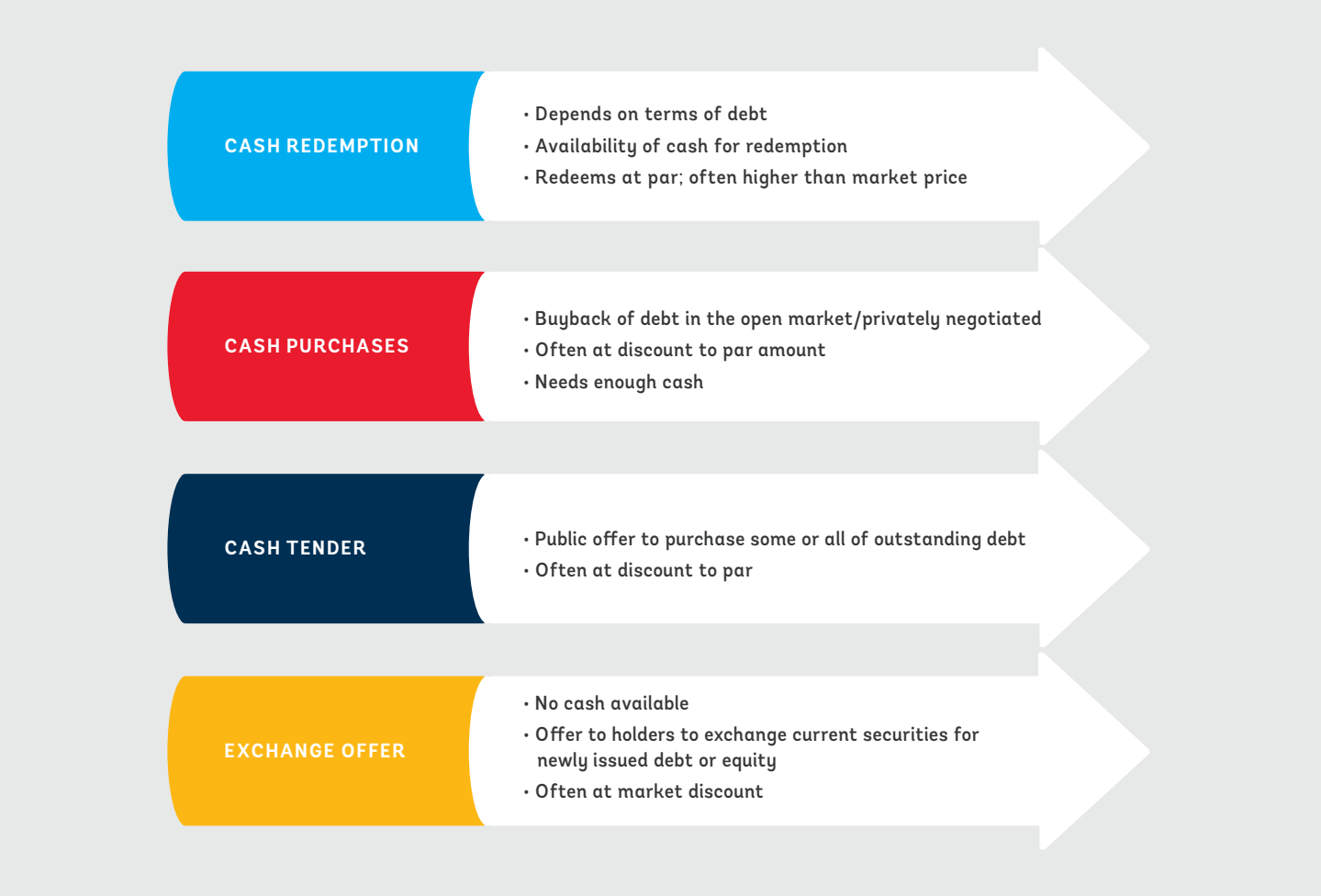
FIGURE 4.12 **Overview of Key Liability Management Techniques**



Source: Davis, Polk, and Wardwell 2008.

Preconditions for NFCs' Issuance of Debt Instruments

Developing the local corporate bond market generally requires (i) a stable macroeconomic environment; (ii) a relatively developed financial sector; and (iii) a solid institutional environment (Figure 4.13). As a result, only a limited number of EMDE NFCs have issued debt in domestic capital markets. In addition, many NFCs in EMDE countries lack the financial sophistication to actively engage with corporate bond markets, often viewing this funding route as too complicated, costly, and difficult to explain to shareholders.

Issuance in the domestic debt market requires a relatively well-developed government bond market. A developed government bond market provides a foundation for the development of a local corporate bond market. For example, the government bond yield curve serves as an important reference point for capital market activity, while the existence of robust market infrastructure supports the development of the market. The primary market framework also needs to be appropriate for issuers while ensuring investor protection. Such a framework can include a streamlined registration process and issuance regulation; reduced approval time and fast-track options such as shelf registrations for seasoned issuers; integrated disclosure; and e-prospectuses.

NFCs from EMDEs with underdeveloped local capital markets or more international balance sheets could consider issuing in international debt markets. Corporates that access international capital markets generally need to meet certain requirements, and their ability to do this will depend on their balance sheet size, financial situation, credit history, industry, and geographic location. In some cases, in less developed EMDEs, only the largest NFCs in the country will have the ability and scale to access international capital markets. Issuance in international debt markets normally requires a credit rating; there may also be many other fees, which can be nontrivial and should be factored into decision-making.

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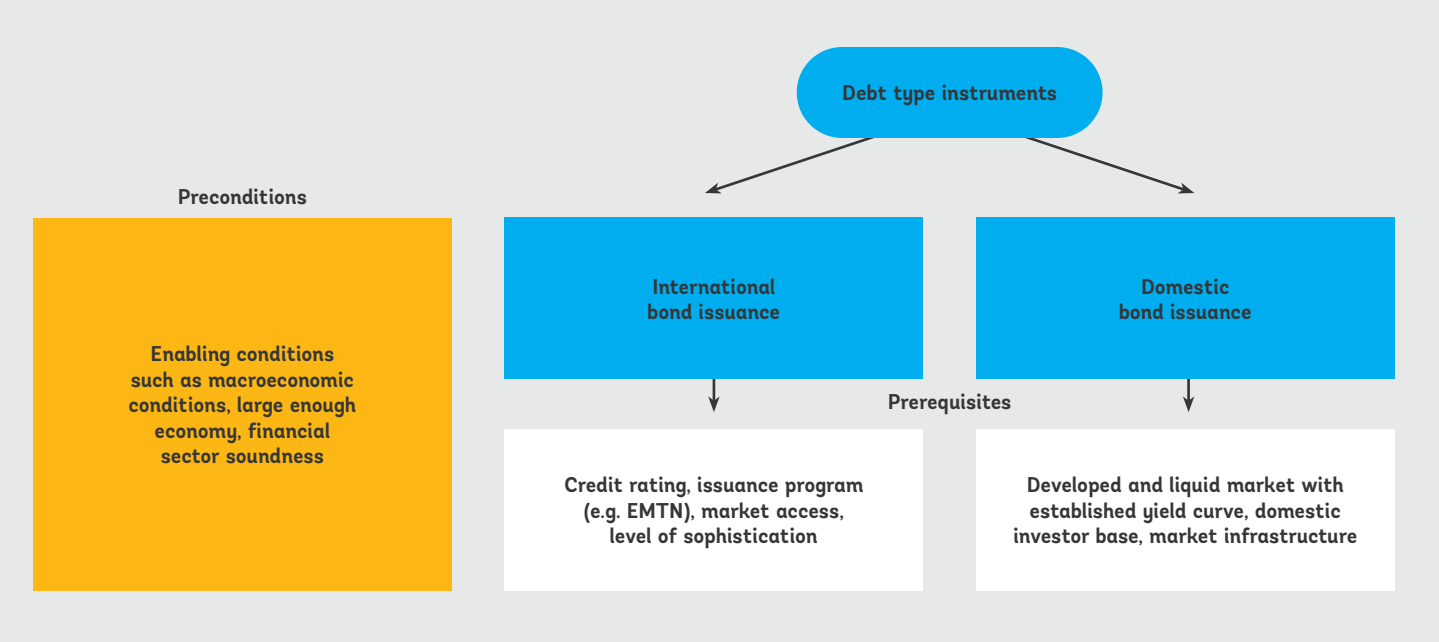
FIGURE 4.13 **Preconditions for Debt Issuance**



Source: World Bank.

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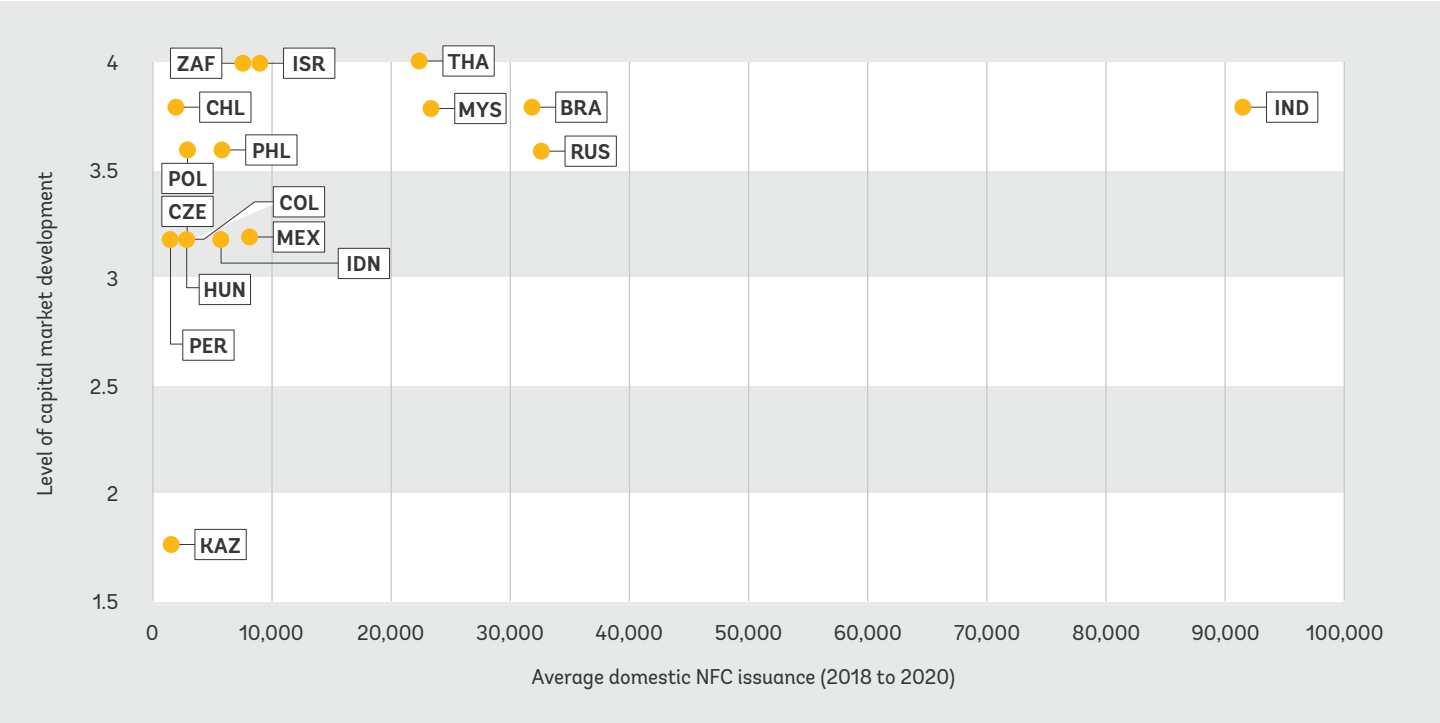
FIGURE 4.14 **Domestic Corporate Bond Markets**



Source: Staff illustration.

Potential for Debt Instuments

Only a limited number of EMDEs have active domestic corporate bond markets (Figure 4.14). As a result, NFC debt options are most promising in these markets. This assessment is based on average NFC issuance volumes in the domestic market over the period 2018–2020. Notwithstanding this assessment, and as illustrated in Figure 4.14, which also considers capital market development potential, policy makers should be cognizant that the current environment may present an opportunity to begin developing the local corporate bond market, based on local specificities. Finally, the potential for crowding out is an important consideration when developing a corporate bond market, particularly in economies with less financial depth.

B. Equity Solutions

The choice between debt and equity as the source of financing can vary depending on a firm's life cycle, market conditions, and company preferences. Equity solutions can provide firms with patient capital, promoting long-term innovation, risk taking, and growth. The decision is relevant, especially for growth companies that want to shift from being a small-to-medium company to being a large one with the potential to affect the real economy and boost overall economic growth (Isaksson and Çelik 2013; OECD 2019).

Where there is a public domestic equity market, both listed firms and nonlisted firms can, in principle, raise new equity. Nonlisted firms can go public in initial public offerings. However, the expensive administrative requirements behind public listing make it less attractive for many firms. Furthermore, the process of listing is long and costly, and success is subject to having stable market conditions over longer periods. Listed firms can do follow-on issuances (sometimes referred to as seasoned equity offerings). These can take the form of rights offerings, where existing shareholders receive a right to buy new shares, or issuance to new investors. For investors, equities are well-known and straightforward financial products with a high risk and reward and offer a voting right. They are tradeable in small sizes and on a continuous basis, which makes public equity particularly attractive to a broad investor base, including retail investors. As illustrated in Figure 4.15, since the beginning of 2020, NFCs in countries with the highest level of initial capital market development were able to issue the most equity, apart from a few outliers. The figure also suggests that equity issuances only take place in significant volumes in countries with relatively developed capital markets (i.e., a score of 3 or above)[131] and deeper investor bases.

131. Based on the capital market development indicator.

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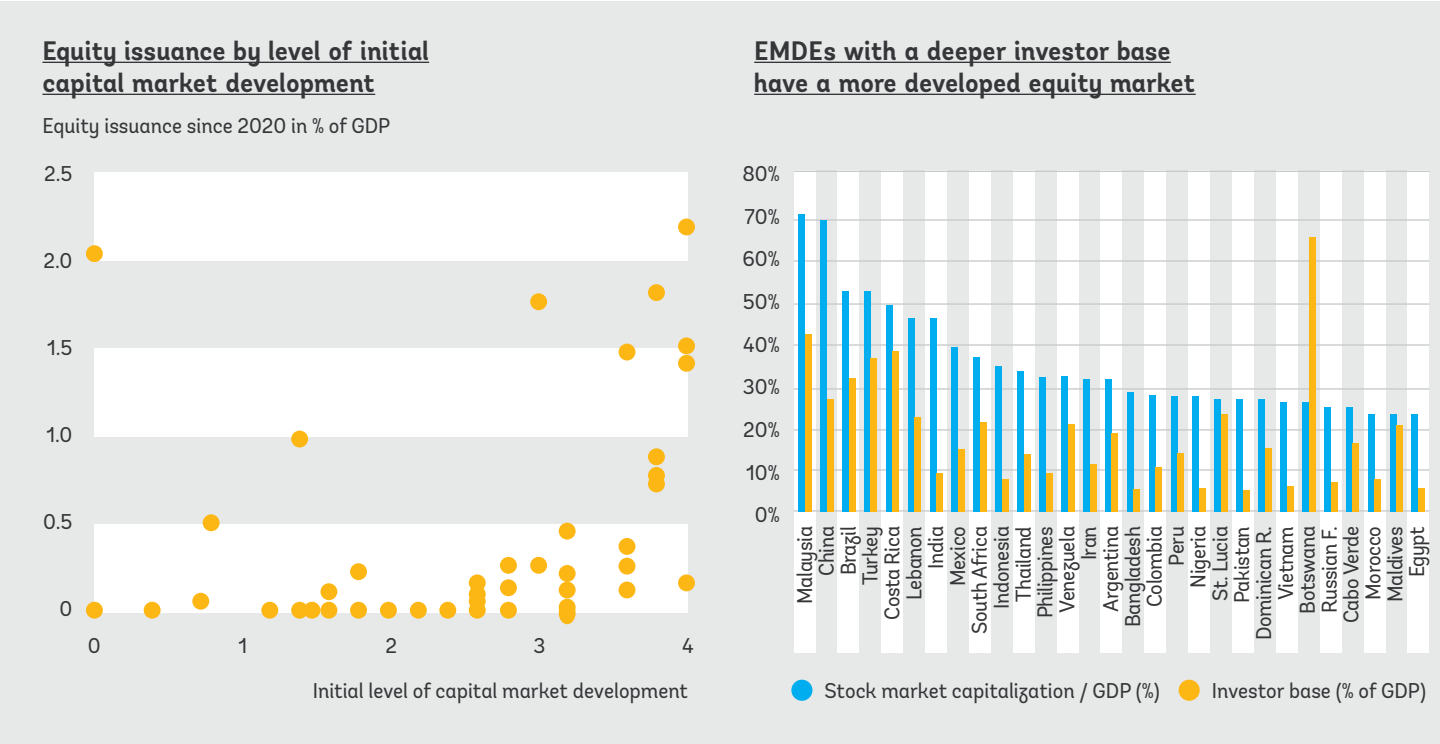
FIGURE 4.15 **Equity Markets in EMDEs**



Source: Bloomberg and World Bank.

Source: World Bank.

Private equity (PE)[132] funds are pooled sources of capital that are used to invest in the equity ownership of companies. Investors buy equity/quasi-equity securities in companies that are not publicly traded, and in exchange for the capital they take an ownership stake in the company, with an expectation that the company will be more valuable and will generate profit when the investor exits in three to seven years. Most funds are structured as partnerships, but other legal structures exist, such as trust and limited liability companies. PE funds can leverage their strategic and operational know-how to help companies navigate the COVID-19 crisis and post-crisis re-adjustments. Unlike other financial intermediaries, PE funds do not just provide capital; they also provide firms with operational capabilities that will be critical in helping them navigate the major trends that will shape economies in the post-COVID-19 world.[133] The PE business model is well suited to help navigate companies out of economic crises, as companies can benefit from the strategic and operational know-how of investors. PE solutions could be particularly useful for MSMEs, for which public equity listings are unlikely and tighter lending conditions make securing debt financing more difficult.

Preconditions for Equity Solutions

Preconditions for equity market solutions share many similarities with those needed for the domestic bond market to develop. For some markets, depending on local specificities, equity appears first, and the market for corporate debt develops later. The experience of the World Bank Group in the field suggests that in practice there is no rigid sequencing between equity and corporate bond markets; rather these two markets tend to develop in parallel (due to their complementarity) albeit at different speeds—depending on local context.

Equity market development is often curtailed when the preconditions for market development are not present. Raising capital through the equity market is much more difficult than from the corporate bond market. Corporate governance is a big challenge for small equity issuers. The level of disclosure requested by corporate governance requirements is costly; transparency requirements make equity issuance more expensive than debt issuance. In small economies, equity issuers may face another challenge: protection of the

132. https://www.ifc.org/wps/wcm/connect/2099c86a-0f99-404f-b407-0691869bc00e/202008-COVID-19-Impacts-PE-EMs.pdf?MOD=AJPERES&CVID=ngxmslN.
133. These include (i) shifts in global supply chains; (ii) digital transformation; and (iii) increased demand for environmental, social, and governance investing and related impact-oriented investment opportunities.

minority stakeholders. Those markets contain a lot of family-owned companies, the current owners of which might be reluctant to give control and/or monitoring rights to people outside the family. This reluctance may prevent the company from going public.

In many EMDEs, large companies have the choice of listing on a domestic or a foreign exchange (either a larger exchange in the region or an international exchange), which may offer more investors, prestige, and liquidity. This can be beneficial for the domestic capital market as it allows foreign investors to get comfortable and familiar with companies from that market, making them more likely to participate in the domestic market once any legal and regulatory barriers for foreign investors are removed. On the other hand, strong regional markets can attract issuers, investors, and liquidity away from the domestic market.

A challenge for equity market solutions is whether existing investors have incentives to support the issuance of new equity and whether new investors have incentives to inject capital. By construction, when new equity is issued, the existing owners are diluted, that is, their ownership share of the company goes down if they do not inject new capital into the company. New investors, on the other hand, typically require a premium to inject new capital, in part to address the risk that the information provided to them is incomplete and that the problems of the company are more severe than were stated to them by the original owner (asymmetric information). However, the literature suggests that these problems can be overcome and that the equity market is used to some extent by distressed companies to raise new capital. Incentives to use equity finance are also affected by corporate tax codes, as interest rate payments on debt are tax deductible. Box 4A.2 in Annex 4A explains ways to address this debt bias to support equity financing, but such attempts may come at a fiscal cost.

PE solutions involve some prerequisites, including a minimum level of private investment and an enabling tax/regulatory environment (see Figure 4.16). Successful PE funds require experienced fund managers with an established presence on the ground and a proven ability to source a proprietary deal-flow. Relevant country and industry experience are also important. A clear investment strategy, a demonstrated successful track record, and a certain level of diversification will also likely make a PE fund more investable. In underdeveloped markets, PE funds may require high levels of support from multilateral development banks, particularly in International Development Association/fragile and conflict-affected situations markets, to demonstrate the viability of the PE business model in unproven situations, establish a track record, and give comfort to other investors, encouraging them to enter into follow-on funds (Box 4.4). Multilateral development banks go beyond providing capital; they also demonstrate that it is possible to invest in nascent markets by providing stable funding, improving fundraising, and promoting environmental, social, and governance standards.[134]

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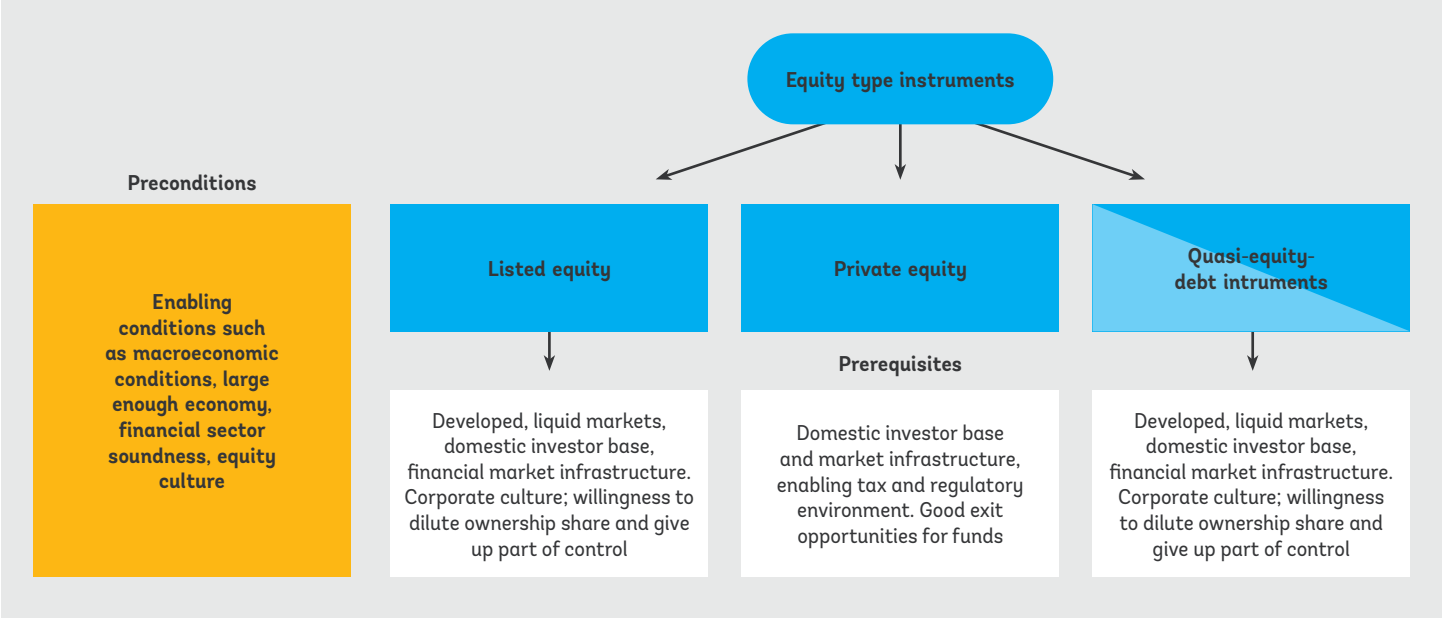
FIGURE 4.16 **Preconditions for Equity Solutions**



Source: Staff illustration.

134. For example, multilateral development banks back more than 50 percent of PE funds in Sub-Saharan Africa and the Middle East and North Africa—regions where the market is still highly underdeveloped—and they back more than 70 percent of the MSME funds critical for nurturing these funds to scale.

Potential for Equity Solutions

Equity solutions will be an option in markets with a more developed capital market. Figure 4.17 illustrates where equity markets could be a viable option now, with markets with a market development indicator of 3 or above showing most promise.

PE is a small but relatively established asset class across many EMDEs. Funding in EMDEs continues to show varying levels of activity, with almost 75 percent occurring in China and India. The macroeconomic impact of the COVID-19 pandemic presents a challenging backdrop for continuing to grow this financing source in many EMDEs. **The uncertainty from the pandemic built onto already significant challenges in investing in EMDE PE funds, such as weak enabling environments; lack of experienced, quality fund managers; shortage of deal availability; and limited exit opportunities**. Another challenge is that most global investors do not invest in local PE and prefer regional offerings with coverage across several corporates and countries. Considering this difficult backdrop, PE is likely to be only a marginal solution in the majority of EMDEs.

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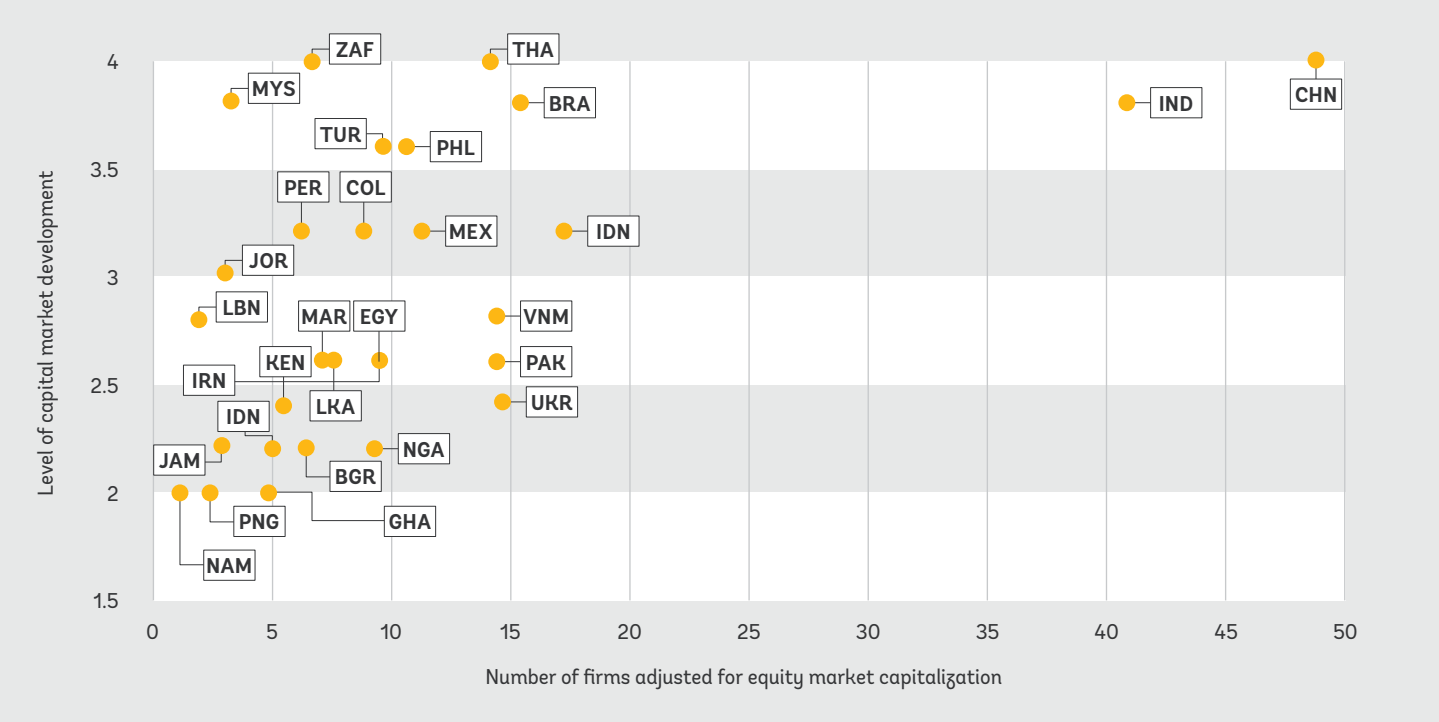
FIGURE 4.17 **Domestic Equity Markets**



Source: Staff illustration.

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BOX 4.4 **International Financial Institutions Supporting PE Funds in More Nascent Markets**

Co-investments are important, especially in the EMDE COVID-19 context. Multilateral development banks have a significant role to play in supporting funds in less developed private equity markets and in scaling up needed MSME financing.[135] These institutions go beyond providing capital by demonstrating that it is possible to invest in nascent markets by providing stable funding; improving fund raising; and promoting environmental, social, and governance standards.[136] Development finance institution partnerships remain vital since their investments still play a prominent role in nascent/basic private equity markets. The increased convening efforts brought about by the involvement of these institutions also helps raise the overall profile of the PE asset class among private companies, institutional investors, and government agencies.

Africa has a nascent PE and venture capital market.[137] The main sectors for funds in these markets are consumer goods/services, financial services (including fintech), and health care. Education is a low volume but promising future business. There is a trend toward "buy and build platforms," especially where North African companies expand into Francophone West Africa. African companies are struggling to raise finance for their new funds, and multilateral development banks are increasingly stepping in to cover the shortfall. Capital has been flowing back to the United States and to other more developed markets where the returns have improved and risks have been lowered.

C. Hybrid Solutions

Hybrid instruments (preference shares, convertible bonds, and profit participating bonds) can raise new, equity-like capital with a smaller degree of dilution for existing owners, but at the cost of a higher strain on future cash flows to pay coupons on such instruments (whereas dividend payments on regular equity are decided on a case-by-case basis). Hybrid instruments' terms can also vary significantly, which further limits depth and liquidity. These factors, combined with the complexity and lack of understanding and standardization of the treatment of hybrid instruments, result in relatively low overall issuance volumes of hybrid instruments over recent years and low numbers of specialized funds that focus on these instruments. Their complexity also means that the cost of issuance tends to be higher, once the issuance cost premium, liquidity premium, and complexity premium are accounted for, in turn reinforcing the low overall volumes.

One type of hybrid instrument that could be relevant in larger EMDEs is convertible bonds. Convertible bonds are flexible financing instruments for the issuer and pay a lower interest rate than regular debt; the trade-off is that they give up upside potential to the investors. In addition, the coupon payments are often tax deductible to the company. However, compared to plain vanilla equity instruments, they entail a higher risk of default than other debt instruments, and the dilution from conversion takes place when the value of the company increases and dilution is most costly for the existing shareholders. For investors, convertible bonds are attractive particularly for periods with elevated uncertainty and for risky corporates with clear upside potential but where the safety of having a claim to debt instead of equity is significant. On the other hand, the bond market is often illiquid, and prices can be volatile.

Prerequisites for Hybrid Solutions

Preconditions for hybrid solutions share many similarities with those needed for the domestic bond market to develop. In addition to the preconditions already discussed under debt and equity solutions, a sophisticated investor base is particularly important. Given the bespoke nature of these instruments, a robust regulatory and legal framework is also paramount.

Potential for Hybrid Solutions

To date, hybrid instruments have only been used marginally in EMDEs. Notwithstanding their limited use so far, they could play a role in the recovery for some larger NFCs that access international markets. In some cases, bonus warrants could be included to make these instruments even more attractive to investors.

135. IFC is heavily involved in the private equity space in emerging markets and often co-invests in funds. IFC (2020) expects fundraising for PE to become more challenging in the next two to three years, especially for funds targeting MSMEs. However, IFC PE funds had sizable cash reserves going into the COVID-19 pandemic, which allowed it to continue investment activity.
136. For example, development finance institutions back more than 50 percent of funds in Sub-Saharan Africa and the Middle East and North Africa—regions where the market is still nascent—while they back more than 70 percent of the SME funds, which are critical in nurturing these funds to scale.
137. The key PE market on the continent is East Africa (Kenya, Ethiopia, Uganda); in West Africa, Nigeria is the main market, followed by Ghana and Côte d'Ivoire; in Southern Africa, South Africa is the main market; in North Africa, Egypt and Morocco are the key markets.

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BOX 4.5 Capital Market Solutions for MSMEs

The pandemic has particularly affected MSMEs, which often play a key role in EMDE economies and are central to economic recovery. Adian et al. (2020) showed that MSMEs were particularly affected by the COVID-19 shock for several reasons. First, MSMEs are prevalent in countries and sectors more affected by the crisis. Second, MSMEs are more vulnerable to some of the pandemic's channels of impact than larger firms within the same country and sector, and, finally, MSMEs may have fewer avenues to respond and manage the impact. These include thinner equity cushions, lower liquidity buffers, limited financing, and less diversified revenue streams. Given a greater reliance on bank financing, MSMEs may be a particular source of vulnerability for small and regional banks with significant asset concentration in lending to such firms; see Chapter 1 of this report.

Capital markets have played a limited role in mobilizing private sector funding to MSME financing in EMDEs. The pandemic is causing countries to re-evaluate the role that capital markets could have, in both the recovery phase and longer term. What solutions should be pursued is country dependent, because (i) countries' objectives differ in focus in addressing immediate working capital needs, more medium-term needs, or even growth financing; (ii) the role of the banking sector and its ability/willingness to provide MSME loans varies; and (iii) the state of development of capital markets and the investor base differs, as does the macroeconomic environment. Investment funds could play an important role in the recovery phase in EMDEs, as they allow pooling of exposures to MSMEs and provide diversification and expert management. However, they are not suited to all countries, and their use would require a more clinical deep dive into the specificities of each market.

- **Equity funds**. PE encompasses a range of investment strategies, including growth equity, buyouts, and venture capital. PE venture capital is most important in the context of MSMEs.
- **Debt funds**. This is a new but growing asset class across EMDEs. Depending on the type, these funds could provide short- and medium-term capital to support MSMEs' financial conditions, as well as longer-term debt financing for capital investments. Debt funds require an asset management industry already in place, as well as a reasonable domestic institutional investor base (at least 10 percent of GDP).

Mobilizing capital market solutions for the MSME sector may need some type of government intervention to foster investor mobilization, such as co-investments. Some form of profit/loss arrangement, guarantees, or co-investments increases investor confidence, particularly in MSME financing where information asymmetries may be large.

- **Several other solutions could help mobilize capital markets to MSME financing, but they must be analyzed from a broader context and with the objective of expanding the mechanisms for MSME financing**, rather than with the lens of the recovery, which requires more ready solutions. In considering adoption of such solutions, policy makers should consider if they are scalable and implementable relatively quickly. Different types of platforms that can connect SMEs with investors can be considered (lending platforms, equity crowdfunding platforms, receivable platforms). For a more in-depth overview of SME solutions, see the recent World Bank Group Capital Markets and SMEs report.[138]

138. https://openknowledge.worldbank.org/handle/10986/33373.

VIII. Conclusion and Policy Recommendations

The role of capital markets in resolving the current corporate debt overhang depends on several factors. First, to play a role it is necessary either that the NFCs seeking financing can access the international capital markets or that the level of development of the local capital market is supportive for a domestic capital market solution. The corporate financial situation and the type and size of the corporate also play key roles. In some cases, other types of financing, such as PE or debt, or risk-sharing schemes provided by the government or multilateral development banks may make capital market solutions more viable. In most cases, the domestic market will only play a role in larger economies with more developed capital markets. These markets generally display a well-functioning local currency government bond market, a broad and diversified investor base, and the presence of foreign investors. Even in larger EMDEs, there are limits to the role that capital markets can play in resolving the debt overhang problem.

Historically, the issuance of equity and equity-like instruments has been on a small scale compared to the debt levels of NFCs. While the issuance of equity or equity-like instruments, to the extent possible, is important to reduce the potential effects of a broad corporate deleveraging that could delay and dampen the economic recovery, there are often barriers such as low investor risk tolerance and a poorly diversified investor base. Issuance of new debt does not address the problem of higher leverage, but debt issuance and debt restructuring efforts by corporates should be aimed at reducing the risks on their existing debt and taking advantage of the windows of opportunity in the financial markets to improve terms through refinancing.

The potential of capital market solutions also depends on the types and sizes of firms and the state of corporate health. Access to listed debt and equity markets is primarily an option for the largest companies, as listings entail issuance and listing costs and stricter disclosure requirements. Countries should seek to have robust but proportionate requirements for public offering and listing, potentially differentiating between large and small firms. Particular attention is needed to address the financial problems of MSMEs without access to capital markets and with no close banking relationship. Few capital market solutions are of relevance in this respect, but facilitating PE flows and freeing up lending capacity in the banking sector will nonetheless be supportive.

For many countries, the low depth of local capital markets limits corporates' access on a significant scale to equity or debt markets and limits their ability to develop other capital market solutions, such as PE solutions. Research and experience suggest that several preconditions need to be met for capital markets to develop. These preconditions can be grouped into three main categories: (i) a stable macroeconomic environment; (ii) a relatively developed financial sector; and (iii) a solid institutional environment. In addition, many corporates in EMDE countries lack the financial sophistication to engage with financial markets, often viewing this funding route as too complicated and costly; existing owners may also be very averse to the dilutional effect of new equity issuance. Countries with less developed markets should aim to improve the preconditions for developing a domestic capital market. Even though capital market solutions will only have a marginal impact on the current situation, they could play a larger role in similar situations in future.

Public intervention should be targeted at supporting the survival of long-term viable firms while avoiding cliff effects from too quickly unwinding broad support for the economy. Public resources are scarce in EMDEs. In that respect, capital market solutions, if feasible, are in principle suitable to support the recovery to the extent they are on market terms or constitute a method to foster flows of private funding or to leverage public money by raising private funding. Leveraging money can be in the form of co-investment, for example, in mezzanine tranches or by providing partial guarantees. Public intervention can be aimed at building a good foundation for corporates to access stable, long-term investors from abroad and at home. For example, sustainable development goals financing is a growing field and has the potential to attract capital from sources that would otherwise not be available.

Finally, it is important that potential public interventions do not distort market competition or keep unviable firms or sectors alive. Distinguishing between viable and nonviable companies is particularly difficult due to the uncertainty that COVID-19 has created. Market signals can be helpful in this respect. Governments should also be aware of contingent liabilities from the corporate sector, for example in the form of guarantees and other financial support policies. Public intervention should also consider the effects of crowding out in local capital markets and the implications for borrowing costs and market functioning.

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Annex 4A

BOX 4A.1 Public Policy Support for Capital Market Solutions and What Policy Makers Should Consider

During the current crisis, government policy responses have been critical. The policy toolkit included fiscal and monetary tools and incentives. Governments swiftly launched broad-based measures to support firms, including transfers, tax cuts and payment deferrals, and provision of loan guarantees. At the same time, central banks supported bank lending to firms by providing ample liquidity with favorable conditions, while prudential authorities encouraged use of available capital and liquidity buffers to provide support. Other decisive policy responses, such as payment moratoria, allowed firms to defer payments of interest and principal to banks and to draw down their credit lines to finance their working capital. A World Bank tracker of initiatives benefiting the MSME sector can be found at https://dataviz.worldbank.org/views/SME-COVID19/Overview?%3Aembed=y&%3AisGuestRedirectFromVizportal=y.

While public sector support has the advantage of potentially avoiding cliff effects and systemic corporate stress, it comes with disadvantages over and above direct fiscal implications. Such interventions can create concerns about market distortion. Concerns are particularly strong if the public support involves direct recapitalization measures. Another concern is whether public support keeps alive sectors or companies that are not viable or productive, potentially creating a "zombie" firm problem that misallocates capital and impedes economic growth.

The design of public intervention is key to alleviating such negative effects. Possible public sector efforts to support capital market solutions should be guided by the following eight common principles.

Common Principles for Public Crisis Solution Mechanisms

- **Provide optionality and proportionality**. Potential support instruments should be proportional to, and aligned with, the actual and foreseeable corporate sector challenges. A degree of optionality should be preserved in cases of direct public sector involvement to ensure, inter alia, that only viable firms are receiving help.
- **Enable adequate incentives for borrowers and lenders**. Solutions should entail the right incentives. For example, viable firms without liquidity or solvency issues but facing higher leverage post-COVID-19 should have incentives to access private funding markets where possible. Potential measures should be aimed at facilitating that access and developing the capital base available to them.
- **Avoid moral hazard and adverse selection**. When introducing public sector intervention in capital market solutions, the risks should be considered. Moral hazard occurs when the incentives for corporate owners or managers change because they are not held accountable for their prior actions. Adverse selection occurs when conditions in financial markets or in supported schemes are such that only nonviable companies or industries access them. Policy makers must monitor such dynamics carefully.
- **Create transparency and develop a level playing field for access**. Transparency is critical so that all creditors and borrowers can take informed decisions and support well-functioning capital markets. It will also help to alleviate concerns about unfair competition.

- **Consider feasibility**. Solutions that could be scaled up in the short term without triggering distortions in financial markets would be preferred, and proposals should not take too long to implement. Otherwise, they could be irrelevant.
- **Leverage capital**. Public sector support should aim at attracting capital from both domestic and foreign sources to leverage scarce public capital. Furthermore, it is important to assess whether there is potential to attract foreign capital that would otherwise be unavailable to that country—for example, sustainable development goals and impact funds or project financing.
- **Minimize risks and maximize upside potential for taxpayers**. Risks are associated with most support schemes to develop capital market financing. The government may incur losses, but its efforts may also have upside potential, depending on the future economic development and the design of the supported scheme. Especially if considering co-investments in (hybrid) equity instruments, the public sector's risk should be rewarded. Grants, subsidies, or tax credits come at a fiscal cost with no direct upside, so the use of these should be considered carefully, especially when the immediate impact of the COVID-19 pandemic is over. Guarantees will not require liquidity up front, but they will create a contingent liability that rating agencies and investors will consider when assessing the guarantor's creditworthiness.
- **Consider crowding out and the sovereign-corporate nexus**. Facilitating the access of corporates to domestic markets may result in competition for the sovereign's own issuances, particularly in countries with limited investor capacity. Furthermore, public support resulting in higher debt or large-scale explicit or implicit contingent liabilities may weaken the sovereign's own access to markets and potentially reduce other domestic private issuers' access to the capital markets.

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BOX 4A.2 Debt-Equity Biases from Corporate Taxation Schemes

The deductibility of interest rate costs in corporate tax codes is one factor influencing corporate leverage (Dallari et al. 2018). The phenomenon arises because there is no tax deductibility for returns on equity financing. The IMF documents a debt bias effect on leverage for MSMEs without access to capital markets as well as for large firms. It found that the debt bias can explain somewhat more than 5 percentage points of the average corporate leverage of 20 percent in its sample of firms, thus about one-quarter. Tax policies in many countries currently encourage leverage.

With the goal of putting equity and debt financing on an equal footing, debt bias can be addressed in two ways: (i) by reducing or eliminating interest deductibility, or (ii) by creating a tax incentive for equity financing. It is not straightforward to implement a tax system that treats equity on equal terms with debt without eliminating debt deductibility. One such approach has been adopted by both Belgium and Italy, which introduced corporate tax systems in 2006 and 2011, respectively, that aimed to incentivize equity financing by introducing a deduction of a notional return to equity (Zangari 2014). The systems are known as allowance for corporate equity. For example, the Belgian allowance for corporate equity has been effective in reducing the debt bias and has reduced the indebtedness of corporates, likely contributing to strong growth of foreign direct investment.

A reduction of the debt bias can incentivize corporates to raise equity to reduce leverage, but this may come at a fiscal cost. Providing tax credits for equity financing comes at a fiscal cost and therefore must be considered on a case-by-case basis. Reducing tax deductibility for debt has a positive fiscal effect, although the implications of a higher tax on corporates' investment behavior should be considered.

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BOX 4A.3 The Carrot-and-Stick Approach for Restructuring Debt of Distressed Corporates

Often existing holders are encouraged to tender[139] their bonds through a combination of carrots and sticks. Carrots may take the form of a higher interest coupon and/or a more senior ranking in the new bonds' capital structure, while sticks may involve impairment of the terms of the existing bonds. Failure to tender in the exchange could leave a holder with a bond that has basically no covenant protection, is effectively subordinated to the new bonds, has a reduced principal amount, and/or only accrues payment-in-kind interest.

Bondholders—often through an organized group—will assess these proposed new terms against retaining the payment terms of their old bonds in light of the issuer's prospects, with a close eye on terms being agreed to by other creditors to the extent that a broader restructuring is in process. (See Chapter 2 for a deeper discussion of corporate debt restructuring.) Disincentives to remaining in the old bonds include the looming threat of a bankruptcy filing, being structurally or effectively subordinated to new bonds, or being subjected to an accompanying exit consent. If requisite consents are obtained in the exchange offer, an accompanying exit consent would strip the old bonds of most of their protective covenants and, if the old bonds are secured, their collateral.

When common equity is offered as consideration, exchanging bondholders may require high minimum participation conditions to avoid having holdouts remain in a senior position (i.e., as debt holders rather than equity holders) if the issuer eventually enters bankruptcy.

Consensual amendments occur when corporate issuers facing debt distress seek to amend the terms of their existing bonds, via maturity extentions, coupon reductions, or similar approaches. The terms of most bonds will have a clause that sets out how amendments can be made to the indenture or trust deed. For most EMDE high-yield bonds, the nonfundamental terms can be amended with the support of a simple majority of bondholders. But in a restructuring, the changes are likely to affect the fundamental terms: principal amount, interest, and maturity. Those terms are subject to a higher threshold—often 90 percent for bonds issued by a non-US company and governed by New York law, and 75 percent for multilateral development banks' bonds governed under English law.

Another approach would seek to exploit investors' "natural hedges." For example, some institutional investors are very averse to reductions in principal, but they may be less concerned about the risk of maturity extensions. They might be attracted by an extendable bond or a bond with an extendable grace period contingent on recovery from COVID-19-related shocks.

139. A debt tender offer is when a company retires all or a portion of its outstanding bonds or other debt securities. This is accomplished by making an offer to its debt holders to repurchase a predetermined number of bonds at a specified price and during a set period.

Annex 4B: Overview of Capital Market Solutions for Corporate Debt Overhang

	Solvency issues			Liquidity issues	
Instrument	**Listed equity**	**Private equity**	**Quasi-equity, e.g. preference shares, convertible bonds**	**International bond issuance**	**Domestic bond issuance**
Prerequisites	Developed, liquid markets, domestic investor base, financial market infrastructure. Corporate culture; willingness to dilute ownership share and give up part of control.	Domestic investor base and market infrastructure, enabling tax and regulatory environment. Good exit opportunities for funds.	Developed, liquid markets, domestic investor base, financial market infrastructure. Corporate culture; willingness to dilute ownership share and give up part of control.	Credit rating issuance program (e.g. EMTN).	Developed and liquid markets with a sovereign benchmark curve, domestic investor base, and market infrastructure.
Pros	Liquid market with possibilities to access finance once listed.	Comes with strategic and operational know-how.	Lower dilution than equity, lower interest rate than debt.	Liquid and deep markets with access to broad investor base.	Possibly captive investor base. Financing in domestic currency.
Cons	Mostly relevant for largest corporations. Onerous listing and reporting requirements, high listing costs.	Subject to investor's plans and financial situation, e.g. for extracting capital or exiting investment.	Low liquidity. Strain on cash flow and higher default risk than equity.	Only relevant for large and low-risk corporations. Subject to global financial cycles. Possible foreign exchange risk for issuer.	Limited investor and liquidity. Does not address solvency issues.
Potential	Available and liquid market in some larger, more developed markets. Typically low issuance volumes even in liquid markets.	Small but relatively developed in some countries. Difficult to scale up in short term due to delivery structure, and difficult to start up in new markets.	Likely to remain a marginal solution for some companies in a few markets.	Large capital base and easy to scale but limited to a few companies.	Available in some larger and more developed markets. Liquid if investor base is strong.

Source: Staff illustration.

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