World Development Report 2022

Finance for an Equitable Recovery

Concept Note

May 5, 2021

Preparation of the 2022 WDR will be led by the Development Economics Vice Presidency (DEC) under the supervision of Carmen Reinhart, Vice President and Chief Economist of DEC. The Director of the report is Leora Klapper, Lead Economist in the Finance and Private Sector Development research team in DEC. Davida Connon will manage the report and Martin Kanz will serve as Deputy Director. The report will be prepared by a multi-disciplinary team from across the World Bank Group, including the WB's Development Economics (DEC), Equitable Growth, Finance, and Institutions (EFI), and Poverty (POV) groups, and the IFC's Financial Institutions Growth (FIG) group and Sector Economics and Development Impact (CSE) Department, including Momina Aijazuddin, Alexandru Cojocaru, Miquel Dijkman, Erik Feyen, Kathryn Holston, Martin Holtmann, Nigel Jenkinson, Christoph Lakner, Harry Lawless, Sephooko Ignatius Motelle, Davide Mare, Matthew Saal, Beniamino Savonitto, Mahesh Uttamchandani, and Guillermo Vuletin.

WORLD DEVELOPMENT REPORT 2022

Finance for an Equitable Recovery

The 2022 World Development Report (WDR) is a practical guide—grounded in research and real-world experience—for low-and-middle-income countries to develop strategies to strengthen financial markets for a more equitable recovery from the COVID-19 economic crisis. Through analysis, frameworks, and case studies, the report will assess the financial and economic impacts of COVID-19 on households, businesses, banks, and governments, and provide recommendations for addressing financial fragilities as nations rebuild.

INTRODUCTION

The COVID-19 pandemic and public health measures necessary to contain the spread of the disease led to a decline in economic activity that was unprecedented in scale, severity, and global impact. The cross-country decline in output, with 95 percent of countries registering a contraction in 2020, was greater than that experienced in either of the World Wars or the economic depression of the 1930s.[1] The repercussions of this economic shock were felt very unevenly within and across countries. Smaller firms, low-income households, women, and other vulnerable populations were more adversely affected by changes to work arrangements. Likewise, the effects were worse in emerging markets and developing economies (EMDEs), where the existing social safety nets to mitigate the impacts of the crisis on poverty are weaker. The regressive effects of the crisis extend to the perception of sovereign risk. While 15 percent of advanced economies' credit ratings were cut since the start of 2020, the comparable share of downgrades for EMDEs is about 40 percent.

Governments around the world responded to the economic crisis with large support measures and expansionary fiscal policy at an unprecedented scale. In many cases, these efforts were supported by a similarly swift monetary policy response. These measures include a broad range of policies to provide liquidity to the many businesses that have been shuttered during the lockdowns, and to support households hit by a sudden loss of income and employment.[2] In the expectation that the financial distress of firms and households is temporary, lawmakers required banks to allow grace periods in the repayment of existing loans, extensions in loan maturities, and interest rate reductions. Overall, these government actions mitigated the fallout of the crisis in the short run. Without them, the social and economic costs of the crisis would have been significantly higher.

This World Development Report will focus on the crucial role that finance will play in ensuring an equitable recovery. *Equitable* refers to the ability of different groups, including poor adults, women, and MSMEs, to recover losses in human capital, assets, jobs and income, to resolve debt distress caused by the pandemic, and to pursue economic opportunities.

As countries shift their attention to rebuilding their economies, they face the dual challenge of ensuring access to finance to help households and businesses weather economic uncertainty and invest in human capital and opportunities, and managing the longer-term financial risks to the crisis recovery in a way that reduces financial market fragility and restores economic growth.

The COVID-19 crisis is unique in some ways that can facilitate an effective and equitable recovery. In contrast to previous crisis episodes, the COVID-19 economic crisis did not have its origins in a liquidity crisis in the public or financial sector, which means that both were able to play a more active role in stabilizing aggregate demand. The COVID-19 shock is also taking place in an era of widespread digitization, a fact that will help temper the longer-term impacts as e-commerce, online communications, digital payments, and other technologies can speed up the return to normal economic activity.

While the ambitious short-term response to the COVID-19 crisis mitigated some of the worst impacts, it also generated longer-term financial risks that will need to be carefully managed to ensure an equitable recovery. Most notably, large fiscal support programs led to a surge in government debt and contingent liabilities. This has exacerbated debt sustainability concerns which were already high on the eve of the pandemic. Today, more than half of low-income countries that are eligible for relief under the Debt Service Suspension Initiative (DSSI) are either in debt distress or at high risk, doubling in the course of the last decade.

Governments worldwide also face the challenge of phasing out support programs to households and firms in a way that does not threaten the economic recovery. Similarly, temporary moratoria on debt repayment for many households and firms will come, in various stages, to an end. Pre-existing fragilities and the tools available to address emerging challenges vary across the world economy, and thus the recovery will differ from country to country.

Balance sheet damage takes time to repair, and sustained overborrowing by firms and households often ushers in a long period of deleveraging. Financial institutions become more cautious in their lending practices. A credit crunch is often a headwind to recovery. The first step toward dealing with financial fragility is the recognition of the scope and scale of the problem, followed by the expedient restructuring and write downs of bad debts. The alternative of channelling scarce resources into zombie loans is a recipe for delayed recovery. Timely and well-designed policies can be effective in reducing those risks in the post-COVID landscape.

This World Development Report will leverage research, data, and analysis to guide recovery strategies with a special emphasis on the opportunities and financial challenges faced by developing economies. The report will open in Chapter 1 with an overview of the economic and financial impact of the COVID-19 crisis on households and small-and-medium

businesses, document the governmental actions taken early in the crisis to contain the economic fallout, and highlight its impact on pre-existing fragilities that will require structural reforms and investments in the financial sector to enable recovery.

Chapters 2 and 3 each provide blueprints for action to facilitate recovery and address structural gaps in legal and governance rules. Chapter 2 focuses on the policies needed to support banks and avoid a credit crunch, which could derail recovery, as fiscal and financial support programs are scaled back and loan defaults increase. Credit rating agencies expect mounting business failures, especially among small and medium enterprises.[3] Chapter 3 will focus on the critical role of formal and informal bankruptcy provisions that can help households and small businesses reduce their debt burdens and pursue debt workouts in an orderly manner, mitigating the risks that excessive debt levels pose for recovery. Chapter 4 explores ways to incentivize and enable financial service providers to continue lending during the crisis and the recovery, when credit risk will likely be high and/or opaque. The chapter focuses on providing credit to viable yet financially underserved segments, such as MSMEs, using alternative data, technology-enabled product design, and e-commerce platforms to measure and manage the risks. Chapter 5 will wrap up the report by offering forward-looking insights on the timing and approaches for unwinding government supports and addressing unsustainably-accumulated sovereign debts and contingent liabilities, and by highlighting as-yet unanswered questions that will require ongoing, targeted research.

The report will propose mechanisms for governments to support banks, corporates, and households given existing fiscal constraints. It will also explore ways to reduce more chronic or persistent risks for the various balance sheets. For governments, these include better forecasting, improved transparency, and debt management. Related to business and household debt, the report will examine new ideas to reform firm and personal bankruptcy regimes, including out-of-court resolution and mediation to deal with the predicted spike in insolvency. For struggling financial institutions, the report will discuss regulatory and supervisory frameworks to ensure that banks report economically meaningful measures of asset quality and overall financial strength, as well as how to manage failing banks and support recapitalization. The analysis will also explore how digital adoption can help expand financial access and quality within a context of strong borrower protection, to build a recovery that is more responsible and inclusive.

In light of the pressing nature of the current challenges, the timeliness of guidance is critical. For this reason, the report has a compressed timeline and planned publication date of December 2021. This WDR will leverage WB data collected on country, firm, and household responses to the pandemic; qualitative surveys collected from financial institutions; and a new survey of central bankers. A number of issues relevant to the crisis overall fall outside the finance-sector focus of this report. As such, the report will not evaluate government social distancing measures, analyse the trade-offs between health policy and the economy, or evaluate the effectiveness of lockdown and viral containment measures.

CHAPTER 1

THE IMPACT OF THE COVID-19 SHOCK ON HOUSEHOLDS, FIRMS, AND GOVERNMENT BUDGETS AND THE FINANCIAL ENABLERS OF AN ECONOMIC RECOVERY

- The public health measures necessary to contain the COVID-19 pandemic caused an unprecedented contraction in household incomes and firm and government revenues. Governments responded swiftly with fiscal, monetary, and financial sector policy tools at an unprecedented scale that helped mitigate many of the economic and social impacts of the shock in the short run.

- Pre-existing fragilities in household, corporate, financial, and government balance sheets determined the scale of the crisis impact and the nature of crisis response. The crisis and government responses exacerbated interconnected risks among balance sheets which could have long-term implications for the crisis recovery.

- Strengthening the financial sector can help deliver a stronger and more equitable recovery. Avoiding a credit crunch will help households and businesses weather economic uncertainty and invest in opportunities, but striking the appropriate balance in policies is critical to guard against financial risk and achieve a sustainable recovery.

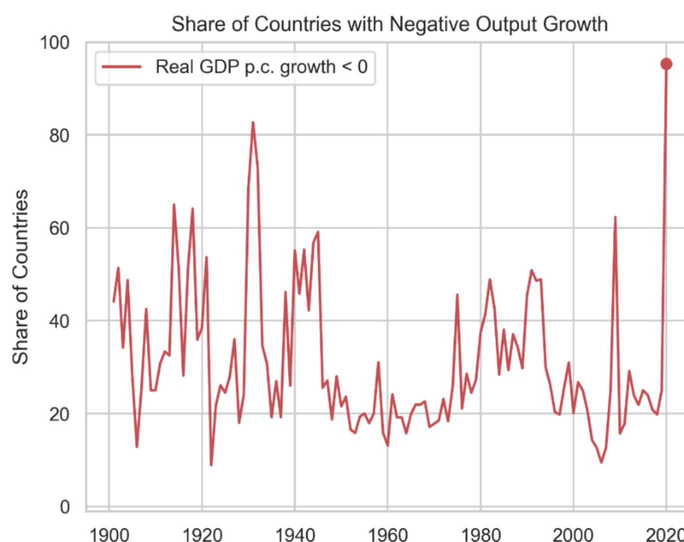
This chapter will (i) examine the short-term impacts of the COVID-19 crisis on households, firms, and government budgets; (ii) highlight the large and globally coordinated fiscal and monetary response to the crisis and underscore how, at the country level, the response relates to pre-existing fragilities at the household, corporate, and government levels; (iii) explore the challenges exacerbated by the response; and (iv) explain why protecting and strengthening the finance sector through investments in structural enablers is essential to a sustainable recovery.[4]

THE IMPACT OF THE COVID-19 SHOCK ON ECONOMIC ACTIVITY, POVERTY AND INEQUALITY

The COVID-19 pandemic started as a public health emergency and quickly turned into a global economic crisis, as lockdowns and other policies adopted to contain the spread of the disease drove an unparalleled economic contraction.[5] The pandemic brought about a collapse of real economic activity across sectors, as well as contractions in credit, investment, and labor force participation, especially among women, an increase in labor informality[6], and a spike in business failures.[7] Households and small businesses quickly depleted their savings,[8] struggled to make loan payments, and were forced to reduce expenditures. Some of these businesses eventually shut down. As a result, in 2020, 95 percent of countries experienced

negative output growth – a greater proportion as compared to the contractions resulting from the world wars or the Great Depression (see Figure 1.1).

Figure 1.1: The Economic Impact of COVID-19 in Historical Perspective



Note: Figure: Real GDP per capita, based on Maddison Project Database (2018) for 1900-1980 and IMF WEO (Oct. 2020) for 1980-2020. Source: Holston, Kaminsky, and Reinhart (2021).

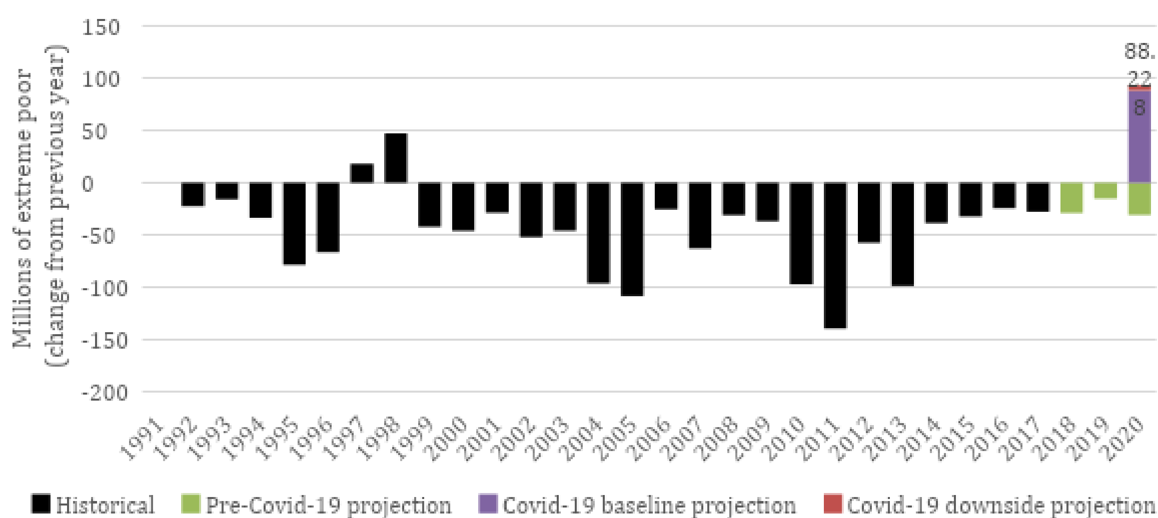
The COVID-19 economic crisis stands out in history in terms of global scale, scope, and severity. Unlike previous crises, it did not originate in the public or financial sector, but was the result of an exogenous event that affected practically all sectors of the economy. Other crises in recent decades have hit advanced economies and emerging markets unevenly: The 2007-09 crisis, for instance, was primarily in advanced economies, and was felt much less severely in emerging markets, while the financial crises in the 1980s were more severe in emerging markets. The more isolated nature of these crises is evident in the data: real economic activity contracted in around 60 percent of countries in 2009, and in fewer than half of all economies in the 1980s. The COVID-19 crisis also affected economies around the world at an unusual point in the business cycle: it was not preceded by a rapid expansion of credit, or the collapse of an asset bubble; it is a "bust without boom."

The impacts of the COVID-19 economic crisis are highly regressive *within* and *across* countries. Smaller firms, low-income households, women, and vulnerable populations were disproportionately affected by the dramatic contraction in incomes, business revenues, and the change in work arrangements. These disproportionate impacts on low-income populations are likely to affect incomes and livelihoods in the longer run, such as through disruptions in access to education, which has more severe repercussions for vulnerable populations. While early evidence suggests that in 2020, per capita incomes fell further in higher-income countries,[9] high-frequency phone survey data reveal that LMICs and UMICs had the highest share of respondents that stopped working on account of the pandemic.[10] In

many developing countries, the size of the informal sector is larger, social safety nets, automatic stabilizers, and access to technologies that can mitigate the impacts of the crisis—such as digital payments and online communications[11]—are more limited. The economic challenges that came about as a result of the pandemic will likely persist.

This section will use new data, collected during the crisis, on household expenditures, unemployment, business revenues, and insolvencies, to trace the short-term impact of the pandemic on economic activity, and place the economic contraction in historical perspective. It will also use extensive data from surveys of households and small businesses to assess the short-run impact of the crisis on poverty and inequality *within* and *across* countries, highlighting differences by region, income level, and extent of available social safety nets (see Figure 1.2). Developing countries and low-income populations were disproportionately affected by concurrent economic events, including increases in relative food prices and a collapse of remittances. The real-time survey data we will use to trace the crisis impact are well-suited to present an accurate picture of the true impacts of the crisis, as they also capture individuals and businesses in the informal sector.

Figure 1.2. COVID-19 generated new poor in 2020



Source: Lakner et al. (2020); POVCALNET; Global Economic Prospects.

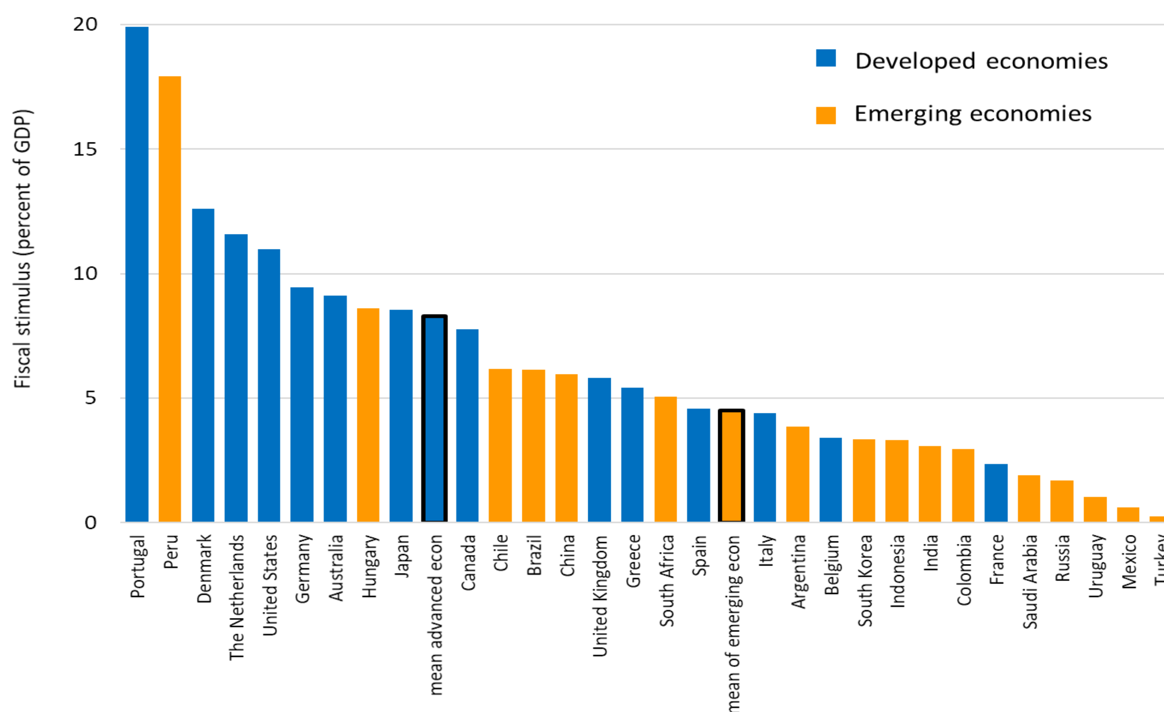
THE GOVERNMENT RESPONSE TO THE COVID-19 SHOCK

The massive impacts of the COVID-19 crisis on poverty and economic activity triggered a government response on a scale not seen since the end of World War II (see Figure 1.3). The world over, fiscal, monetary, and financial sector stimulus policies were enacted to mitigate the impacts on economic activity and household welfare.[12] This swift, massive, and globally-coordinated government response was very effective at containing the fallout of the crisis in the short run. Monetary policy responses in high-income economies also contributed to ease

uncertainty and liquidity conditions in emerging markets. Without these actions, the social and economic costs of the crisis would have been significantly higher.

The components of the response included: helping households directly with unconditional cash transfers (sometimes in the form of electronic transfers enabled by widespread digital transformation across the government, finance, and payments sectors), deferring tax and utility payments, and enacting debt and eviction moratoria; supporting businesses in the form of direct grants and cash transfers, postponements of tax payments and social security contributions, wage subsidies, as well as loan subsidies and guarantees; and financial sector policies pursued in response to the crisis. The report will succinctly document the extent and duration of these policies using an update of the COVID-19 Financial Sector Policy Response Database,[13] highlight inequalities in access to these measures across different population groups, and examine how the type of policies correlated with fiscal capacity and size of the initial shock.

Figure 1.3. Size of the fiscal stimulus (to be expanded with additional examples from low-income countries)



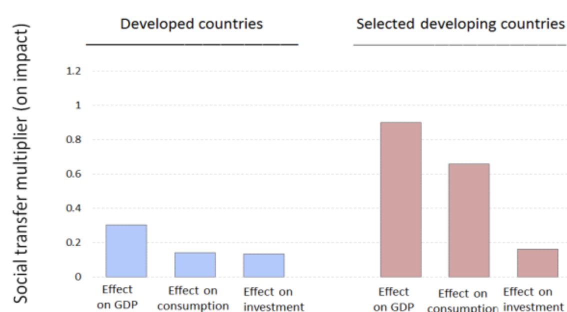
Source: Bracco et al (2021). Fiscal stimulus in 2020 as a share of 2019 GDP excluding loan guarantees; as of June 2020.

Beyond its scale, at least two unique features of the crisis response stand out: First, the COVID-19 response marks the first time that many developing countries enacted *counter*cyclical fiscal and monetary policies, in that they *increased* expenditures and conducted expansionary monetary policy in a downturn. Second, rather than supporting only

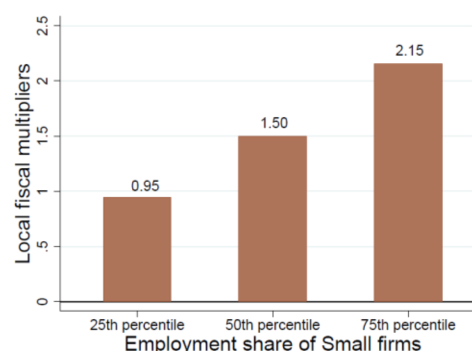
large corporates and the financial sector, a large share of support policies went to individuals and small businesses. Targeting transfers to households and firms in this way was highly effective from a macroeconomic perspective – especially in developing countries — given that financially-constrained firms and households have a higher marginal propensity to spend transfer income. This increased the overall effectiveness of government spending (see Figure 1.4).[14] However, in economies with a large informal sector and limited financial inclusion, targeting transfers to businesses and households directly also had some potentially adverse distributional impacts, as transfers in many cases did not reach the households and informal firms who were most severely affected by the crisis.

Figure 1.4 Fiscal Multipliers of Households and Firms

(a) Developed and Developing Countries



(b) by Firm Size



Source: Bracco et al (2021) and Juarros (2021).

Case Study: "Bust without boom". The COVID-19 crisis hit economies at an unusual point in the business cycle which creates challenges, but also some potential opportunities – for example, some low-income countries were able to run countercyclical fiscal policy for the first time. The chapter will include a case study of a low-income country where this was the case.

FRAGILITIES IN THE HOUSEHOLD, CORPORATE, FINANCIAL AND GOVERNMENT SECTORS AT THE ONSET OF THE CRISIS AND HOW THEY INTERSECT

While the overall crisis response was highly congruent on a global scale, there was considerable cross-country variation in the specific policy mix. This was largely the result of different pre-existing fragilities in the household, corporate, and financial sectors at the onset of the crisis, as well as different levels of fiscal space across sovereigns.

In many countries, monetary policy tools were already stretched close to their limits at the onset of the crisis. Thus, stimulus policies relied extensively on an increase in government spending to support incomes and economic activity. This is more challenging for developing economies, which typically have weaker automatic stabilizers, procyclical fiscal policies,

higher levels of sovereign debt, lower capacity to raise revenue and issue debt in international capital markets and, in some cases, had suffered rating downgrades prior to the crisis. In addition, many developing economies entered the crisis with elevated fragilities in the household, corporate, or financial sector:

- *Household debt*: Over the last decade, households around the world have experienced an unprecedented expansion in access to credit. While access to credit is helpful for consumption smoothing and asset accumulation, household over-indebtedness and non-performing loans had become a concern before the crisis.[15]

- *Corporate debt*: The pre-crisis period saw a surge in corporate leverage in emerging markets.[16] A stress-test exercise using data on 17,000 listed non-financial companies in emerging markets shows that prior to the crisis, 60% of the debt in this sample was associated with firms that exhibited balance sheet fragilities—a 30% drop in earnings increases this to 88%.[17] Much of this solvency risk is concentrated in economies with weak bankruptcy frameworks and high levels of financial fragilities.

- *Financial sector*: Financial sector fragilities in developing economies were heterogeneous at the onset of the crisis. While there have been improvements in prudential regulation in part as a result of the global move towards adoption of the Basel III standards, and many countries had strengthened bank capitalization and regulatory oversight as a result of the Global Financial Crisis, the financial sector in developing countries is exposed to risks not present in more developed economies. Examples include mandates to hold domestic government debt that expose the financial sector to sovereign risk; default risk resulting from misallocation due to political lending; and the growing importance of non-regulated lenders whose balance sheet risks are often opaque.

- *Sovereign debt*: In the years prior to the crisis, developing countries in particular saw a surge in sovereign debt and a deterioration in their risk ratings. Although developing country sovereigns can increasingly borrow in local currency, local currency debt is often still predominantly held by foreign investors, which leaves sovereigns exposed to exchange rate risk and capital flight in times of crisis.[18] If sovereign debt is held by local investors, it increases the risk of financial crises, because a deterioration in sovereign risk directly impacts the asset quality in the domestic financial sector. High levels of sovereign debt likely had a dampening effect on economic growth prior to the crisis and limited the policy options of governments once the crisis hit.

Fragilities at the household, corporate, financial and public sector levels do not operate in isolation from each other. Instead, balance-sheet fragilities in one given sector can spill over into others due to the aggregate nature of this crisis.

The report will examine how the crisis response has magnified pre-existing fragilities and examine the potential threats this creates for an equitable recovery. Building on evidence on the bank-sovereign nexus, household or corporate-sovereign nexus, and household or corporate-bank nexus from previous crises,[19] we discuss the virtuous and vicious cycles between sovereigns, banks, and corporates or households and their relevance to the recovery (see Figure 1.5). Which of these scenarios is most likely to materialize in a given economy depends on the combination of pre-existing financial fragilities, and fiscal, monetary and financial sector policy choices in the post-crisis period.[20] Policy options available to governments differ dramatically: low-income economies, in particular, face more severe constraints in choosing optimal policies, due to external factors, weaker institutions, and more limited fiscal space. This increases the likelihood of an uneven and inequitable recovery, characterized by discrepancies in the ability of different population groups to recover losses in human capital, assets, jobs and income, and/or reduce debt distress.

Figure 1.5. *Virtuous* cycle between sovereigns, banks, and corporates/households

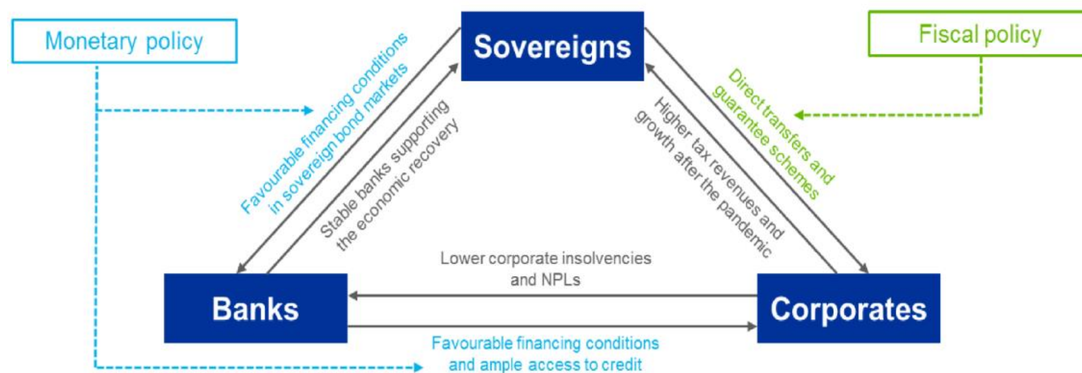
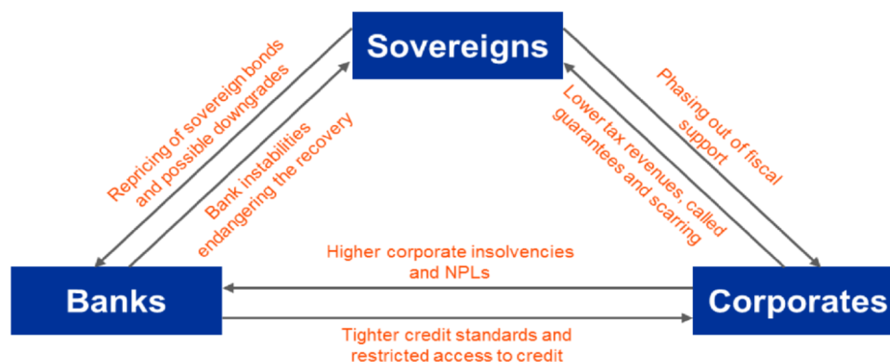


Figure 1.6. *Vicious* cycle between sovereigns, banks, and corporates/households



Source: ECB

Case study: Pre-crisis surge in household debt. Over the past decade, many emerging markets experienced a surge in consumer lending and, as a result, were confronted with issues of household over-indebtedness even before the crisis. The chapter will include case studies

that examine how the crisis aggravated the problem, and to what extent debt forgiveness and restructuring programs were effective. Possible country examples include Thailand, Brazil, China, and/or the Philippines.

Case study: "Original sin redux". Although emerging market governments can increasingly borrow in domestic currency, they are still exposed to currency risk since much local currency debt is held by foreigners. We will include Indonesia as a case study to illustrate this point and discuss how this risk was managed in the current crisis.

WHY FINANCE? THE PATH TO ECONOMIC RECOVERY

Finance will play a critical role in ensuring an equitable recovery. As countries shift their attention to rebuilding their economies, they face the dual challenge of ensuring access to finance to help households and businesses weather economic uncertainty and invest in opportunities, and managing the financial risks created by the government response in a way that preserves the ability to address adverse events in the future and restore economic growth.

The relative importance of addressing the macroeconomic risks generated by the crisis and preserving and expanding financial inclusion will vary across countries. Many of the households and businesses in LICs and LMICs that were hardest hit by the pandemic remain outside of the formal financial sector. As of 2017, 1.7 billion adults remained unbanked, and 2.9 billion adults did not access formal loans in the prior year. The poor, low-skilled, women, and people with precarious attachment to the labor market are more likely to be financial excluded.[21] Likewise, in many LICs the scale of government response was limited.

Achieving an appropriate balance between these two challenges can strengthen credit markets—necessary for a healthy economy. This will require focused attention to filling structural gaps in the financial sector that the economic crisis and its response have uncovered.

E-commerce, digital payments, mobile money and other new financial technologies can be leveraged to speed up the return to normal economic activity. However, dramatic differences in the quality and independence of governance institutions, combined with vast differences in initial economic and financial conditions, raise the risk of a "K-shaped" recovery in which low-income countries and vulnerable populations within countries are left behind.

We are developing a visual conceptual framework that will illustrate how the key actors (governments, households, firms) interact with key enabling factors such as financial sector policies, household and corporate sector policies, and new technologies, which create the context for the crisis recovery. We emphasize:

- *Household and corporate sector policies*: The crisis has highlighted the need for social safety nets that serve as automatic stabilizers and counteract the procyclicality of fiscal policy; it also revealed important coverage gaps in existing safety nets, especially workers in the informal sector. The crisis has also highlighted the need for bankruptcy laws (which currently do not exist in most developing economies) to reduce the scope of political involvement in debt relief and prevent spillovers to the financial sector. Chapter 3 explores critical policies for managing insolvencies in the household and corporate sectors.

- *Financial sector policies*: The main challenge for the financial sector will be to address the decrease in asset quality resulting from the end of forbearance policies. Prior to the crisis, standard-setting bodies were leading an effort towards globally-harmonized regulatory definitions and rules for non-performing loans and forborne exposures. Progress toward harmonization was upended in certain countries by crisis-driven regulatory forbearance policies, which relaxed accounting and regulatory rules below international standards. Where such policies are kept in place, policymakers need to be clear about the time horizon and ensure that financial institutions are adequately capitalized to weather the effects when these policies are eventually removed. Chapter 2 explores enabling recovery policies for the financial sector.

- *New financial technologies:* The availability of digital technologies enabled governments, financial institutions, businesses and households to maintain some level of economic activity through the pandemic and its associated lockdowns (albeit with limitations, and acknowledging that this infrastructure is unevenly available both across and within countries). Going forward, widespread digitization can help facilitate the recovery, as e-commerce, online communications, digital payments, and other technologies speed up the return to normal economic activity. Yet technology must be actively managed to ensure it expands access, opportunity, and transparency in the crisis recovery. Chapter 4 explores the positive potential of digital enablement across the finance, household, corporate, and government regulatory and supervisory sectors.

These enabling factors can serve to strengthen the financial sector, including credit markets. However, even with effective crisis recovery policies, governments will face the challenge of unwinding support and forbearance schemes on which many affected households and businesses are still crucially dependent, and less fiscal space overall may threaten hard-won gains in reducing poverty and inequality. Chapter 5 is dedicated to the discussion of exit strategies and the need for improved debt risk management.[22]

CHAPTER 2

RESOLVING BANK ASSET DISTRESS

- More than a year into the pandemic, insolvency rates have remained low as policy interventions have provided temporary support to borrowers, easing debtors' cash flows problems and generally containing the rise in banking sector credit risk. Financial authorities must nonetheless proactively implement credible exit strategies from the current moratoria and borrower-support measures.
- As borrower-relief measures are phased out, asset quality will become more visible on banks' balance sheets and loan performance could deteriorate quickly. The challenges associated with rapidly rising non-performing loans (NPLs) require a decisive policy response. Failure to act quickly and comprehensively risks trapping countries in a vicious cycle of lacklustre financial sector performance and weak growth.
- Regulators must ensure that banks are reporting economically-meaningful measures of asset quality, and facilitate loan restructuring for distressed-but-viable borrowers, while taking actions to address non-viable ones.
- Banks dedicate adequate resources for absorbing credit losses and supporting the recovery with fresh lending. Without these measures, lending could drop disproportionally on loans to riskier, vulnerable groups, such as poor adults, women, informal self-employed, and MSMEs.
- To preserve financial stability and protect depositors and taxpayers, resolution authorities will need legal frameworks that set bank failures apart from general corporate insolvency, allowing for an appropriate range of intervention and resolution powers.

While the first chapter looked broadly at the impacts of the pandemic and government interventions across the world economy, in this chapter, we delve into the likely consequences of the crisis and the interventions needed to ensure that the banking system can weather the impact of the pandemic and continues to properly perform its financial intermediation function effectively and efficiently. Borrower support measures and prudential relief played a significant role in holding off the pain wrought by the pandemic for households and businesses, but, as we exit the crisis, governments will need to take proactive steps to assess whether, how and when to extend (temporarily), adjust (through narrowing or targeting) or phase out these support measures, while banks will need to closely monitor underlying credit performance. Financial authorities need to ensure transparency in regulatory reporting and public disclosure. Supervisors should also uphold already

implemented accounting standards and monitor closely the implications of the emergency measures for bank asset quality and capitalization. With prior non-performing loan (NPL) and banking crises as context, we discuss the necessary response from financial authorities, regulators and banks in order to contain the impact of the pandemic on banking stability, and to support the efficient allocation of capital to underpin a strong recovery.

Against this backdrop, this chapter will (i) discuss the relevance of NPLs for banks' health and economic growth; (ii) set out an NPL resolution agenda to complement the phase-out of borrower support programs, to assist financial institutions through NPLs workouts and balance sheet restructuring/rebuilding, and to enable meaningful supervision by public authorities; and (iii) examine how to deal with struggling banks, including measures to facilitate recapitalization and reform resolution regimes to reduce the likelihood that public funds need to be deployed to preserve financial stability. [23]

NON-PERFORMING LOANS, BANK SOUNDNESS AND ECONOMIC GROWTH

Banks perform an important credit intermediation function as they extend loans for a wide range of purposes. Credit intermediation is also performed by other monetary financial institutions that take deposits (for example credit unions) and non-bank financial institutions, which typically do not have a full banking licence and are not supervised by a banking regulatory agency (for example, many specialized lenders such as microfinance institutions, peer-to-peer lending platforms, finance companies, and leasing/factoring companies). Yet, around the world, in the majority of countries, financial systems are bank-centric, and banks are the most important intermediaries by volumes of assets and credit intermediation. Thus, the ensuing discussion focuses on the resolution of bad debts and financial institutions in the banking sector, though most of the principles and mechanisms described in the chapter could apply to a wider set of financial intermediaries.

Banks assess borrowers' creditworthiness at the point of loan origination to assume a certain level of risk. Creditworthiness should be actively monitored and managed by banks over the life of the asset. Today, however, with borrower relief measures still in place in many countries and the ample supply of credit facilitated by extraordinary fiscal and monetary support, pressures on asset quality are not yet fully reflected in reported non-performing loans (NPLs). Relaxation of micro-prudential and accounting rules have also made banks' financial statements less transparent, likely postponing losses and overstating current capital buffers to absorb such losses. Policymakers anticipate significant increases in NPL volumes that, over time, will become increasingly apparent in banks' earnings, capital, and financial statements once these support measures are scaled back.

Banks assess borrowers' creditworthiness at the point of loan origination to assume a certain level of risk. Creditworthiness should be actively monitored and managed by banks over the life of the asset. Today, however, with borrower relief measures still in place in many

countries and the ample supply of credit facilitated by extraordinary fiscal and monetary support, underlying pressures on asset quality are not yet fully reflected in reported non-performing loans (NPLs). Relaxation of micro-prudential and accounting rules in some countries have also made banks' financial statements less transparent, likely postponing losses and overstating current capital buffers to absorb such losses. Policymakers anticipate significant increases in NPL volumes that, over time, will become increasingly apparent in banks' earnings, capital, and financial statements once these support measures are scaled back.[24]

High NPL levels are associated with negative micro and macro effects. At the micro-level, high levels of NPLs in banks' balance sheets are typically associated, among other things, with capital misallocation, higher funding costs and lower profitability, driving up the cost of finance and impairing banks' ability to run a viable and sustainable business. An excessive proportion of bad assets may also lead to lower lending or outright financial exclusion of certain vulnerable market segments, such as small and medium sized enterprises (SMEs), informal enterprise owners, women and the poor.[25] At the aggregate level, high NPLs depress economic growth, as capital is tied up in underperforming sectors, lowering new lending into the real economy and worsening market confidence.[26] Furthermore, misallocation of credit delays the exit of unhealthy and potentially insolvent firms, lowering aggregate productivity and often contributing to severe and prolonged economic strains.[27] In addition, a high stock of NPLs negatively affects the resilience of the banking sector to shocks and increases systemic risk.

Past experience of the aftermath of banking crises presents a cautionary tale on how deteriorating asset quality can compromise the capacity of the banking sector to finance the real economy, leaving countries trapped in a vicious cycle of low growth and lacklustre financial sector performance. Research shows that following financial crises in countries where banks have weaker incentives and regulatory and legal frameworks to resolve bad loans, banks remain exposed to persistent problems in asset quality, which has a negative impact on economic growth.[28] Whereas the increase of NPLs in the aftermath of the global financial crisis was rooted in banks' lax underwriting practices, this time, the pressures on asset quality come from an unprecedented economic shock and restrictions in economic life that inhibited borrowers' incomes and debt-shouldering capacity, as well as affecting current and future spending patterns. A weak economic recovery may also reduce fresh lending, slowing the potential benefits of reducing bank NPLs.

The risk of prolonged weak asset quality and an overhang of high NPLs looms large in many countries, highlighting the need for a quick and comprehensive policy response. This issue is particularly relevant in many emerging markets and developing countries (EMDEs) as most of these countries have bank-dominated financial sectors that lack the spare tire of well-developed capital markets and private investors to support the mobilization of financial resources.

ESTABLISHING ASSET QUALITY INDICATORS AND ENSURING ADEQUATE BANK CAPITALIZATION

As a first step in the NPL resolution process, banks and policymakers will need economically meaningful data about banks' exposure to troubled assets. This information is needed to gauge the magnitude of the problem, inform NPL resolution strategies, ensure that banks provision appropriately for credit losses, and identify banks with a high NPL exposure. Reported asset quality indicators can easily become disconnected from economic realities (e.g. due to evergreening, overvalued collateral, and offloading to unconsolidated affiliated entities), as illustrated by the sizable credit losses often exposed by Asset Quality Reviews. Regulators will face increased pressure to dilute definitions and weaken supervisory enforcement. In some countries (e.g. Argentina, Ghana, and Turkey) this has already led to relaxations in regulatory definitions that diverge from international standards, including the stretching of the 90 days-past-due criterion commonly applied to identify NPLs. Although supervisory reporting has been streamlined during the pandemic, it is essential that banks produce reliable, frequent, detailed, and up to date information on credit quality, including on the performance of loans that have benefitted from borrower relief measures. Regulators may also use technology that supports the analysis of data from a wide range of sources which can help authorities identify emerging risks.

The adoption of weakened loan loss classification rules in the wake of the pandemic lowers reported NPLs, but it does so at the cost of increased opacity, and simply obscures and distorts the magnitude of the underlying problem and associated risks.[29] Going forward, new lending must be underpinned by robust underwriting standards. In that context, some economies have leaned on state-controlled financial institutions to ramp up the credit supply, but, if not very carefully focused on addressing market failures and underpinned by strong governance, that can compromise credit quality further down the road. This has been the experience of some countries, which in the aftermath of Global Financial Crisis relied on state-controlled financial institutions as countercyclical lenders; this eventually led to significant pressures on credit quality.

Capital buffers are an important factor determining (i) the likelihood that asset quality declines will lead to the emergence of problem banks, and (ii) the extent to which banks are financially able to support the recovery with fresh lending. A lack of capital space to absorb credit losses can incentivize banks to present an overly optimistic picture of asset quality, hindering authorities' ability to monitor accurate and timely financial results, and diminishing confidence in the system as a whole. Institutions with a significant mass of uncaptured credit risk may find that their provisions for credit losses fall short of what is needed given their true exposure. The resulting provisioning gap inflates banks' reported capital, obfuscating their true financial position and impeding the timely identification and remediation of problem banks. Capital buffers vary significantly across countries, and thus the capacity of banks to absorb increases in NPLs varies by region.

BANKS MUST PREPARE TO RESOLVE BAD DEBTS

To prepare operationally to resolve increasing volumes of bad debt, banks need to build up internal workout capacity. They can do so by establishing dedicated workout units, separate from loan origination departments. These workout units must have adequate human and financial resources and robust information systems and bank-specific policies regarding the management and resolution of NPLs. Few countries have yet undertaken concrete steps in this area. In practice, low levels of loan file digitalization and poor internal management information systems within banks can be important impediments to the effective identification and monitoring of NPLs and to their rapid resolution. [Chapter 4 discusses the role of technology and data in more detail].

The chapter will also discuss the various NPL reduction channels (i.e. restructuring, legal enforcement, sales and write-offs), pros and cons, commonly observed impediments and good practices.

Pressures will inevitably increase to keep non-viable/non-cooperative borrowers afloat with low quality "extend and pretend" loan restructuring measures, locking up the credit stock in underperforming economic sectors at the expense of more dynamic borrowers (as occurred in the ECA region in the aftermath of the global financial crisis). Sound regulatory principles are critical: e.g., requiring a solid track record of payment performance before restructured loans can be reclassified as performing, insisting banks confirm the borrower's viability before granting tailored easing of payment terms.

Given the many stakeholders involved, policy coordination is a critical element of any strategy to address high NPLs. Nationwide NPL reduction strategies, designed and implemented with the active participation of private and public sector stakeholders, can help to accelerate the rate of NPL reduction. This chapter will highlight some success stories where this has worked well (e.g., Albania and Serbia).

DEALING WITH PROBLEM BANKS

Resolving bank distress is key for maintaining the supply of credit, spurring investment, and fostering employment.[30] Pressures on asset quality will first affect revenues and profitability before hitting banks' capital buffers. Over time, banks may struggle to meet capital adequacy requirements or may fail altogether (particularly in countries with banking sectors suffering from pre-existing vulnerabilities).

A lack of an effective response to undercapitalization can have real economic consequences.[31] Latent banking vulnerabilities in fiscally weak countries in Europe left banks highly exposed to the global financial crisis and the subsequent sovereign debt crisis. It set the stage for widespread evergreening of loans to poor-quality borrowers by weak banks,

and led banks to shift from real sector lending to financing fiscally constrained governments.[32]

Meanwhile, the feasibility of recapitalizing banks varies according to ownership structures. For privately-owned domestic banks, recapitalization prospects depend on financial market conditions and investor risk appetite. For subsidiaries of foreign-owned banks, the key question is to what extent these banks will be able to rely on parent bank support. This, in turn, depends on how the parent bank is affected by the pandemic.[33] Lastly, in the case of state-owned banks, taxpayers can be exposed to significant losses, while overall recapitalization prospects can be influenced by fiscal space and sovereign debt sustainability.

Experiences during the global financial crisis have highlighted the inadequacies of the corporate insolvency framework to handle failures in the financial sector. Without modernized resolution regimes for financial firms, the calamitous consequences of the failure of financial institutions create expectations of public support, creating incentives and moral hazard for banks to increase leveraging and excessive risk-taking in the belief that financial sector losses can be pushed on to taxpayers.

Following the global financial crisis, standard setting bodies have made the modernization of resolution regimes a priority. The overarching objective has been to make the resolution of financial institutions feasible without severe systemic disruption and without exposing taxpayers to loss, prioritizing shareholders' and unsecured and uninsured credits' ability to absorb losses in a manner that respects the hierarchy of claims in liquidation. Many client countries have also embarked on sweeping reforms in this area, but progress is uneven across regions and there are lingering questions about the feasibility of some of these reforms, particularly in a context of widespread asset quality weakness. Open bank bail-in strategies, for instance, which have been introduced in many countries in the ECA region, may prove difficult to execute due to the general lack of loss-absorbing financial instruments in the banking sector, while Purchase & Assumption (P&A) strategies may be difficult to arrange if banks are financially stressed across the board. Similarly, the use of asset management companies (AMCs) may just conceal instead of resolving the issue of troubled bank assets.

Case study: Historical evidence. This chapter will include discussion of the recent banking crises highlighted in research by Laeven and Valencia (2018), including Nigeria (2009), Moldova (2014) and Ukraine (2014).

Case study: Non-bank lending. This chapter will also discuss the consequences of non-prudential regulation in microfinance, including a discussion of non-bank financial corporations in supporting vulnerable populations in India.

CHAPTER 3

RESTRUCTURING FIRM AND HOUSEHOLD DEBT

- The likely wave of insolvency proceedings in 2021 risks overburdening court systems, which could delay the pace of household and firm restructuring and increase costs for both debtors and creditors (including non-banks), hindering capital reallocation.
- Effective and resilient insolvency systems are needed to accommodate periods of mass illiquidity. Less formal restructuring processes that bypass the courts, such as conciliation and mediation, can tailor procedures to the type of debtor involved, e.g., based on size (MSMEs versus large enterprises) or sector.
- Stronger insolvency laws can create the right incentives for debtors and creditors to engage in out-of-court workouts.
- Simplified liquidation procedures will facilitate exit from the market and avoid the build-up of so-called "zombie firms" that can limit credit opportunities for healthy firms during the recovery.
- Frameworks for individual debt forgiveness are needed, particularly in low- and middle-income contexts, given the links between MSME failure and individual insolvency.
- With exceptions, the commendable output of measures to forestall the worst immediate effects of the COVID-19 pandemic has not been matched by commitment to insolvency law reforms that can facilitate smooth exit from the crisis.

The pressures from the COVID-19 crisis will drive many households and businesses to the point of insolvency. Both formal and informal systems will be needed to restructure viable businesses while accelerating the liquidation of those that are no longer viable.

This chapter will (i) discuss the likely spike in insolvencies that will follow the phase-out of economic stimulus and debt forbearance measures, and outline the consequent challenges for economic recovery; (ii) examine past illiquidity crises to draw lessons for legal and policy action to facilitate restructuring; (iii) examine government reform efforts in the early stages of the pandemic to address shortcomings in firm and individual bankruptcy frameworks; (iv) put forward recommendations for reform, focused on the need for less formal processes that facilitate faster, non-adversarial, out-of-court workouts.

THE APPROACHING WAVE OF INSOLVENCY PROCEEDINGS AND POTENTIAL RISKS

This section will examine the effect of the COVID-19 shock and the initial policy response on bankruptcies and debt, utilizing any relevant empirical economic literature.[34] The section will introduce the problems of "zombie firms" and high firm debt levels. In 2021, many firms will renegotiate their debt obligations, restructure their operations, or cease to operate, all of which will create pressure on the courts.

The section will also consider the debt distress faced by individuals and the challenges that arise when personal insolvency regimes are absent, with an emphasis on the problem of personal liability for entrepreneurs operating informal MSMEs.[35] Financial institution support to resolve rising NPLs, as highlighted in Chapter 2, will be more effective in an environment with strong rules and regulations for dealing with personal insolvency. In many EMDEs, there is no personal insolvency framework,[36] which forces creditors to seek piecemeal enforcement through the courts. This is troublesome for three reasons. First, it comes with high costs from court filing fees, enforcement costs, and the lost opportunity to negotiate a pathway to repayment.[37] Second, it clogs the courts (this is discussed in detail in chapter 3). Third, it can cause avoidable hardship for debtors, including the loss of domicile and the stigma of bankruptcy.

Overburdened court systems undermine the efficiency of capital reallocation within an economy, exacerbating the underlying problems. Effective and resilient insolvency systems, including both accessible out-of-court workouts and a rigorous court system, can drive a faster economic recovery by facilitating firm entry and exit and the efficient allocation of capital.[38] To the extent that data is available at the time of writing, on the expected increase in insolvency and restructuring rates within sectors and/or economies (including possible input from Daniel Chen), that will be included in this section.

The chapter will use data on the pandemic's impact on firms collected through the new COVID-19 Business Pulse Surveys (BPS) and follow-up modules of the Enterprise Surveys. Available data covers close to 70 countries, and recent survey questionnaires gather more detailed information on financial variables.[39] The data will help gauge how widespread financial distress among firms is, which, in turn, could spill over into the financial sector.

LESSONS FROM HISTORY

This section will examine case studies of previous illiquidity crises to reach three conclusions. First, that mass illiquidity tends to increase the uptake of less formalized restructuring processes, bypassing the courts. Second, that segmented or sector-based approaches can be effective for managing the distinct characteristics of MSMEs and large enterprises. Third, buy-in from creditors into the process is critical. This section will be underpinned by any relevant empirical economic literature.[40]

This chapter will point to numerous case examples, including: the Polish Enterprise and Bank Restructuring Program in 1993, which shows that illiquidity tends to increase the uptake of alternative restructuring processes; Mexico's 1995 'tequila crisis' and government measures to foster creditor buy-in to the restructuring process; the Asian Financial Crisis and the responses of Indonesia, Malaysia and Thailand (each country took a different approach to the question of segmenting the policy response for SMEs); post global finance crisis in ECA.

PANDEMIC ERA INSOLVENCY REFORMS FOR VULNERABLE POPULATIONS

Building on the explanation in chapters 1 and 2 of the government reforms taken at the onset of the pandemic to insulate individuals and firms against credit market failures, this section will examine key trends in recent insolvency reforms. This section will emphasize particular reforms related to MSME insolvency. It will also briefly survey recent trends (in selected countries) in insolvency frameworks prior to COVID-19, the experience of female entrepreneurs and business owners in the pandemic, the extent of recent reforms to individual bankruptcy law, the present (deficient) state of individual bankruptcy law around the world, and changes to credit reporting to manage the effect on credit histories and risk scores of individuals and firms as a result of the pandemic. This section will be primarily qualitative rather than empirical. To identify global trends in the introduction and cessation of temporary government measures, this section will draw on available datasets including the World Bank and INSOL International's "Global Guide: Measures Adopted to Support Distressed Businesses Through the Covid-19 Crisis" (Global Guide). The Global Guide is an evolving dataset that tracks the introduction and cessation of insolvency reforms responding to COVID-19.[41]

Case studies: The illustrative case studies for this section will include: India's introduction of the *Insolvency and Bankruptcy Code* in 2016 and subsequent adjustments; Brazil's reforms in 2020 to facilitate pre-court and out-of-court mediation and conciliation for creditor-debtor disputes; The Netherlands and/or Germany, both of which adopted a comprehensive set of temporary measures and fast-tracked previously planned comprehensive reforms to their insolvency frameworks, characterized by greater use of and flexibility in restructuring; Sector specific (likely aviation or energy) restructuring issues, featuring a noteworthy restructuring example from 2020; and a credit reporting case study building on the work of WB credit reporting specialist Colleen Masunda.

RECOMMENDED REFORMS

Drawing on the World Bank's "Principles for Effective Creditor/Debtor Regimes" (revised in April 2021)[42] as well as available economic literature,[43] this section will make five recommendations for reforms to be implemented in the near to medium term that provide a least harmful path through the illiquidity crisis:

1. *Strengthen formal insolvency mechanisms*, noting that countries without functioning insolvency law will find it more difficult to implement out-of-court workouts. This is because out-of-court workouts exist "in the shadow of the law". Formal insolvency law provides the right incentives for debtors and creditors to engage in out-of-court workouts.

2. *Facilitate conciliation and mediation* for efficient, non-adversarial resolution of creditor-debtor disputes. This hybrid approach allows for quicker and cheaper resolution of disputes than the formal court system, while preserving some of the rigor that courts provide.[44]

3. *Establish accessible and cheap out-of-court procedures for MSMEs*, to make the system workable for them and to ease the burden on the courts. Examples include lowering or removing debt thresholds and documentation requirements, simplifying plan approval mechanisms, and subsidizing the costs of engaging facilitators/insolvency practitioners. Some recommended features of these procedures include suspending creditor actions and wrongful trading liability, keeping the debtor in control of the business, supervision by an insolvency/restructuring practitioner, the availability of fresh financing (including debt to equity financing) and minimal or no use of the courts.[45]

4. *Simplify liquidation procedures*, to hasten the market exit of inutile firms. Some countries are already streamlining liquidation processes to facilitate market exit and avoid the build-up of so-called "zombie firms" in the market. Reforms include removing procedural steps, shortening timeframes, and easing evidentiary burdens for the proof of debts and related matters.[46]

5. *Promote debt forgiveness and discharge of natural-person debtors*. The law and the courts should aim to quickly resolve no-income, no-asset cases and provide for a discharge and fresh start for all natural-person entrepreneurs. MSMEs are often financed at least in part by debt that has been personally guaranteed by the entrepreneur. As a result, business failure can have severe adverse consequences for the individual. Debt forgiveness is critical in the COVID-19 context, since the pandemic has devastated many businesses through no fault of the entrepreneur.[47]

This chapter will not deal in depth with household/consumer over-indebtedness except as noted in section 3 (deficiency of personal insolvency regimes). Nor will it discuss the relative merits/detriments of insolvency regimes that are debtor- or creditor-friendly. Last, while the chapter will draw on existing information regarding corporate indebtedness, consumer indebtedness and bankruptcy filings, it is important to note that the COVID crisis continues to unfold and extensive quantitative information remains hard to obtain.

CHAPTER 4

LENDING DURING THE RECOVERY AND BEYOND: LEVERAGING TECHNOLOGY FOR INCLUSIVE AND RESILIENT CREDIT MARKETS

- COVID-19 has led many credit providers in EMDEs to reduce lending and tighten lending criteria, threatening to reduce access to finance for underserved groups, in particular MSMEs. A strong recovery will depend on financial inclusion for viable MSMEs so they can stay in business and continue to serve as the primary source of employment in low-income countries.

- The data used to assess credit worthiness has been rendered unreliable by moratoria, loosened reporting standards and changed borrower behaviour. Lenders must embrace alternative data, while credit bureaus and other enabling institutions must integrate it into credit scores as a key took for measuring credit risk.

- Product design offers additional ways to manage risk through asset-based lending and securitized lending using alternative forms of collateral. Alternative lenders providing MSME finance through e-commerce platforms or supply chain networks also offer new and promising models for expanding credit access by increasing insight through the use of transactional data.

- Regulators and supervisors must expand their oversight to include alternative lenders, as well as new sources of data, while implementing and enforcing technologically-aware regulatory frameworks that guarantee cyber and data security, and competitive tech-enabled credit markets in a context of strong consumer protection.

Lenders have tended to resist extending new loans during crises, with particularly negative impacts for micro, small, and medium-sized enterprises (MSMEs), including vulnerable and underserved segments, such as those who are living in poverty, women, rural residents, and informal workers in emerging and developing economies (EMDEs).[48] Constrained access to credit for viable, underserved groups can cause the whole economy to suffer, since MSMEs and the informal sector are the largest source of employment and livelihoods in EMDEs. Yet it remains that COVID-19 has created a variety of new challenges for lenders. Chief among them is the inability to measure and mitigate credit risk due to the lack of reliable information typically used to evaluate credit worthiness—a challenge exacerbated by the debt moratoria and changes to reporting rules.

This chapter will therefore explore through literature, data and case studies, (i) Why financial inclusion for underserved groups, in particular access to credit, can facilitate economic resilience and eventual recovery; (ii) How lenders can measure and manage pandemic-era credit risk using digital technology including alternative data, product design, and digitally-secured or embedded finance; (iii) The operational risks that financial providers face in a digitally-mediated world and how to address them; and (iv) How regulation and supervision can adapt for a technology-enabled financial sector.

FINANCIAL INCLUSION AND ECONOMIC RESILIENCE FOR HOUSEHOLDS AND MSMES

Access to financial services is key for resilience and economic recovery especially for small businesses and households. Digital payments, savings, credit, and insurance allow businesses and individuals to manage risk, smooth expenses and invest. Households and businesses that have access to financial services are better able to withstand financial shocks than those that do not. [49] Access to credit in particularly is vital for MSMEs to survive as employers and creators of economic value[50]

Financial exclusion is a systemic issue. Over 1 billion adults lack access to basic accounts and an estimated 130 million MSMEs in EMDEs lack access to credit. Since MSMEs and the informal sector are the largest source of employment and livelihoods in EMDEs, their resilience is central to any economic recovery effort.[51] A credit crunch for these segments can have last impacts on the overall economy.[52]

MSMEs will need credit for recovery and resilience, especially as government support is phased out. A credit crunch can lead to a market failure where otherwise viable, *credit worthy* households and firms are not able to access credit in the market. The financial markets and respective governments must pro-actively fix a market failure that arises when credit worthy customers cannot get funding, in order to enable firms to survive and contribute earnings and employment to the economy.

THE EFFECTS OF COVID-19 ON THE SUPPLY OF CREDIT

Experience of previous financial crises shows how credit providers tend to tighten credit standards and shift towards safer assets, moving away from riskier segments, including MSMEs. The historical tendency to limit lending during hard times is compounded by the disproportionate impact that COVID-19 is having on MSMEs and underserved segments.

Twenty-three out of 40 EMDEs for which data for February or March 2021 are available, saw credit growth decelerate on a year-over-year basis relative to January 2020.[53] A review of credit standards show a consistent and continued tightening across countries. Fintech lending also saw a contraction by June 2020.[54] While it is difficult to distinguish supply side availability from a decline in demand, as lockdowns kept individuals at home and businesses

shut, a survey of banks and microfinance institutions consistently show a market contraction in lending during the first months of the crisis.

To normalize lending even as the government supports are unwound, credit providers will need to deploy a complementary mix of approaches to measure and manage credit risk in the context of the crisis.

ADDRESSING CREDIT MARKET FAILURE: MEASURING AND MANAGING CREDIT RISK TO ENABLE LENDING DURING THE CRISIS AND BEYOND

The COVID-19 crisis exacerbated the challenges of providing credit to informationally opaque customers, including small businesses, lower-income consumers and women, especially in low-income countries.[55] The pandemic largely invalidated traditional credit history as means to assess credit worthiness credit and may have altered the long-term viability of many businesses, and the incomes of individuals associated with them.

These changes affect the creditworthiness of individual businesses and whole sectors in ways that will continue to be difficult, if not impossible, to determine for some time, requiring lenders to find alternative ways to assess and underwrite risk.[56] A digital transformation of credit risk measurement and management is needed to avoid credit rationing for MSMEs and underserved segments.

IMPROVING RISK MEASUREMENT THROUGH ALTERNATIVE SOURCES OF DATA

High frequency financial data on payments and financial transactions, as well as non-financial data (e.g. digital footprint) can provide information that is at least as predictive as that held by credit bureaus.[57] The ability to access real-time data on the businesses, validate it and analyse it is key to assessing credit risk in this context.

Beyond accessing new data, lenders need ways to validate its credit-relevance, and incorporate it into underwriting models. Artificial intelligence (AI) can leverage high frequency data and adapt to changing economic situations. In particular, machine learning (ML) techniques can continuously tune and re-tune as the situation evolves, with potentially higher predictive capacity over time than traditional multivariate models and analyses.

Leveraging new types of credit information requires not only adoption of new analytic approaches by lenders, but also updating the infrastructure for credit information systems at the national level. Credit bureaus and registries will need the capacity to collect and store this information, and governments will need to have the legal/regulatory frameworks for data sharing by financial and non-financial firms defined to ensure appropriate data ownership and privacy regulations.

Case studies will discuss the performance of fintechs lenders that leveraged alternative data to build inclusive loan portfolios (e.g. Konfio, Mexico), evidence on big data, AI and algorithmic bias.

REDUCING RISK THROUGH PRODUCT CHOICE AND DESIGN

Product configurations that take less risk provide another pathway for lenders to continue to deliver capital into the market during the recovery period.

Digitally-enabled short-term lending allows for frequent check points and risk assessment. Pre-pandemic, innovations such as asset-based lending (ST/ABL) frameworks, enabled by collateral registries, were enabling lenders to broaden the range of collateral they could use as security to expand the provision of financial services to the underserved and unbanked.[58] Under current conditions, accepting a broader range of collateral could enable lenders to provide credit and manage risks for a wider spectrum of borrowers.

Supply chain finance (SCF) offers a form of secured lending that ties credit to the movement of goods or inventories.[59] By embedding or contextualizing finance, lenders reduce information asymmetries and tailor size and duration of credit to the underlying asset, thus mitigating risk. One major European SCF platform increased the number of onboarded suppliers during the pandemic, because banks and mid-market credit providers encouraged them, to better contain risk relative to standard, unsecured lending.

Then there are e-commerce platforms, which are leading the charge to embed lending into their service portfolio using data about the businesses that sell via the platform. Amazon, Mercado Libre and eBay are extended working capital loans to platform merchants, while others such as Jumia, Lazada, and Shopee provide data to allow third-party accredited finance providers to offer loans via the marketplace. Consumer protections are needed to ensure that Big Tech actors don't exploit their market power and raise borrowing costs for MSME borrowers who lack alternatives.

Adjusting the product mix to improve access and better manage risk will help some borrowers, but it may not be sufficient to overcome the degree of continuing economic uncertainty and compensate for the diminished risk appetite of many lenders. Credit guarantees (CGs) will continue to be useful for this reason to ensure an equitable recovery.

Case studies will include lessons from the performance of PAYGO solar industry in East Africa, e-commerce Mybank/Alibaba in China, and the performance of supply chain finance innovations, including a supply chain example of financing tied to sustainable practices in garment factories.

THE REGULATOR'S ROLE IN ENABLING ACCESS TO CREDIT AND REDUCING RISK

While technology can be part of the solution as credit providers navigate the new economic environment of COVID-19, it also brings with it certain risks that will need to be managed. For instance, supervisors around the world frequently rank cyber risks, operational risks, and consumer protection risks as top three risks in the fintech space during the COVID-19 crisis – an indicator of the risks that the entire financial sector confronts as technology and data become more integrated into business models and lending processes.[60]

Network and processing infrastructure require oversight to protect from unreliable digital infrastructure as well as from cyber threats. Mobile networks and digital finance platforms may be unstable and suffer frequent downtimes, blackouts, or penetration by nefarious actors. Without appropriate safeguards to ensure data and cyber security, the rapid adoption of digital channels seen during the pandemic could come with increased risk of digital fraud and scams.[61] More specifically, cybersecurity breaches increased by an average of 15 percent for fintech firms during the COVID-19 pandemic.[62] Regulators must delicately balance the gains from new approaches with inherent technology risks.

Data and information sharing and open banking represent another operational enabler that requires enabling regulatory attention**.** Credit bureaus and registries must be equipped to incorporate alternative data to improve credit risk assessment by traditional lenders. Data safety is key, enabled by proper internal and regulatory safeguards. Moreover, there is increased need for effective data privacy and consumer protection regulation and enforcement. In the context of EMDEs, the dark side of digitization appears in the form of high and hidden prices, over-indebtedness, exploitation and debt collection abuse, fraud, and discrimination against disadvantaged groups, such as women.[63] The volume of consumer complaints increased dramatically during the crisis both in high-income countries (e.g. the United States) and in low- and middle-income (e.g. Colombia).[64]

Finally, regulatory and supervisory frameworks must support broader participation of diverse lenders operating with modern business models,[65] and with that support, expand the regulatory perimeter to include alternative lenders under the governments regulatory umbrella. Providers that should be regulated include those providing supply chain finance or embedded finance through e-commerce platforms.

This section will use country examples to show how RegTech and SupTech can help financial institutions and regulators provide appropriate safeguards for data and consumer protection for responsible finance. We will also illustrate how digitization can facilitate greener finance with examples of environment and sustainability (E&S) risk management.

CHAPTER 5

NEXT STEPS AND EMERGING QUESTIONS TO GUIDE THE RECOVERY

- Governments must carefully unwind the debt forbearance and stimulus policies implemented as part of the crisis response. Move too soon and they risk dampening economic recovery; move too late and they heighten the risk of obscuring the real condition of borrowers and lenders, enabling capital to flow to less productive sectors of the economy.
- The high levels of sovereign debt exacerbated by the crisis can have a dampening effect on economic growth. Debt transparency and focused initiatives to address debt through tax programs or other mechanisms will need to be part of the recovery.
- The unprecedented aspects of the crisis require research to explore important, unanswered questions.

The previous chapters in this report focus on structural reforms that aim to encourage the flow of capital to productive individuals and businesses, and away from "zombie" firms and high-risk sectors. These reforms could dramatically enable finance to contribute to a strong and equitable recovery. They do not take place in a vacuum, however. The risks created by the crisis response, including those brought about by the increases in sovereign debt, will need to be managed in parallel.

This chapter therefore provides guidance on how governments can (i) time the unwinding of government supports, and pursue exit approaches that encourage economic growth; (ii) explore lessons from the past to inform the resolution of sovereign debt; and (iii) pose as-yet unanswered questions that the World Bank Group is exploring about the route to recovery.

EXIT STRATEGIES: HOW TO UNWIND CRISIS RESPONSE?

Governments face the challenge of unwinding the stimulus and forbearance policies initiated as part of the crisis response. This section will highlight the range of constraints policymakers may face in the post-crisis period that affect timing, and evaluate the factors that could lead to a K-shaped recovery *across* and *within* countries that leaves behind vulnerable populations and economies greater fragilities at the onset of the crisis.

To ground the discussion in practical country experiences, this section will present new evidence from a survey of policy practitioners who provide an assessment of how effectively the crisis response in their countries addressed risks in the household, corporate, and

financial sectors, respectively, and what they view as the main risks and policy challenges going forward.

This section will also reflect on the early experiences of certain countries (e.g., India and Colombia) to discuss challenges in rolling back moratoria and borrower support measures, including the impact on NPLs, early arrears, and restructuring activity. As borrowers struggle to meet their debt-service obligations, governments face ongoing pressure to continue borrower support programs. As well as direct fiscal costs, prolonging them carries hidden costs, including a weakening of repayment discipline, allocative inefficiencies associated with zombie borrowers, and a lack of transparency regarding banks' true exposure to problem assets.[66] The question of when and how to phase out the measures does not have a simple answer: premature withdrawal of borrower support measures risks weakening balance sheets of households and firms (especially SMEs), resulting in unnecessary failures and a deterioration of bank asset quality. But their prolongation is associated with other hidden costs in terms of allocative efficiency and repayment discipline, that will become visible over time.

Case studies for this section will consider debt moratoria for households, including the case of India, which enacted far-reaching debt forbearance policies for households and firms, some of which have already been phased out.

RESOLUTION AND RELIEF OF SOVEREIGN DEBT: WHICH LESSONS FROM THE PAST INFORM THIS UNPRECEDENTED CRISIS?

The main longer-term effect of the crisis will be significantly increased levels of sovereign debt as well as contingent liabilities in the financial and corporate sector that will ultimately have to be borne by the sovereign. If debt forgiveness to some groups is socialized, this will add to public debt and will have to be paid back in the form of taxes, inflation, or reduced spending on investments and social programs. This will constrain policy going forward, especially for developing countries that entered the crisis with elevated levels of sovereign risk, have enacted generous tax forbearance schemes, and face difficulties mobilizing tax revenues due to weak institutional capabilities. Historical evidence shows that past episodes of high sovereign indebtedness have had deleterious effects on social expenditures, public investment, and indicators such as infant mortality, life expectancy, and the primary gross enrolment rate,[67] as well as being associated with a higher probability of financial crises,[68] which, in turn, have negative effects on poverty and inequality.[69]

In the medium run, countries can increase the transparency of sovereign debt through policies that provide accurate data on level, term structure and local versus foreign holdings of sovereign debt. Transparency of debt, credits, and terms can help with creditor coordination and speed up debt reduction efforts.

Where issues servicing debt become apparent and restructuring or debt relief becomes necessary, it is important that this is not delayed, given the well-established negative effects of elevated sovereign debt on financial repression and economic growth. For example, how government arrears affect the corporate sector and how, in turn, forbearance policies affect arrears in tax collection and other payments owed to the government. In the longer run, structural reforms that lead to a better targeting of government spending and help mobilize tax revenue may be required.

The section will draw on evidence from previous debt crises to evaluate alternative approaches to debt restructuring and assess to what extent the lessons from these earlier episodes apply to low- and middle-income countries in the current setting.

OUTSTANDING RESEARCH QUESTIONS

The unique nature of the COVID-19 crisis and the government response leaves many open questions. We have leveraged existing research and key lessons from past crises where clear parallels exist. The fact remains, however, that for many governments, the next twelve- to thirty-six months represent fully uncharted territory.

The World Bank is already documenting key issues that may hinder or help during the recovery period, and designing research studies to explore those issues and gather insights that can serve the agents of the recovery, including governments, regulators, businesses, and households. Here, we highlight some important, as-yet unanswered questions and how the Development Research Group is exploring them.

NOTES

[1] Holston, Kaminsky, and Reinhart (2021).
[2] See World Bank (2020) for a cross-country database on these policies.
[3] https://www.advisor.ca/news/economic/business-insolvencies-set-to-surge-fitch-says/
[4] Additional references: Bartik, Alexander, Marianne Bertrand, Zoë B. Cullen, Edward L. Glaeser, Michael Luca, and Christopher Stanton. "The Impact of COVID-19 on Small Business Outcomes and Expectations." Proceedings of the National Academy of Sciences 117(30), 2020; Chetty, Raj, John Friedman, Nathaniel Hendren, Michael Stepner, and the Opportunity Insights Team, The Economic Impacts of COVID-19: Evidence from a New Public Database Built Using Private Sector Data. NBER Working Paper No. 26463; Djankov, Simeon and Ugo Panizza (Eds.). Covid-19 in Developing Economies. CEPR e Book, May 2020; Reinhart, Carmen M., and Kenneth Rogoff. 2009. This Time Is Different: Eight Centuries of Financial Folly. Princeton, NJ: Princeton University Press; Reinhart, Carmen M., Vincent R. Reinhart, and Kenneth S. Rogoff, (2012) Public Debt Overhangs: Advanced-Economy Episodes since 1800, Journal of Economic Perspectives, Vol. 26(3), Summer, 69-86; Reinhart, Carmen M. and Belen Sbrancia (2015). The Liquidation of Government Debt, Economic Policy, Vol. 30(82), March, 291-333.
[5] Taleb, 2007; and Vegh, Carlos A.; Vuletin, Guillermo; Riera-Crichton, Daniel; Medina, Pablo, Juan; Friedheim, Diego; Morano, Luis; Venturi, Lucila. "From Known Unknowns to Black Swans: How to Manage Risk in Latin America and the Caribbean." Washington, DC: World Bank (2018).
[6] While labor informality is not a desired long-term goal, at least, during crises, it can act as a shock-absorber for people losing formal employment. In this sense, many people saw their incomes and social protection reduced during the crisis, yet they were able to remain employed in the informal labor market.
[7] Beck, T; Flynn, B; and Homanen, M. "COVID-19 in Emerging Markets: Firm-Survey Evidence." In *Covid Economics, Vetted and Real-Time Papers 38*; Bloom, Nicholas; Bunn, Philip; Mizen, Paul; Smietanka, Pawel; and Thwaites, Gregory. "The Impact of Covid-19 on Productivity." NBER Working Paper No. 28233 (2020); and Gourinchas, Pierre-Olivier; Kalemli-Özcan, Ṣebnem; Penciakova, Veronika; and Sander, Nick. "COVID-19 and SME Failures." NBER Working Paper No. 27877 (2020)
[8] Feyen, Erik; Alonso Gispert, Tatiana; Kliatskova, Tatsiana; Mare, Davide S. "Taking Stock of the Financial Sector Policy Response to COVID-19 around the World." World Bank Policy Research Working Paper No. 9497 (2020a); Feyen, Erik H.B.; Dancausa, Fernando; O'Reilly Gurhy, Bryan; Nie, Owen. "COVID-19 and EMDE Corporate Balance Sheet Vulnerabilities: A Simple Stress-Test Approach." World Bank Policy Research Working Paper No. 9324 (2020b); and "Taxonomy of insolvency proceedings."
[9] Deaton, Angus. "COVID-19 and global income inequality", NBER Working Paper 28392 (2021).
[10] Khamis, Melanie; Prinz, Daniel; Newhouse, David; Palacios-Lopez, Amparo; Pape, Utz; Weber, Michael. "The Early Labor Market Impacts of COVID-19 in Developing Countries : Evidence from High-Frequency Phone Surveys." Jobs Working Paper;No. 58 (2021). World Bank, Washington, DC.
[11] Galeano, Luciana; Izquierdo, Alejandro; Puig, Jorge; Vegh, Carlos; and Vuletin, Guillermo. "Can Automatic Government Spending Be Procyclical?" NBER working paper 28521 (March 2021).
[12] Naturally, developed countries and emerging markets with larger fiscal space were able to implement larger stimulus and policy efforts.
[13] Feyen, Erik; Alonso Gispert, Tatiana; Kliatskova, Tatsiana; Mare, Davide S. "Taking Stock of the Financial Sector Policy Response to COVID-19 around the World." World Bank Policy Research Working Paper no. 9497 (2020a), Washington DC: World Bank; or Feyen, Erik H.B.; Dancausa, Fernando; O'Reilly Gurhy, Bryan; Nie, Owen. "COVID-19 and EMDE Corporate Balance Sheet Vulnerabilities: A Simple Stress-Test Approach." World Bank Policy Research Working Paper no. 9324 (2020b).
[14] Bracco, Jessica; Galeano, Luciana; Pedro, Juarros; Riera-Crichton, Daniel; and Vuletin, Guillermo. "Social Transfer Multipliers in Developed and Emerging Countries: The Role of Hand-to-Mouth Consumers." World Bank (2021).; Juarros, Pedro. *Fiscal Stimulus, Credit Frictions and the Amplification Effects of Small Firms.* Washington DC: Georgetown University Press, mimeo.; and Auerbach, Alan; Gorodnichenko, Yuriy; and Murphy, Daniel. "Effects of Fiscal Policy on Credit Markets." NBER Working Paper No. 26655 (2021).
[15] Cristian Badarinza, Vimal Balasubramania and Tarun Ramadorai. "The Household Finance Landscape in Emerging Economies." *Annual Review of Financial Economics* 11 (2019): 109-129.

[16] Alfaro, Laura; Gonzalo Asis; Chari, Anusha; and Panizza, Ugo. "Corporate Debt, Firm Size and Financial Fragility in Emerging Markets." *Journal of International Economics* 118 (May 2019): 1–19.
[17] Feyen, E.; Alonso Gispert, T.; Kliatskova T.; and Mare, D.S. "Taking Stock of the Financial Sector Policy Response to COVID-19 Around the World." Policy Research Working Paper no. 9497 (2020a), Washington DC: World Bank.
[18] Hofmann, B.; Shim, I.; and Shin, H. "Bond Risk Premia and the Exchange Rate." *Journal of Money, Credit and Banking* (December 2020).
[19] Reinhart, Carmen M. and Rogoff, Kenneth S. "A Decade of Debt." Peterson Institute for International Economics (2011).; Acharya, V. and Rajan R. "Sovereign debt, government myopia, and the financial sector." *Review of Financial Studies* 26, Issue: 6 (June 2013): 1526-1560; Acharya, V., Drechsler, I. and Schnabl, P. "A Pyrrhic Victory? Bank Bailouts and Sovereign Credit Risk." *Journal of Finance* 69 no. 6 (2014): 2689–2739; Arellano, C., Bai, Y.; and Bocola, L. "Sovereign Default Risk and Firm Heterogeneity." NBER Working Paper No. 23314 (2020); Becker, B., and Ivashina, V. "Financial Repression in the European Sovereign Debt Crisis." *Review of Finance* 22 no. 1 (2018): 83–115; Bocola, L. "The Pass-Through of Sovereign Risk," *Journal of Political Economy* 124 no. 4 (2016): 879–926; Bolton, P.; and Jeanne, O. "Sovereign Default Risk and Bank Fragility in Financially Integrated Economies" (2011); Gennaioli, N.; Martin, A.; and Rossi, S. "Banks, Government Bonds, and Default: What Do the Data Say?" *Journal of Finance* 69 no. 2 (2014).
[20] Feyen, Erik H. B. and Zuccardi Huertas, Igor Esteban, "The Sovereign-Bank Nexus in EMDEs: What Is It, Is It Rising, and What Are the Policy Implications?" World Bank Policy Research Working Paper No. 8950 (2019).
[21] Group of Twenty. "Enhancing access to opportunities. (2020) Paper prepared by staff of the International Monetary Fund and the World Bank, Washington, DC.
[22] Vegh, Carlos; and Vuletin, Guillermo. "The Road to Redemption: Policy Response to Crises in Latin America." *IMF Economic Review* 62 (November 2014): 526-568.; Camarena, José Andrée; Galeano, Luciana; Morano, Luis; Puig, Jorge; Riera-Crichton, Daniel; Vegh, Carlos; Venturi, Lucila; and Vuletin, Guillermo. "Fooled by the Cycle: Permanent Versus Cyclical Improvements in Social Indicators." NBER working paper 26199 (August 2019).
[23] Additional references: Acharya, Viral and Subramanian, Krishnamurthy. "Bankruptcy Codes and Innovation." AFA 2008 New Orleans Meetings Paper; Ayotte, Kenneth M. and Skeel, David A. Jr., "Bankruptcy or Bailouts?" Faculty Scholarship at Penn Law 259 (2009); Dobbie, Will and Song, Jae. "Debt Relief and Debtor Outcomes: Measuring the Effects of Consumer Bankruptcy Protection." *American Economic Review* 105:3 (2015); Dobbie, Will; Goldsmith-Pinkham, Paul; Mahoney, Neale and Song, Jae. "Bad Credit, No Problem? Credit and Labor Market Consequences of Bad Credit Reports." *The Journal of Finance* 75:5 (2020); Insolvency and Bankruptcy Board of India, "Insolvency and Bankruptcy Regime in India - A Narrative," (October, 2020) available at: https://ibbi.gov.in/resources/articles; Rodano, Giacomo; Serrano-Velarde, Nicolas; and Tarantino, Emanuele. "Bankruptcy Law and Bank Financing." *Journal of Financial Economics*, 120:2 (2016).; Martinez, Aurelio G. "Insolvency Law in Times of COVID-19." Ibero American Institute for Law and Finance Working Paper no. 2 (2020); Morrison, Edward R. and Saavedra, Adrea C. "Bankruptcy's Role in the COVID-19 Crisis." *Law in the Time of COVID-19*, Katherina Pistor, Ed. Columbia Law School, 2020; Columbia Law and Economics Working Paper No. 624 (2020).; Menezes, Antonia and Muro, Sergio. "Covid-19 Outbreak: Implications on Corporate and Individual Insolvency." EFI COVID-19 Notes: Finance Series. The World Bank (2020); Ari, Anil; Chen, Sophia, Ratnovski, Lev. "COVID-19 and Non-Performing Loans: Lessons from Past Crises." ECB Research Bulletin No.71 (2020).; White, Michelle, J. "Bankruptcy Reform and Credit Cards." *Journal of Economic Perspectives* 21 no. 4 (2007): 175-200; White, Michelle, J. "Bankruptcy: Past Puzzles, Recent Reforms and the Mortgage Crisis." NBER Working Paper 14549 (2008); Cirmizi, Elena; Klapper, Leora; Uttamchandani, Mahesh. *The Challenges of Bankruptcy Reform*, (2012), Published by Oxford University Press on behalf of the World Bank; van Zwieten, Kristin. "Unpublished briefing note surveying the use of insolvency policy tools in past liquidity crises." World Bank's Business Pulse survey data (2020 and ongoing); World Bank Group and INSOL International, *Global Guide: Measures Adopted to Support Distressed Businesses Through the Covid-19 Crisis* (April 2020),
available at: https://www.insol.org/library/opendownload/1511.
[24] A variety of pundits and market observers have expressed concerns regarding a potential future increase in bad loans. See, for example, Muro, Sergio "The Calm Before the Storm: Early Evidence on Business Insolvency Filings After the Onset of COVID-19. COVID-19." Notes: World Bank (2021); Fitch "What Investors Want to Know: Loan Moratoria in EMEA Emerging Markets." FitchRatings (2021); Financial Times "European financial

supervisor warns of 'tsunami' of insolvencies." Financial Times (2021); Ryan Banerjee, Joseph Noss and Jose Maria Vidal Pastor "Liquidity to solvency: transition cancelled or postponed?" BIS Bulletin 40 (2021).
[25] To keep bad loans on check and limit capital absorption due to higher regulatory requirements, banks may try to limit lending towards riskier borrowers.
[26] Ari, A.; Chen S.; and Ratnovski, L. "The Dynamics of Non-Performing Loans During Banking Crisis: A New Database." IMF Working Paper 19 no. 272 (2019).
[27] Peek, J. and Rosengren, E. S. "Unnatural Selection: Perverse Incentives and the Misallocation of Credit in Japan." *American Economic Review* 95 no.4 (2005): 1144-1166; and Caballero, R.; Hoshi J. T.; and Kashyap A. K. "Zombie Lending and Depressed Restructuring in Japan." *American Economic Review* 98 no. 5 (2008): 1943-77.
[28] Ari, Chen and Ratnovski (2021) provide evidence that out of 92 banking crises episodes in 82 countries since 1990, in 30 percent of the crises NPLs exceed 7 percent of total loans. In these countries, output growth 6 years after a crisis is 5 percent lower than countries with a relatively low (i.e., below 7 percent of total loans) NPLs levels. In previous research, Reinhart and Rogoff (2009a, 2009b) show that the peak-to-trough output decline after a banking crisis is approximately 9 percent.
[29] This section will include boxes discussing the resolution of non-performing loans at credit institutions that in some countries are not subject to prudential financial regulation, such as microfinance institutions and non-bank financial institutions (NBFI's) such as leasing and factoring companies.
[30] Giannetti, M.; and Simonov, A. "On the Real Effects of Bank Bailouts: Micro Evidence from Japan." *American Economic Journal: Macroeconomics* 5 no. 1 (2013): 135-67; Beck, T.; Da-Rocha-Lopes, S.; & Silva, A. F. "Sharing the Pain? Credit Supply and Real Effects of Bank Bail-Ins." *The Review of Financial Studies*, forthcoming.
[31] Acharya, V. V.; Borchert, L.; Jager, M.. and Steffen, S. "Kicking the Can Down the Road: Government Interventions in the European Banking Sector." *The Review of Financial Studies* (2020).
[32] Acharya, V. V.; Borchert, L.; Jager, M.. and Steffen, S. "Kicking the Can Down the Road: Government Interventions in the European Banking Sector." *The Review of Financial Studies* (2020).
[33] In addition to advanced country-based parent banks, new players from World Bank client countries have accounted for much of the growth in cross-border banking in recent years, which in a few cases has led to establishment of holding companies in jurisdictions (e.g. Ecobank in Togo, Colombian banks in Panama) where the group has a limited footprint, and the home authority limited incentives to financially support cross-border subsidiaries. *Global Financial Development Report 2017/2018: Bankers without Borders*. Washington, DC: World Bank.
[34] Alencar S, Leonardo; and Ponticelli, Jacopo. "Court Enforcement, Bank Loans and Firm Investment: Evidence from a Bankruptcy Reform in Brazil." *The Quarterly Journal of Economics* 131 no. 3 (2016): 1365-1413; Hahn, Chin Hee and Lim, Youngjae. "Bankruptcy Policy Reform and Total Factor Productivity Dynamics in Korea: Evidence from Microdata." NBER – East Asia Seminar on Economics 13 (2004).
[35] *Report on the Treatment of MSME Insolvency*. Washington, DC: World Bank (2017).
[36] Kilborn et al (World Bank), 'Report on the Treatment of the Insolvency of Natural Persons' (2014) at p 2. Available at: https://openknowledge.worldbank.org/handle/10986/17606.
[37] Kilborn et al (World Bank), 'Report on the Treatment of the Insolvency of Natural Persons' (2014) at p 129. Available at: https://openknowledge.worldbank.org/handle/10986/17606; IMF, 'Orderly & Efficient Insolvency Procedures' (1999). Available at: https://www.imf.org/external/pubs/ft/orderly/index.htm
[38] Cirmizi, E., Klapper, L. and Uttamchandani, M. "The Challenges of Bankruptcy Reform." World Bank Policy Research Working Paper 5448 (2010); World Bank Group, "*A Toolkit for Out-of-Court Workouts*," (2017), Washington DC: World Bank (revised edition forthcoming 2021); and World Bank Group. *How Insolvency and Creditor-Debtor Regimes Can Help Address Nonperforming Loans* (2021), Equitable Growth, Finance and Institutions Notes, Washington DC: World Bank.
[39] For more details and general findings, see Apedo-Amah, Marie Christine; Avdiu, Besart; Cirera, Xavier; Cruz, Marcio; Davies, Elwyn; Grover, Arti; Iacovone, Leonardo; Kilinc, Umut; Medvedev, Denis; Maduko, Franklin Okechukwu; Poupakis, Stavros; Torres, Jesica; Tran, Trang Thu, "Unmasking the Impact of COVID-19 on Businesses : Firm Level Evidence from Across the World," Policy Research Working Paper No. 9434 (2020), Washington DC: World Bank; Cirera, Xavier; Cruz, Marcio; Davies, Elwyn; Grover, Arti; Iacovone, Leonardo; Lopez Cordova, Jose Ernesto; Medvedev, Denis; Okechukwu Maduko, Franklin; Nayyar, Gaurav; Reyes Ortega, Santiago; Torres, Jesica, "Policies to Support Businesses through the COVID-19 Shock : A Firm-Level

Perspective, "Policy Research Working Paper No. 9506 (2021), Washington, DC: World Bank. The Business Pulse Survey dashboard is available at:
https://www.worldbank.org/en/data/interactive/2021/01/19/covid-19-business-pulse-survey-dashboard

[40] Giné, Xavier and Love, Inessa. "Do Reorganization Costs Matter for Efficiency? Evidence from a Bankruptcy Reform in Colombia." *Journal of Law and Economics* 53 (2010).; Cirmizi, E. Klapper, L. and Uttamchandani, M. "The Challenges of Bankruptcy Reform." Policy Research Working Paper 5448 (2010), Washington DC: World Bank.

[41] For an example of this form of analysis, see Muro, Sergio, "The Calm Before the Storm : Early Evidence on Business Insolvency Filings After the Onset of COVID-19," COVID-19 Notes, Washington DC: World Bank.

[42] Principles for Effective Insolvency and Creditor and Debtor Regimes (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/391341619072648570/Principles-for-Effective-Insolvency-and-Creditor-and-Debtor-Regimes

[43] Examples include: Cook, Gary; Pandit, Naresh; Milman, David. 'Formal Rehabilitation Procedures and Insolvent Firms: Empirical Evidence on the British Company Voluntary Arrangement Procedure' (Small Business Economics, Volume 17, 2001); Cutler, David; Summers, Lawrence. 'The costs of conflict resolution and financial distress: evidence from the Texaco-Pennzoil Litigation' (RAND Journal of Economics, Volume 19, Number 2, 1988); Fonseca, Julia; Van Doornik, Bernadus, "Financial Development and Labor Market Outcomes: Evidence from Brazil" (2020); Hahn, Chin Hee and Lim, Youngjae (2004) "Bankruptcy Policy Reform and Total Factor Productivity Dynamics in Korea: Evidence from Microdata".

[44] *A Toolkit for Out-of-Court Workouts*. Washington, DC: World Bank. (2017, revised edition forthcoming 2021).

[45] *Report on the Treatment of MSME Insolvency*. Washington, DC: World Bank (2017).

[46] Menezes, Gropper. "Overview of Insolvency and Debt Restructuring Reforms in Response to the COVID-19 Pandemic and Past Financial Crises: Lessons for Emerging Markets." (2021, unpublished).

[47] *On the Treatment of MSME Insolvency*. Washington, DC: World Bank (2017).

[48] Sugawara and Zalduendo 2013

[49] Breza; Morduch, J. Portfolios of the Poor.

[50] Financial Constraints and Small and Medium Enterprises: A Review (iza.org)

[51] "Ayyagari, Meghana; Beck, Thorsten; Demirguc-Kunt, Asli. 2003. *Small and Medium Enterprises across the Globe : A New Database.* Policy Research Working Paper;No. 3127. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/18131 License: CC BY 3.0 IGO.

[52] Breza, E. and C. Kinnan, 2021, *Measuring the Equilibrium Impacts of Credit: Evidence from the Indian Microfinance Crisis*, The Quarterly Journal of Economics, 2021;, qjab016,

[53] World Bank (2021), Macro-Financial Review,

[54] CCAF, World Bank and World Economic Forum (2020) The Global Covid-19 FinTech Market Rapid Assessment Report, University of Cambridge, World Bank Group and the World Economic Forum

[55] Ayyagari, M., Demirguc-Kunt, A., and Maksimovic, V., 2017. SME Finance. World Bank Policy Research Working Paper 8241.

[56] Kououridi et al. 2020, Managing and Monitoring Credit Risk After the COVID-19 Pandemic, McKinsey & Co.

[57] Berg, T., Berg, V., Gombovi, A., and Puri, M., 2018. On the Rise of Fintechs-Credit Scoring Using Digital Frontiers. NBER Working Paper 24551.

[58] Moveable collateral may be more challenging to manage and thus requires supporting infrastructure in the form of collateral registries; evidence shows this helps improve access to bank finance, especially by smaller firms. Modern collateral registries can benefit from the use of digital technologies such as distributed ledger technologies (DLT, a.k.a. Blockchain), which can enable lenders to track location collateral, monitor its use, and deactivate it to enforce repayment. See also: Miller et al. 2009.

[59] Khan et al. 2019, Supply Chain Finance Knowledge Guide, IFC

[60] World Bank and CCAF (2020) The Global Covid-19 FinTech Regulatory Rapid Assessment Report, World Bank Group and the University of Cambridge

[61] Crisanto and Prenio 2020

[62] World Bank and CCAF (2020) The Global Covid-19 FinTech Regulatory Rapid Assessment Report, World Bank Group and the University of Cambridge

[63] Garz, S., Giné, X., Karlan, D., Mazer, R., Sanford, C., and J. Zinman (2020), Consumer Protection for Financial Inclusion in Low and Middle Income Countries: Bridging Regulator and Academic Perspectives, NBER Working Paper 28262

[64] World Bank, The Next Wave of Suptech Innovation: Suptech Solutions for Market Conduct Supervision

[65] For example, innovations in financial regulation to provide for a broader spectrum of assets that can be used as collateral e.g. movable assets along with incentives in capital treatment of secured transactions can spur lending to MSMEs and other vulnerable borrowers.

[66] Kanz, M. 2016. What does debt relief do for development? Evidence from India's bailout for rural households. American Economic Journal: Applied Economics, 8(4), 66-99; and Giné, X., and Kanz, M. 2018. The economic effects of a borrower bailout: evidence from an emerging market. The Review of Financial Studies, 31(5), 1752-1783.

[67] Loko, Boileau, Montfort Mlachila, Raj Nallari and Kadima Kalonji. (2003). The Impact of External Indebtedness on Poverty in Low-Income Countries. IMF Working Paper 03/61; Lora, E., and M. Olivera. 2006. "Public Debt and Social Expenditure: Friends or Foes." Research Department Working Paper 563, Inter-American Development Bank, Washington, DC; Cassimon, D., Van Campenhout, B., Ferry, M. and Raffinot, M. (2015). Africa: Out of debt, into fiscal space? Dynamic fiscal impact of the debt relief initiatives on African Heavily Indebted Poor Countries (HIPCs). International Economics, [online] 144, pp.29–52; Welander, A. (2016). Does Debt Relief Improve Child Health? Evidence from Cross-Country Micro Data. Policy Research Working Papers. [online] Available at: https://openknowledge.worldbank.org/handle/10986/25316; Ferry, M. and Raffinot, M. (2019). Curse or Blessing? Has the Impact of Debt Relief Lived up to Expectations? A Review of the Effects of the Multilateral Debt Relief Initiatives for Low-Income Countries. [online] The Journal of Development Studies.

[68] Koh, W.C., Kose, M.A., Nagle, P.S., Ohnsorge, F.L. and Sugawara, N. (2020). Debt and Financial Crises. Policy Research Working Papers.

[69] Furceri, D., & Zdzienicka, A. (2012). How costly are debt crises? Journal of International Money and Finance, 31(4), 726–742; Rewilak, J. (2017). The Impact of Financial Crises on the Poor. Journal of International Development, [online] 30(1), pp.3–19.