Reviving and Restructuring the Corporate Sector Post-Covid

DESIGNING PUBLIC POLICY INTERVENTIONS

GROUP OF THIRTY

DISCLAIMER

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Contents

BOXES

FIGURES

TABLES

Foreword

The Group of Thirty (G30) aims to deepen understanding of international economic and financial issues, and to explore the international repercussions of decisions taken in the public and private sectors.

The human cost of the Covid-19 crisis continues to mount. We pay tribute to the efforts of healthcare professionals, scientists, policymakers, business leaders, non-governmental organizations and all others who have helped in their own way to respond to the challenge so far.

The crisis has struck, too, at the health and viability of a significant part of the corporate sector around the world. It has accelerated underlying trends, ushered in structural changes in our economies and societies, threatened jobs, and generated immense uncertainty.

Policymakers around the world acted rapidly and boldly in their initial policy responses to the pandemic. However, this report highlights how, in the face of these structural changes and a growing corporate solvency crisis, governments now need to alter their responses. It aims to provide a guide to policymakers as they consider how best to intervene to support the corporate sector, addressing three pivotal questions: Which companies to assist, and why? Who decides which companies to assist? And how to assist them?

Governments will increasingly need to move away from broad support to more targeted measures. This means refraining from trying to preserve the pre-pandemic *status quo*, and enabling the reallocation of resources needed for economies to emerge fitter and stronger. Further, private sector capabilities should be relied on to prioritize and administer support in jurisdictions with strong private financial institutions and deeper capital markets. Government intervention is best focused on addressing market failures, and to managing the pace of the needed creative destruction. Where they do act, policymakers should be willing to be creative in the tools they deploy.

The most effective mix of policy responses will vary depending on the specific circumstances in each jurisdiction. The report's recommendations therefore cover key universal principles, a set of policy tools, and a decision framework that should inform the policy response tailored to local conditions. We hope these will support the ongoing debate on how to support the corporate sector through the Covid-19 crisis, and provide a practical guide to policymakers as they face difficult tradeoffs now and in the months ahead.

In short, policymakers must make hard choices. The decisions they make now will define the strength and resilience of their economies, and the wider global financial system, over the coming decade.

On behalf of the G30, we extend our thanks to Mario Draghi and Raghuram Rajan for their astute leadership of the Working Group behind the report, and to the Project Directors, Douglas Elliott and Victoria Ivashina, for their capable construction of the report. We also thank those who participated in the study as Steering Committee and Working Group members.

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On behalf of the Group of Thirty, we would like to express our appreciation to those whose time, talent, and energy have driven this project to a successful completion. We would like to thank the members of the Steering Committee and Working Group on Corporate Sector Revitalization, who guided our collective work at every stage. The intellect and experience of this diverse and deeply knowledgeable team was essential as we sought to craft the report's findings and policy recommendations in the approach to corporate restructuring.

We also thank the many leaders in the financial community and the wider corporate sector who supported the study and agreed to be interviewed, illuminating how their institutions and firms are dealing with the current economic environment and what policy interventions are needed moving forward.

We also extend our thanks to the Project Directors Douglas Elliott and Victoria Ivashina for their support and careful drafting of the report, and to the extended drafting team experts, Andrew Bailey and Sofia Price, for their efforts.

The coordination of this project and many aspects of project management, Working Group logistics, and report production were centered at the G30 offices in Washington, D.C. This project could not have been completed without the efforts of our editor, Diane Stamm, and the work of the Executive Director, Stuart Mackintosh, and his team, including Desiree Maruca and Emma Prall. We are grateful to them all.

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1. Executive summary

1.1 THE SITUATION

The coronavirus pandemic, by dramatically changing consumption patterns and business operations, is triggering a major corporate solvency crisis in many countries. Apart from policies directly supporting employment, initial policy responses to support businesses focused heavily on liquidity issues. Some liquidity support is still needed, but the crucial issue now is solvency.

Policymakers need to act urgently, as the solvency crisis is already eroding the underlying strength of the business sector in many countries. The problem is worse than it appears on the surface, as massive liquidity support, and the confusion caused by the unprecedented nature of this crisis, are masking the full extent of the problem, with a "cliff edge" of insolvencies coming in many sectors and jurisdictions as support programs lose funding and existing net worth is eaten up by losses. However, the difficulty of predicting the duration and recovery path after the pandemic, and of differentiating between structural versus temporary changes in demand, makes it hard to determine the long-term viability of enterprises during the pandemic. This complicates the targeting and design of measures to support the corporate sector.

This solvency crisis differs sharply from the global financial crisis, which centered on the financial system and on liquidity problems. Some of the answers from that previous crisis are valid now, but new approaches are also needed.

1.2 THE RESPONSE

The first wave of liquidity-focused policy measures has prevented much more severe consequences for the corporate sector, jobs, and for the economy more broadly. As the crisis progresses, jurisdictions now need to develop policy responses that accommodate structural changes in the economy triggered by the pandemic, and address the following problems that make the initial response unsustainable:

- Inadequate targeting of support, which fails to sufficiently tailor the policy response to the situations of different firms
- An excessive focus on credit provision, which risks overburdening firms with debt, promoting inefficient use of resources, and engendering future problems
- Excessive direct government decision-making and suboptimal use of private sector expertise that could be used to better direct support
- A level of public spending that would be unsustainable over the potential duration of the ongoing economic crisis.

In this report we recommend for policymakers:

- A set of universal **core principles** to guide the design of the policy response
- A set of **potential tools** with which to respond
- A **decision framework** to determine appropriate policy responses for a specific jurisdiction.

Our objective is to encourage the development of policy actions that support long-term economic resilience and growth, and broad-based improvements in living standards, while minimizing the costs to the public.

Desirable, and feasible, responses will vary across nations and regions due to differences in available government resources, institutional capabilities, and social and political priorities and constraints.

Available resources: All countries have to assess programs based on whether they are a good use of resources, particularly in helping engender robust economic growth and recognizing that any government costs today will eventually have to be paid for. To the degree that a country faces constraints on borrowing or higher borrowing costs, as is especially true of many emerging markets and developing countries, they will have to make tougher trade-offs in the targeting and scale of possible interventions, and place more emphasis on harnessing foreign investment flows. Without assistance from advanced economies, and sovereign debt relief, some developing countries would struggle to create the fiscal resource envelope to allow them to respond to the crisis. In countries where a larger share of the financial and corporate sector is state-owned, there will be less scope for private risk holders to absorb some costs.

Institutional capabilities: In countries where there is a strong privately owned banking sector or well-developed capital markets, there will be greater opportunity to use the private sector to target and deliver support than in others. Some countries, including some emerging markets and developing countries, have significant public sector investment capability to draw upon through sovereign wealth funds and development banks. Countries with independent, government-sponsored long-term pools of capital that have a record of successful partnership with the private sources of capital have certain advantages when responding to this type of crisis. The strength and efficiency of bankruptcy systems will determine the extent to which they can be relied upon in the crisis versus demanding other intervention.

Social and political priorities and constraints: Countries vary in what they value and what they can do politically or bureaucratically. Some countries are more open to full or partial state ownership of firms. Similarly, cultural attitudes toward debt forgiveness and second chances for bankrupt individuals and firms may place design constraints on adjustments to restructuring and bankruptcy measures. The appetite for using the private sector to distribute taxpayers' money for credit and investment also varies across the world. Views differ as well on industrial planning or the desirability of incorporating national objectives, such as the greening of the economy or digitalization, into policy responses. Market failures will manifest differently for firms of different sizes, and any support deemed appropriate may need to be tailored to the company size. Policy interventions will therefore also differ significantly between large corporates and the small and medium-sized enterprises (SMEs) that provide a substantial share of employment and whose failure may have significant economic and social costs.

1.3 CORE PRINCIPLES

We recommend a set of core principles that are critical for success. These fall within three broad areas of focus for policymakers.

- **Focus on the long-term health of the corporate sector.** The duration of the pandemic forces us to focus on structural issues and solvency, rather than buying time through a focus on liquidity. This also means we need to shift from broad-based to targeted measures, allowing reallocation of resources to occur.
- **Focus on the most productive use of resources.** It is critical at this stage that public policy is geared towards a strong economic recovery. This is one reason for taking advantage of private sector capacities where they exist, in order to leverage scarce public resources and to make use of private sector expertise to evaluate the viability of businesses. This also means that the choice of strategies aimed at achieving other societal objectives, such as greening of the economy or digitalization, should be based on their synergies with the efforts to accelerate the recovery. Finally, the design of any scheme to support the corporate sector should contain the risks of adverse selection, with weaker players seeking to take great advantage of such support.
- **Focus on preventing collateral damage.** The main example of this is avoiding unintended consequences for financial stability, including preserving the ability of the financial system to sustain lending and otherwise support the recovery.

We believe policymakers should rely on a set of ten core principles to help put into practice these areas of policy focus.

1. **Act urgently to tackle the growing corporate solvency crisis.** This crisis threatens prolonged economic stagnation, and harm for households and workers, if it precipitates a "cliff edge" wave of insolvencies or the creation of masses of zombie firms. Many measures to support the recovery will take time to deliver and should be initiated early. Some nations have already made significant progress in this area.

2. **Carefully target public support to optimize the use of resources and help economies emerge fitter and stronger.** Policymakers need to consider how to allocate scarce resources, and how to facilitate appropriate loss absorption by existing stakeholders. Indiscriminate support carries the danger of imposing a significant burden on taxpayers. Not all struggling firms should receive public support. Resources should not be wasted on companies that are ultimately doomed to failure or which do not need public support. Moreover, firms that would otherwise be successful should not receive unjustified windfalls.

3. **Adapt to the new business realities, rather than trying to preserve the status quo.** The business sector that emerges from this crisis should not look exactly like it did before due to permanent effects of the crisis and the pandemic's acceleration of existing trends such as digitalization. Governments should encourage necessary or desirable business transformations and adjustments in employment. This may require a certain amount of "creative destruction" as some firms shrink or close and new ones open, and as some workers need to move between companies and sectors, with appropriate retraining and transitional assistance. However, even governments that support such adaptation in principle may need to take measures to manage the timing of creative destruction to account for the knock-on effects of excessively rapid shifts, such as for insolvency regimes that could become overwhelmed.

4. **Market forces should generally be allowed to operate, but governments should intervene to address market failures that create substantial social costs.** Some existing market failures are particularly troublesome in the current crisis, such as the longstanding difficulty in funding SMEs effectively. Other market failures are artifacts of this specific crisis, such as the high degree of uncertainty that can deter private investment.

5. **Private sector expertise should be tapped to optimize resource allocation, where possible.** Properly functioning markets can help allocate resources (and costs) using existing expertise and funding channels. Governments are usually less able to pick winners and losers and to structure funding injections that properly align incentives. Harnessing private sector expertise is also likely to reduce adverse selection problems. When combining private and public sector expertise and resources, often the optimal solution will be to provide government incentives to encourage or channel private sector investment. Some states additionally have substantial investment expertise and financial resources in long-term capital pools, including sovereign wealth funds and development banks, that can complement private sector expertise.

6. **Carefully balance the combination of broader national objectives with business support measures.** Many countries are interested in using their policy responses to solvency and liquidity crises to accelerate strategic changes, such as the greening of the economy or digitalization. This is a legitimate choice, but requires a careful balancing of the desire to direct the change process against the need to avoid imposing excessive constraints on struggling businesses or too narrow an allocation of support into too few business sectors or specific firms. In many cases other policy levers may be better suited to advancing national objectives.

7. **Minimize risk and maximize upside potential for taxpayers, while ensuring stakeholders share in losses and do not receive unjustified windfalls.** Where possible, government support measures should limit risk for taxpayers, such as through staged deployment of funding, and come with some direct upside, such as through a share of future profits.

8. **Be mindful of moral hazard issues without undermining the core objectives.** Where companies entered the crisis with excessive debt leverage, there is the danger of "bailing out" owners and managers who took too much risk, which could also create moral hazard problems, through the expectation of future rescues. At

the same time, governments should avoid an excessive focus on assigning blame or withholding support; such an approach could cripple essential business support measures necessary for the sake of society as a whole.

9. **Get the timing right in the staging and longevity of interventions.** The duration of the pandemic, the shape of the economic recovery, the long-term consequences for demand, and the structural impacts on businesses are still unknown. Policymakers should move quickly, but design their programs to reflect this uncertainty, as well as mitigate political and bureaucratic tendencies to make temporary programs effectively permanent. Policy interventions should be designed to phase out when they are no longer needed. Policymakers may also wish to keep some "dry powder" available for later interventions, although this must be balanced against the benefits of the strongest possible early intervention to head off later problems.

10. **Anticipate potential spillovers to the financial sector to preserve its strength and enable it to help drive the recovery.** While this is primarily a crisis of nonfinancial firms, government may need to intervene to protect or bolster the ability of the financial sector to support the economic recovery. Further, policy choices should avoid actions that would significantly weaken the financial sector, such as forcing banks to make bad loans as a way of supporting the economy.

There are other important considerations for policymakers that are outside the scope of this report, which focuses specifically on the corporate solvency crisis. These include:

- Wider economic policy responses to the recession, such as fiscal and monetary policy stimuli.
- Policies designed to support broader national objectives such as digitalization, environmental sustainability, or the promotion of new or strategic industries. We note that some of these measures could be incorporated into the targeting or design of responses to the corporate solvency crisis, but do not discuss these in detail.
- Responding to the implications for individuals of business failures. By accepting that some firms should be allowed to fail, governments will need to ensure their social safety nets are robust, and provide support for retraining and entrepreneurship.

1.4 MAKING HARD CHOICES

These principles provide a guide for the hard and often unpopular choices that most governments will have to make. These choices include:

Reducing broad support of businesses and moving to more targeted measures focused on those firms that need support but are expected to be viable in the post-Covid 19 economy. Our interviews with government officials, central bankers, private sector executives, and academics demonstrated a broad consensus in favor of targeting business support measures to firms viable in the long run that face temporary financial problems. A key task will be to communicate these aims clearly, and manage the inevitable pushback against winding down broad, untargeted support programs and allowing some businesses to fail. It is equally necessary to provide proactive support to displaced workers, to help them transition into growing industries and firms.

Limiting government support of businesses to those circumstances where there is a market failure. Again, there was broad support in our interviews for saving government resources for those situations where private sector mechanisms were not adequate to solve problems effectively.

Partnering with the private sector to finance necessary balance sheet restructurings. Virtually every serious analyst recognizes that governments face severe practical and political constraints in targeting loans and investments to firms that will be viable in the long term but need support now. Banks and private sector investors usually have substantially more expertise in evaluating viability, and they certainly face less political pressure as they make those decisions.

Investing in equity and quasi-equity of businesses. Now is a time for many businesses to increase the amount of their equity funding and to limit their debt, to give themselves a greater margin for error and to decrease repayment burdens. Governments can get the most "bang for their buck" by encouraging that balance sheet restructuring through incentives for new equity and quasi-equity in these targeted firms or by making such investments themselves. Properly structured, these government initiatives can generate substantial investment earnings to partially or fully offset the cost of the incentives or the losses governments incur from firms that collapse.

Changing bankruptcy laws or introducing new restructuring schemes for firms that would otherwise go bankrupt. There has been a strong consensus for years that most countries have bankruptcy laws that are ill-suited to a situation like the current one, where there are many businesses that are fundamentally sound but have unsound balance sheets. This crisis increases the need to tackle reforms of insolvency laws or to pilot new schemes that would facilitate contractual debt restructurings without the use of bankruptcy procedures.

In the remainder of this paper, we present a series of policy tools to help governments follow through on our ten principles, as well as a decision framework to help optimize the use of these tools. We urge policymakers to stay true to these principles, despite the political pressures they will inevitably face in the short run.

1.5 POTENTIAL TOOLS

We propose a toolbox of policy measures from which policymakers can choose to tackle the solvency crisis in their jurisdiction. Some are long-standing tools, some are substantial adaptations of existing tools, and some are novel.

Our primary focus is on the following tools to support the corporate sector in the current crisis:

- **Targeted credit programs:** Government programs or guidance to encourage lending to viable, solvent firms while discouraging indiscriminate lending
- **Infusions of equity or equity-like investments:** Policies to make, or encourage the infusion of, equity or equity-like investments in viable firms
- **Balance sheet restructuring of otherwise viable businesses:** Enable restructuring of balance sheets to be achieved rapidly and inexpensively for qualifying businesses, including through modified bankruptcy processes and workout procedures.

A further tool is briefly explored, with potential to support the corporate sector primarily against future pandemic risk:

- **Government-backed (re)insurance** against future pandemic-related business interruption.

In addition, we address further measures that could support the health of the financial sector:

- **Measures to deal with bad debt efficiently and effectively:** Buying or guaranteeing bad assets, establishing "bad bank" structures, or encouraging the use of specially designed Asset Management Companies to take on nonperforming assets.

1.6 DECISION FRAMEWORK

There is no "one-size-fits-all" answer to this complex crisis, given the many differences across countries and regions. We therefore propose a framework for decisions, rather than a single set of answers. We recommend that policymakers address the following set of questions to determine whether and how to deploy these tools.

TARGETING

Which companies to assist, and why?

1. **What are your priorities?** This includes being clear about attitudes toward firm failure, protecting jobs and assets in SMEs versus large corporates, the importance of broader strategic objectives such as preservation of critical industries or encouraging the greening of the economy, and the balance of cost burden sharing across different stakeholders.
2. **What resources do you have available?** Clarity over available resources (both domestic and through foreign investment) will drive the targeting and scope of support measures.
3. **Where are there market failures with substantial social costs?** Identify for different types of firm whether there are sufficiently significant market failures to require interventions, and the barriers to the private sector in resolving them. In addition, identify where the costs of financial distress and the social costs of business failure are substantial.
4. **Which firms should be assisted through public policies to address these market failures?** Define your policy objectives for the different categories of firm defined by their size, financial constraints, nature of any market failures, and costs of business failure. This will depend on social and political priorities.

GOVERNANCE

Who decides which companies to assist?

5. **How should the viability and needs of individual firms be determined, and by whom?** Establish whether the private sector can determine the viability and needs of the firms in question, or whether and what government action is required. This will depend on local institutional capabilities. Where government does intervene, it should do so in a transparent way, with clear accountability, to provide clarity to the market and wider public.

DESIGN AND IMPLEMENTATION

How to assist them?

6. **What public support could be provided?** Identify the desired intervention or interventions to support firms in different situations.
7. **How should the chosen interventions be structured?** Design the delivery of the intervention, making best use of private expertise. The design of the intervention will depend on available government resources, institutional capabilities, and social and political priorities.
8. **When should the interventions be made, and for how long?** Determine when interventions should be introduced to have the greatest effect at lowest cost, and consider for how long they should last.
9. **Are actions needed to prevent spillovers to the financial sector?** Identify whether there is risk to the health of the financial sector that justifies government action to ensure it remains resilient and capable of supporting the recovery.

1.7 TIME TO ACT

Policymakers need to act urgently if they are not already doing so. The solvency crisis is already eroding the underlying strength of the business sector in many countries. Action is required to design and implement the policies and structures required before companies have failed. Although the situation varies by country, officials cannot afford to be complacent in any jurisdiction.

2. Introduction

In the first phase of the response to the economic effects of Covid-19, governments and central banks devoted trillions of dollars to deal with the corporate liquidity crisis, mostly through the provision of loans.[1] However, there is a growing corporate solvency crisis in most of the world, as balance sheets are hit hard by losses and the resulting need to pile up debt. In addition, many companies entered the coronavirus recession with unusually high levels of leverage.

This solvency crisis is too severe to be fixed through the normal operations of markets, without generating massive harm to the global economy. Therefore, it behooves policymakers to address the crisis proactively. Different governments are at different stages of addressing the solvency crisis. This paper provides frameworks and tools that will help them target and tailor their ongoing policy response.

Policymakers need to address three central questions:

Targeting: Which companies to assist, and why?

Governance: Who decides which companies to assist?

Design and implementation: How to assist the companies?

In the initial phase of the crisis, the overarching policy objective was to avoid extreme downsides. This, and the need for urgent action, meant the initial answers to these questions were, broadly: help everyone, have the government decide directly, and provide funding through debt.

Policymakers now need an actionable framework to inform more nuanced answers to these questions, and a range of policy tools through which to take action. The framework and tools will drive the allocation of finite government resources in the context of a potentially prolonged coronavirus recession whose duration and magnitude are uncertain.

Many governments have already acted and innovated in their policy responses. The approaches and recommendations in this paper should be of value for assessing and adapting existing policy responses, and for designing interventions going forward. Our focus necessarily spans companies of all sizes, from large corporates to small and medium-sized enterprises, since they all affect individuals' jobs and living standards and the advancement of economies as a whole.

2.1 POLICY OBJECTIVES

This report seeks to spur policy interventions that support economic resilience and growth, and high living standards, by:

- Helping restore financial health to the corporate sector while enabling efficient reallocation of resources through desirable economic and business model transformations
- Minimizing or mitigating the spillover of problems to the broader financial sector, while strengthening it to support financing of the recovery

1 See, for example, Gourinchas et al. (2020) for a detailed overview of the fast-expanding academic research on the effectiveness of the initial policy response to the Covid economic crisis.

- Avoiding short-term responses that undermine the medium- and longer-term recovery
- Minimizing the long-term cost to the public of achieving these objectives.

2.2 REPORT SCOPE, STRUCTURE, AND CONCEPTUAL APPROACH

The report first identifies the unique economic challenges posed by the Covid-19 pandemic (section 3). It then posits nine questions policymakers can ask to inform how they target, govern, and deliver their policy response. These questions form our recommended decision framework.

Targeting: Which companies to assist, and why? (section 4)

1. What are your priorities?
2. What resources do you have available?
3. Where are there market failures with substantial social costs?
4. Which firms should be assisted through public policies to address these market failures?

Governance: Who decides which companies to assist? (section 5)

5. How should the viability and needs of individual firms be determined, and by whom?

Design and implementation: How to assist them? (section 6)

6. What public support could be provided?
7. How should the chosen intervention be structured?
8. When should the interventions be made, and for how long?
9. Is additional action needed to prevent spillovers to the financial sector?

This report is intended to be of use for policymakers globally. Specific policy choices will be influenced by factors including countries' available resources, institutional capabilities, and social and political priorities and constraints, which are outlined in subsection 6.2

Section 7 makes recommendations for key principles and the decision framework by which these elements can be combined in practice.

3. The unique economic challenges presented by the Covid-19 pandemic and the initial policy response

The current policy challenges are rooted in the speed, scale, and uncertain nature of the Covid-19 pandemic and its economic consequences. Making the right policy choices in the current environment requires understanding the unique characteristics of the coronavirus recession. This context explains both the nature of the initial policy response, and why that policy response is insufficient in the medium and longer term. This section sets out these unique economic circumstances, the resulting global economic policy response to combat the crisis, and the reasons why this response now needs to evolve to meet the policy objectives set out for this paper.

3.1 THE UNIQUE ECONOMIC CHALLENGES PRESENTED BY COVID-19

The sudden and extreme supply shock made previous methods of production impossible in many cases and dramatically changed consumption patterns, triggered by the virus and associated restrictions, leading to a collapse of revenues for many companies, thereby creating substantial losses and urgent and continuous liquidity needs to ensure business continuity. Many industries, particularly those with high fixed costs, are facing extreme cash flow pressures as sales plunge due to government lockdowns and changes in consumer behavior. Uncertainty and lockdowns preventing spending have caused consumers to limit their expenditure to essential products and services. The hardest hit industries include airlines, travel and leisure, and energy, but the magnitude of impact across sectors varies by country (see Figure 1). Travel and tourism sector revenue, which accounts for 10.4 percent of global GDP,[2] is estimated to drop by approximately 35 percent from 2019 to 2020.[3] By suddenly stopping the activities of many companies and radically changing consumption patterns, the initial Covid shock presented an immediate threat to jobs, with widespread consequences for household incomes if left unmitigated by governments. Businesses of all sizes have been affected; however, SMEs (which are more heavily concentrated in some countries and industries than others) are often less resilient to shocks than larger firms, because they typically have fewer routes to access private capital or a greater dependency on fewer suppliers. Self-employed individuals in many areas have also been heavily impacted by decreased revenues.

The global and largely synchronized nature of the shock has disrupted supply chains. The initial outbreak in China led to plant closures and supply shortages that disrupted global supply chains even before the virus reached other parts of the world—938 of the Fortune 1000 have Tier 2 suppliers in the Chinese provinces most affected by the virus.[4] Even as China began to lift its lockdowns, other economies were implementing their own.

The difficulty of predicting the duration and recovery path after the pandemic, and differentiating between structural versus temporary changes in demand, make it difficult to determine the long-term viability of enterprises during the pandemic. There is the risk of further disruption to consumer demand and to businesses' supply

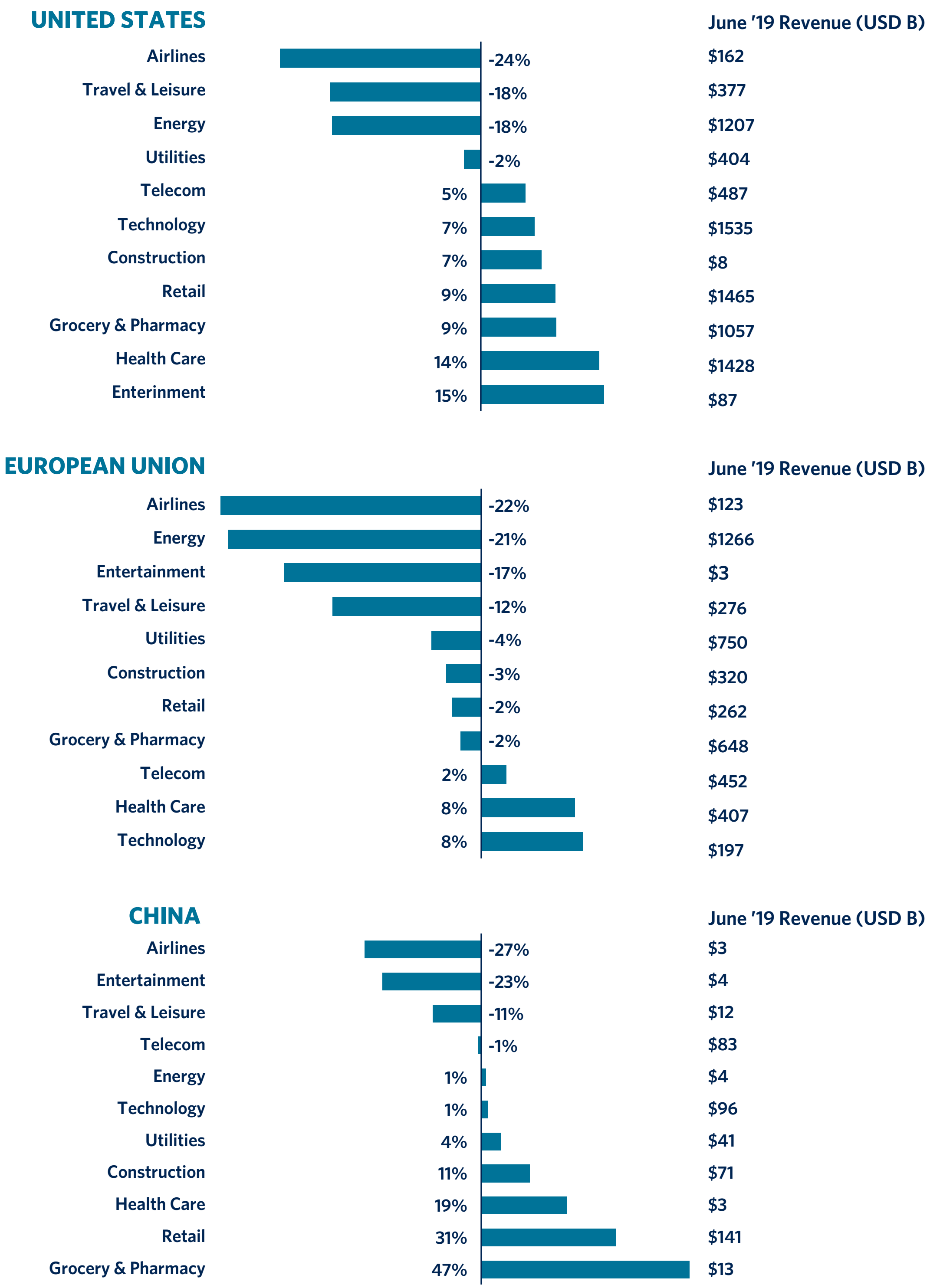
2 Jones 2020.

3 *Statista* 2020.

4 Dun & Bradstreet 2020.

FIGURE 1. Year-on-year (YOY) revenue growth by industry segment in three sample economic areas

June 2019 to June 2020; publicly listed companies only



Sources: Refinitiv DataStream; Oliver Wyman analysis.

Note: Includes the 26 members of the EU and the UK.

chains from further waves of the pandemic and additional lockdowns. Some industries may face sustained impacts due to lasting changes in consumer behavior and to acceleration of the pre-pandemic trends of growth in demand for online services, including shopping and education.

The propagation mechanisms, financial players, and financial context are different from those seen in the 2008 global financial crisis (Table 1). Following the 2008 crisis, the banking sector was recapitalized and subject to more prudent regulation and supervision. Moreover, the 2008 crisis was primarily a financial crisis that directly hit the balance sheets of banks and eventually spread to the real economy through the contraction of credit supply. Most economies confronted the coronavirus crisis with a much stronger and better capitalized banking sector, with better risk management, and with flexible stress testing tools that allow for a more timely insight into banks' risk exposure. Unlike in 2008, the Coronavirus crisis has directly hit the balance sheets of firms in the real economy, with the potential risk of spread to the balance sheets of banks.

In the past decade, alternative private capital sources have become more abundant and diverse. Many long-term investors around the world, including pension and sovereign wealth funds, have built capacity and expertise for nontraditional investments through private fund structures and directly. Between 2005–2007 and 2017–2019, growth in private equity and private debt globally outpaced global GDP growth of 51 percent (from US$58 trillion to US$88 trillion).[5] Private equity fundraising in developed markets grew by 69 percent, from US$957 billion to US$1,614 billion; and in emerging markets by 635 percent, from US$52 billion to US$382 billion. During the same period, private debt in developed markets grew by 176 percent, from US$129 billion to US$357 billion; and in emerging markets by 973 percent, from US$1.6 billion to US$17 billion.[6]

TABLE 1. How the context and propagation of the current crisis differs from that of 2008 (debt levels for Q1 2007 and Q1 2020)

	2008 global financial crisis	2020 Covid-19 pandemic
Initial shock to the balance sheet of:	• Households • Banks	• Businesses • "Non-bank" high-yield lenders (collateralized loan obligations, mutual funds, and business development companies)
Sources of capital:	• Limited private capital • Official sector	• More transparent and better capitalized banking sectors • Abundant private capital (through fund structures and direct investments by sovereign wealth funds, pensions, and family offices) • Official sector
Corporate leverage:	• 73% of GDP globally for nonfinancial sector corporates	• Higher: 91% of GDP globally for nonfinancial sector corporates[a]
Household leverage:	• 57% of GDP globally	• Slightly higher: 60% of GDP globally
Public sector debt:[b]	• 58% of GDP globally	• Higher: 88% of GDP globally

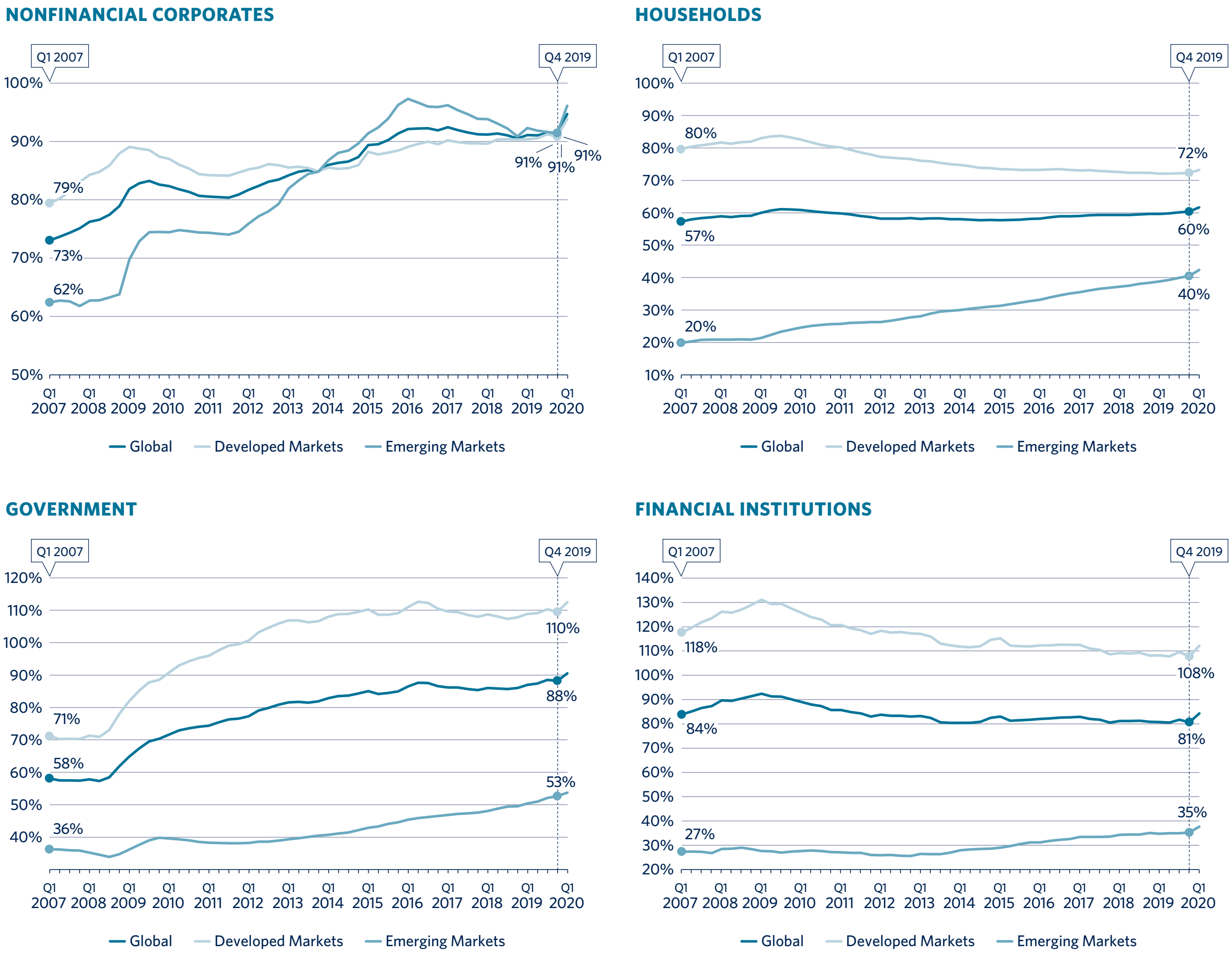
Note: a. Although due to the lower interest environment and compression of spreads in the credit market, corporate debt servicing has been less burdensome. Carrying significant amounts of leverage, and especially senior secured leverage, exposes firms to a limited ability to access liquidity when dealing with negative shocks. In addition, much of the debt can become binding through the covenants structure. b. Lower interest rates mean debt service costs for many countries were still lower at the start of the current crisis than previously despite higher public debt burdens.

5 World Bank 2020.

6 Preqin. Since fundraising is not continuous, the value of closed funds is measured over a window of time rather than for one single year.

FIGURE 2: Levels of debt by sector from pre-global financial crisis to pre-Covid

Debt as a % of GDP by market



Source: IIF Global Debt Monitor Database, Oliver Wyman analysis

Levels of debt in the nonfinancial sector in many developed markets are higher than in 2007, as cheap and readily available funding encouraged borrowing. Global nonfinancial sector corporate debt levels as a percent of global GDP was 73 percent at the beginning of 2007 compared with 91 percent at the beginning of 2020, and in emerging markets specifically, levels increased from 62 percent to 91 percent of GDP between 2007 and 2020.[7] This higher leverage meant the corporate sector in many countries entered the coronavirus recession more vulnerable to financial stresses.

Overall levels of public debt going into the Covid-19 crisis were higher than in 2008, and in some cases already exceeded 100% of GDP. However, interest payments on the debt were generally lower than in 2007 given low interest rates. Across the OECD, for example, general government net interest spending as a share of GDP fell from 2.25 percent in 2007 to 2.04 percent in 2018.[8] Countries therefore had varying fiscal headroom coming into the crisis, linked to their existing debt and borrowing capacity going forward.

7 IIF 2020.

8 OECD.Stat. 2020.

The aggregate global figures summarized in Figure 2 conceal differences among countries, which has influenced the economic consequences of the Covid-19 pandemic so far, and shaped individual countries' policy responses.

3.2 THE FIRST WAVE OF POLICY RESPONSES

The policy response to the Covid-19 crisis has been swift and substantial. Policymakers have drawn from and expanded the use of tools from the 2008 playbook and taken additional, and in some cases unprecedented, measures. A range of fiscal, credit guarantee, and monetary and macro-financial measures have been deployed.

FISCAL POLICY RESPONSES

As of October 2020, the global fiscal support spending by governments is estimated at about US$12 trillion.[9] Governments have implemented aggressive fiscal stimulus policies to encourage spending and the flow of money into the economy through employment protection, government spending, and incentives. For instance, as of October 2020, Japan had passed the largest fiscal package among G20 countries, amounting to more than 21 percent of its GDP.[10]

Governments are working to limit unemployment spikes by helping companies continue to cover payroll expenses and, in some cases, other costs. Germany's Kurzarbeit program is aimed at reducing employees' working hours, sometimes down to zero,[11] while the government shares the cost of employees' income during the downturn. Many other countries around the world, including the UK, adopted similar models in their initial response to encourage businesses to furlough workers rather than lay them off, paying up to 80 percent of wages of self-employed and furloughed workers.[12] Governments have taken various approaches to extending or modifying initial furlough schemes versus allowing them to end. The US's Paycheck Protection Program (PPP) seeks to achieve a similar aim through loans that may be partially or fully forgiven if employment levels are retained.

Governments have been engaging in targeted financial support and direct government spending, including nationalizations, to aid struggling sectors or companies. For instance, the airline sector has seen varying forms of government support. Italy nationalized Alitalia in March, while Portugal struck a deal to nationalize TAP Air in July. Singapore Airlines' market recapitalization exercise in March 2020 was underwritten by its largest shareholder, Temasek Holdings, an investment company owned by the Singapore government.

Many governments have also launched tax cuts and spending subsidies as part of their fiscal stimulus measures to incentivize spending in hard-hit sectors or provided direct stimulus to households to spur spending and help alleviate financial hardship.

CREDIT PROGRAMS

Many governments have offered large guarantee programs for bank loans to businesses. In an attempt to avoid a flood of defaults, some countries have pledged hundreds of billions in loan guarantees. Britain and France have made aggressive credit guarantees worth as much as 15 percent of GDP.[13] Other countries promised to cover 100 percent of loans in the case of defaults. For instance, through the Canada Emergency Business Account, Canada guaranteed 100 percent of interest-free loans made by banks to small businesses and nonprofits, and Germany promised to guarantee 100 percent of loans made by banks to SMEs through their own program.[14]

MONETARY AND MACRO-FINANCIAL POLICY RESPONSE

Monetary and macro-financial measures have had a role to play in the initial policy response. Globally, central banks have widely eased monetary policy by cutting interest rates. Between March and April 2020, the Federal Reserve and the Bank of Canada cut interest rates by 1.50 percent, and the Bank of England cut interest rates by 0.65 percent. In other major advanced economies, interest rates were already generally around zero.[15] Central banks have

9 Gasper et al. 2020.
10 IMF 2020a.
11 German Federal Ministry of Labour and Social Affairs 2020.
12 IMF 2020b.
13 *The Economist* 2020.
14 Baudino 2020.
15 Cavallino and Fiore 2020.

radically expanded asset purchase schemes in an effort to provide liquidity to the economy and exert downward pressure on longer-term rates, and have expanded lending operations to provide liquidity to the secondary market. In order to support a wider credit response, central banks and other financial regulators have made changes to rules and supervisory requirements, including temporary relaxation of bank capital requirements, to allow more lending, suspension of bank dividend payments and share buybacks, and relaxation of rules around classification of certain loans as "nonperforming."

BROAD THEMES OF THE INITIAL POLICY RESPONSE

The nature of the current response has been significantly different from that in 2008 in that support has been targeted directly to companies and employees, rather than banks. This reflects the nature of the crisis, which has hit companies and jobs instead of the financial sector first, and political lessons learned from public reactions to the 2008 crisis response. The initial policy response has varied by country, reflecting different starting points, different timings and trajectories for the spread of Covid-19, and a range of political and ideological factors.

The speed of the policy response has benefited from previous experience, with some tools developed during and since the 2008 financial crisis. After the 2008 crisis, some governments tried to stimulate the economy by temporarily cutting the value-added tax rate, subsidizing the hiring of unemployed people, extending unemployment insurance, and increasing government spending. For instance, analogues of the Kurzarbeit program, credited with helping Germany recover quickly after the last financial crisis, are a common tool in this crisis. In addition, several programs to stabilize money market funds and other parts of the financial markets were conceived in the 2008 crisis.

The early policy response in many countries was heavily skewed toward liquidity measures, including major government-backed credit programs. A number of interventions also failed to take full advantage of private sector expertise, including through provision of generous loan guarantees and direct investments.

Importantly, even after government mitigation measures, some nonessential sectors are still unprofitable including (for one sample G20 country) manufacturers, travel and transportation, and nonessential retail (see Figure 3), reinforcing the likelihood of a corporate solvency crisis as initial government support measures wind down or are made less generous.

3.3 WHY WE HAVE NOT YET SEEN MAJOR SOLVENCY ISSUES

A major wave of corporate insolvencies that might have been expected in the face of such an extreme economic shock has not yet materialized, and in some countries rates of insolvency were in fact lower during the first half of 2020 than in prior years. Nevertheless, there are several reasons why policymakers and commentators should not be complacent about the potential scale of the coming solvency crisis.

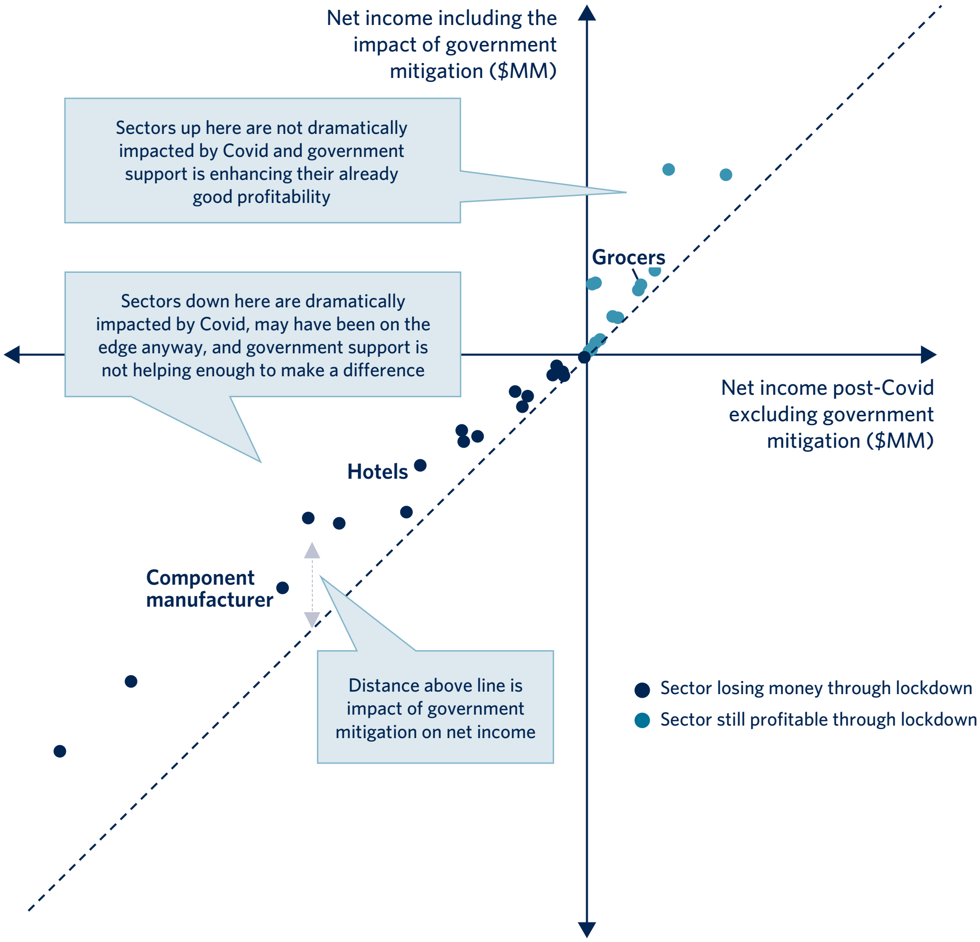
Generous government financial support has concealed the scale of the challenge: The scale of many governments' spending to mitigate the initial effects of the pandemic on the corporate sector has been substantial. In addition, aid to households has allowed them to maintain consumption levels higher than would otherwise be possible. As government support programs tail off and repayments start to become due, a significant increase in insolvencies could be expected.

Temporary adjustments to insolvency regimes have blocked bankruptcies: Many countries adjusted their insolvency regimes to protect companies from bankruptcy, for instance, by freezing insolvency proceedings or preventing creditors from initiating an insolvency procedure. In most cases, these were introduced as temporary measures, and when they lapse the rate of insolvencies is likely to increase.

Existing cash buffers: Many firms have used existing cash buffers to soften the drop in demand. However, many studies have found that the strain of continued lockdowns will quickly exhaust cash buffers for many firms. A Bank for International Settlements (BIS) study estimated that if 2020 revenues fall by 25 percent and firms are not able to roll over debt, cash buffers and revenues will be exceeded by debt service and operating costs in more than half of the sampled corporates across 26 countries. [16]

16 Banerjee et al. 2020. This 2020 BIS study looked at a sample of 40,000 listed and large unlisted corporate firms across 26 advanced and emerging economies, with a combined revenue around 60 percent of GDP.

FIGURE 3. Subsector level net income post-Covid accounting for income of government mitigation action in 2020 based on three-month lockdown and mitigation measures for a sample G20 country



Source: Moynihan 2020.

Note: In this example, for firms with 50 to 250 employees.

Adjusting operating expenses: Many companies have lowered operating expenses through steps including reducing salary overhead through layoffs, pay cuts, and shorter work weeks; reducing office space; or negotiating payment holidays from landlords. Some measures are temporary, and as the pandemic persists may no longer be enough to sustain solvency.

There is a growing sense of the magnitude of the coming challenge. In the second quarter of 2020, 147 companies globally with turnover in excess of €50 million became insolvent, representing a 99 percent increase over the same quarter in 2019. The greatest increase was in Western Europe and the United States, and in the retail, services, and energy sectors.[17] Meanwhile, fallen angel debt globally hit US$323 billion in the first half of 2020, and is on track to hit its own all-time high of US$640 billion in 2020.[18] The credit insurance company Euler Hermes expects its

17 Lemerle 2020.

18 Brennan 2020.

global insolvency index to reach a record high by 2021.[19] SMEs face a significant solvency risk in 2021 because their cash shortages, reduced revenues, and increased borrowing will greatly weaken their debt servicing capacity and already low equity positions. For instance, one forecast anticipates that for SMEs in the Euro area, the share of debt with an interest coverage ratio below one will increase by more than 30 percentage points by 2021 from pre-Covid.[20] Another study finds that levels of nonperforming loans among 13 European countries are forecasted to rise by 7 percentage points due to Covid.[21]

3.4 WHY THE EXISTING MEASURES ARE INSUFFICIENT

The first wave of liquidity-focused policy measures has prevented much more severe consequences for the corporate sector, and for the economy, more broadly. However, as the crisis progresses, jurisdictions now need to develop policy responses that address the following problems that make the initial response unsustainable:

- Inadequate targeting of support, which fails to sufficiently tailor the policy response to the situations of different firms
- An excessive focus on credit provision, which risks overburdening firms with debt, promoting inefficient use of resources, and engendering problems for the future
- Excessive direct government decision-making and suboptimal use of private sector expertise, which could be used to better direct support
- A level of public spending that would be unsustainable over the potential duration of the ongoing economic crisis.

These problems are in many cases attributable to the speed of policy action required, and many countries have already started to adapt their policy responses to address such issues.

Now, to meet the policy objectives we have set out, a playbook is needed that allows policymakers to better target support they provide to different companies, including equipping them to address problems of solvency. Some of the tools set out in this report are already being used in various forms by some governments. The discussion below should be of interest to policymakers in evaluating and improving their existing interventions, and in designing their response going forward.

19 Lemerle 2020.
20 IMF 2020b.
21 Gourinchas et al. 2020.

4. Targeting: Which companies to assist, and why?

Scarce public resources should be targeted toward the correction of market failures that would harm the wider economy, and should enable the efficient reallocation of economic resources to where they will preserve and create the most value. Not all firms will merit policy support, and those that do will merit differentiated and potentially novel interventions.

To determine which companies to assist, and why, policymakers should answer four questions:

- What are your priorities?
- What resources do you have available?
- Where are there materialized or anticipated market failures with substantial social costs?
- Which firms should receive what sort of public support?

4.1 WHAT ARE YOUR PRIORITIES?

In the first wave of the response to Covid-19, many governments prioritized liquidity provision to maintain the status quo, and job protection schemes in one form or another. As it becomes clear that sustaining the initial levels of spending through an ongoing or recurring crisis is not affordable, governments will need to be explicit about their priorities moving forward to inform their ongoing response. Key considerations include:

- **Large corporates versus SMEs:** In some jurisdictions, large corporates may be more successful at making their voice heard by policymakers, and their challenges and failure may raise more visible public and political concern, with national "flag carrier" airlines a case in point. However, there are good reasons for policymakers to give attention to the fate of SMEs, for which interventions may need to be designed very differently from those for larger firms. SMEs are important for many reasons, not least their contribution to employment, their very different geographic distribution from that of large companies, and the importance of the "striving" SME environment for entrepreneurship (see Box 1).
- **Attitudes toward firm failure and employment:** Policymakers will vary in their weighting of preserving the status quo and existing jobs, versus allowing or encouraging the process of "creative destruction," in which firms fail, allowing jobs and resources to flow from unsuccessful firms to ones that are better suited for the new economy.
- **Combining broader national objectives with business support measures:** Many countries are interested in using their policy responses to solvency and liquidity crises to accelerate strategic changes, such as the greening of the economy or digitalization, or the preservation or development of strategic industries. This is a legitimate choice, but requires a careful balancing of the desire to direct the change process against the need to avoid imposing excessive constraints on struggling businesses or too narrow an allocation of support into only selected business sectors or specific firms. In many cases, it may be better to have specific policies to advance broader national objectives rather than incorporating this into corporate support and restructuring policies, overwhelming already complex regulations.

BOX 1. Why focus on small firms?

SMEs make a significant contribution to total employment around the world. In the United States, for instance, firms with fewer than 500 employees contributed 47 percent of the private workforce in 2016.[a] Where there is a risk of SMEs failing, policymakers need to consider whether and why to provide support rather than depending simply on social safety nets to mitigate the consequences of failure. The following economic and social costs may persuade policymakers to support SMEs:

- SMEs may be under greater pressure than larger firms since they will have fewer options for financing[b]; they largely depend on relationship banking, and many loans may carry personal guarantees.
- The geographic distribution of SMEs differs from that of large firms, so the social effects of unemployment resulting from their failure may be widespread across communities with limited alternative employment options.
- Preservation of small firms may be desirable in those sectors and jurisdictions where it limits the market share of a small number of larger companies, with beneficial competition effects.
- In developing countries, failure of SMEs may set back development of the formal economy and increase the size of the informal economy, seen by some as an obstacle to economic development.
- Bankruptcy frictions are larger for SMEs than for larger firms (see subsection 6.2.3.).
- Many smaller businesses may hold significant intangible and relational capital[c,d] (relative to their size), although this is likely to vary substantially by individual firm and the nature of its business. Admittedly, where this is relatively limited, and particularly where social safety nets exist and support could be provided to develop new businesses once the crisis has passed, failure may be an economically rational outcome (notwithstanding possible social costs described above).

Sources: a. US Small Business Administration 2019; County Business Patterns 2016. b. See, for example, Mills 2020. c. Welbourne and Padro del Val 2009. d. Brassell and Boschmans 2019.

- **Burden sharing:** Given that there are costs associated with the effects of the pandemic, these must fall on some stakeholders. In their policy response, policymakers will (implicitly or explicitly) prioritize some stakeholders over others. This is true among existing stakeholders, such as whether shareholders of large companies should be assisted with taxpayer funds. There is also a question of intergenerational transfer of costs, whereby more spending by governments today will benefit stakeholders today while burdening future generations.

Clarity about priorities allows policymakers to identify the operational metrics against which they can measure the success of their response so far and track the effectiveness on their ongoing policy measures. Where possible these should include forward-looking "leading indicators." These metrics may include employment rate statistics, numbers of new claimants of out-of-work social support, filings for insolvency, and real-time consumer payment data. Emerging sources of more real-time data have been used by some governments to anticipate levels of some forms of financial support, including footfall data in retail districts provided by big tech firms.

4.2 WHAT RESOURCES DO YOU HAVE AVAILABLE?

Clarity about available resources will drive the targeting and scope of support measures. Key considerations include:

- **Attitudes to public sector debt:** Some countries entered the current crisis with already high levels of public debt. This debt has already increased substantially to fund the initial wave of policy measures in most jurisdictions, increasing fragility to future shocks.

Determining what the limit is to this public debt, and what represents a sustainable level of public finances, will provide an envelope for public spending. Not all developed markets entered this crisis on an equal footing, with some countries still recovering from sovereign debt crises following the global financial crisis. Many advanced economies have substantial economic and financial market scope for additional borrowing, so their primary constraint will not be how much they can afford, but how much they can use wisely without creating undue burdens on other stakeholders, including future generations. In many developing countries and some emerging markets, the potential for significant sovereign borrowing to help "smooth" the economic shock from Covid-19 will be more limited than elsewhere since they will find it harder to credibly fund fiscal expansion today through committing future tax revenues.[22] Some such countries will first need to restructure their sovereign debt to give them the capacity to respond, which will require collaboration from developed countries.

- **The value of keeping "dry powder" and optionality:** Policymakers may also wish to keep some "dry powder" available for later interventions, although this must be balanced against the benefits of the strongest possible early intervention to head off later problems. We, and the great majority of government officials, central bankers, private sector executives, and academics we spoke with in the preparation of this report, lean strongly toward the view that greater, earlier intervention is likely to be the better choice.
- **Ability to mobilize domestic sources of private funding:** Policymakers should identify where domestic pools of private capital reside to inform the design of interventions to channel private sector expertise and funds in the same way the banking sector has been used in the initial stage of pandemic policy response.
- **Ability to mobilize foreign sources of private funding:** This may be a disproportionately important source of financial resources for emerging markets and developing countries with less developed domestic private sources of funding. Governments' attitude toward foreign takeovers of domestic firms will be important.
- **The role of monetary policy:** A broad overview of the monetary policy response in the initial response to the Covid-19 pandemic is outlined in section 3.2. Central bank balance sheets will grow this year, paralleling increases in public debt. There are limits to the role that monetary policy can play on an ongoing basis. Agustín Carstens, the BIS General Manager, has said that "[c]entral banks cannot intervene in government debt markets on a large scale for any great length of time. Eventually, the natural boundaries between fiscal and monetary policy will need to be fully restored to preserve central bank credibility."[23] In addition, some measures that cross the traditional boundaries between fiscal and monetary policy, "are only feasible for central banks in advanced economies with high credibility stemming from a long track record of stability-oriented policies."[24]

Policymakers will need to make these decisions alongside the broader question of whether marginal resources should be spent on supporting businesses or investing in measures to manage the public health crisis itself.

4.3 WHERE ARE THERE MARKET FAILURES WITH SUBSTANTIAL SOCIAL COSTS?

Market forces should generally be allowed to operate, but governments should intervene to address market failures that create substantial social costs. The fundamental economic problem of solvency addressed in this report is that—due to the large negative shock to the demand for firms' goods and services—many businesses require a significant amount of capital to ensure business continuity, but are not able to raise it quickly enough at a fair price. If the business model is solid, why might the flow of capital from banks, public markets, and/or non-private capital be blocked in the absence of government assistance? The reasons vary depending on the type of companies.

Challenges for SMEs: For small and medium-sized firms, which are not typically highly leveraged even in normal

22 Djankov and Panizza 2020.

23 Carstens 2020.

24 Carstens 2020.

times, the fundamental problem is the lack of significant hard collateral, higher levels of cash-flow risk, and limited information, all of which leads to financial constraints. Traditionally, this segment relies on "relationship banking" as a primary source of funds. Thus, the existing lending relationships would be the cheapest source of additional funding, since lack of significant collateral and public information might make switching costs prohibitively expensive, especially in the context of a pandemic. From the bank perspective, and especially given the systemic nature of the shock, this would imply taking on higher risk. When done at scale, this is likely to push the bank against its own capital constraints. This risk absorption by the banking sector also might not be desirable for a broader economy due to it destabilizing nature. Existing bank relationships for this segment, therefore, are the desirable channels of capital flow. However, such capital flows may not take place at the scale needed in the absence of government assistance.

Challenges for larger firms: The problem is different for large firms as these have much broader access to capital sources (because of the type and size of collateral, more stable cash flows backed by more stable market positions, and better public information). The basic idea that the existing creditors to the company, and particularly those creditors that hold proprietary information, are the cheapest source of capital, still applies. This is especially true when the economy is stressed. Many large companies that entered the crisis with moderate levels of leverage have been able to take advantage of usual market functioning to preserve cash and strengthen their financial positions, including many such examples in industries most directly hit by the pandemic. The solvency problem for large companies is concentrated primarily among those that entered the crisis with substantial amounts of leverage, facilitated to a large degree by decades of rapid expansion of the leveraged loan market in the United States and Europe in the runup to the coronavirus outbreak.[25] The fundamental problem for this set of firms is that their lending capacity is clogged by senior secured debt, where existing creditors are facing balance sheet constraints that prevent them from channeling additional rescue capital.[26] For an outside investor, it is an unattractive investment proposition during the pandemic to take a massive block of senior secured debt at par, or enter into a much more junior position. This delays capital structure restructuring while depriving companies of much-needed capital.

There are further, cross-cutting issues that drive market failures in the current context.

Unsuitability of restructuring processes: This raises another central constraint: if there would be a quick formal restructuring process with the power to "cram-up" (in this case, some of the existing senior creditors would end up with a partial equity stake as a recognition of permanent revenue loss resulting from the pandemic shock), it could open the flow of new capital with lower risk. While such processes do exist, even US bankruptcy law, which is celebrated for business friendliness, is not suited to handle the volume of bankruptcies likely to be triggered in the current context.

Excessive uncertainty: Finally, there is a set of firms (such as low-leveraged medium-sized companies, or later-stage startups) for which private capital sources might dry up due to the uncertainty surrounding the sustainability of the business model. In other words, these are companies for which liquidity problems are perceived to be solvency problems. We do not believe that government entities are better than the private sector at telling these two problems apart; it is almost certain they would be worse. However, this is where countries capable of articulating long-term strategic goals for developing specific sectors and gaining political consensus for this agenda might be able to provide targeted assistance. More broadly, beyond the uncertainty that makes identification of sustainable business models difficult, some investors may be deterred by overall macroeconomic uncertainty. In this case, government intervention to protect extreme negative outcomes on investments across portfolios of investments resulting from extreme negative macroeconomic tail risks may be required to give private investors the confidence to invest (see section 6.2.2).

25 The leveraged loan market is a high-yield segment of the syndicated loan market, that is, a large-cap loan market where loans are originated by a few banks (typically one or two), but funded by a group of creditors. Notably, in the leveraged segment, the group of non-originating creditors largely consists of non-bank lenders, such as collateralized loan obligations, mutual funds, and hedge funds, among others. Leveraged loans are senior secured debt.

26 The specific economics of the constraints binding in the leveraged loan market during the pandemic crisis are discussed in detail in Harmon and Ivashina (2020).

4.4 WHICH FIRMS SHOULD BE ASSISTED THROUGH PUBLIC POLICIES TO ADDRESS THESE MARKET FAILURES?

Policymakers should identify targeted policy objectives for different categories of firm, defined by their size, financial constraints, nature of any market failures, and costs of business failure. Policy objectives by firm will depend on social and political priorities and constraints specific to the jurisdiction in question.

Firms are likely to fall into five broad categories:

1. Firms that are economically viable, have low leverage, and have ready access to financing
2. Firms that are economically viable, have low leverage, but have limited access to financing (typically small firms and startups)
3. Firms that have an economically viable business model but have too much financial leverage and are illiquid
4. Firms that have an economically viable business model but have too much financial leverage and are insolvent
5. Firms that are not economically viable under their current business model (Figure 4).

The coronavirus recession is already propelling more firms into the "Solvency-challenged" category. Policy interventions should seek to ensure that firms in Category 1 are not disadvantaged, and firms in Category 5 undergo necessary business adjustments or are closed, helping to avoid the creation of zombie firms (see Box 2). Policy interventions for Categories 2 to 4 should be designed to differentiate between the needs of firms in the different categories in order to deliver against all the policy objectives efficiently and effectively. Additional policy interventions may be justified, including for "structurally unsound" firms, if the social externality costs of failure that would otherwise materialize are judged to be sufficiently high.

FIGURE 4. Firm classification

Economically viable?	**Yes**				**No**
Degree of leverage	Low leverage		High leverage		
Nature of the financial constraint	With access to external financing	Without access to external financing	Liquidity problem	Solvency problem	
	Category 1: Healthy firms	***Category 2: Financing-constrained***	***Category 3: Liquidity-challenged***	***Category 4: Solvency-challenged***	***Category 5: Structurally unsound firms***
Policy focus	Help ensure normal market functioning	Provide liquidity or encourage its provision	Provide liquidity or encourage its provision while being mindful of moral hazard issues Balance sheet restructuring may also be appropriate	Facilitate balance sheet restructuring while being mindful of moral hazard issues	Encourage necessary business adjustments or closure

BOX 2. Zombie firms: The dangers of the walking dead

Zombie firms are companies that are unable to cover debt servicing costs from current profits and that depend on creditors for their continued existence. The term "zombie firms" was coined to refer to firms propped up by Japanese banks during Japan's so-called "Lost Decade," following the collapse in 2001 of the Japanese asset price bubble. Multiple studies suggest these firms contributed to Japan's economic stagnation by distorting market competition and depressing profits and investments in healthy firms. The concept has subsequently been used elsewhere, including in the wake of the global financial crisis and with reference to the Chinese and European economies. Fears are mounting that overburdening of the corporate sector with debt in the response to Covid-19 could create a new wave of zombie firms, with harmful consequences for the prospects of economic recovery.

Japan's walking dead

In Japan, zombie firms were found to have proliferated as banks lent to fundamentally insolvent borrowers to avoid recognizing losses on the banks' balance sheets that would have caused the banks to fall below required capital levels, and the public and political backlash they would receive for denying credit to companies in need.[a] (This pressure was exemplified as the then-Finance Minister, Takeo Hiranuma, declared that Daiei, a firm employing 96,000 people, was "too big to fail."[b]) Firms were most likely to receive credit from banks with weak balance sheets or from within the same *keiretsu*, or business group. Interest rate drops during the economic downturn supported the proliferation of zombie firms by reducing some financial pressures and allowing them to avoid restructuring or failing. The nonperforming loan issue was exacerbated by Japanese regulatory and political authorities, because they avoided calling for bank reform or restructuring, and instead announced that no public money would be needed to assist the banks, asserting in 1998 that the issue "would be over within a matter of weeks."[c]

Caballero, Hoshi, and Kashya's (2008) analysis of the Tokyo Stock Exchange found that between 1981 and 2002 almost a third of firms present at some point during the period could be classified as zombie firms (using a standard that zombie firms were provided a direct interest rate subsidy).[d] Their analysis indicated that employment growth, average industry productivity, and investment would have been higher without the presence of zombie firms. Industries with more zombie firms had lower prices and higher wages, limiting growth for viable firms, and reducing profits of new firms, creating barriers for entry. Many zombie firms recovered in the 2000s. A study conducted on the recovery of Japan's zombie firms found that the combination of corporate restructuring and a positive macroeconomic environment helped revive the firms. Specifically, reducing employee count, selling fixed assets, and increasing special losses were strategies employed by Japanese firms that aided their recovery.[e]

Zombie proliferation

Prior to the solvency challenges posed by Covid-19, the concept of zombie firms had been revived in the context of the recovery from the global financial crisis, and more recently, the Chinese economy. A study focusing on 11 European countries following the sovereign debt crisis found that a stronger zombie firm presence creates excess production capacity and, subsequently, affected industries experience lower average firm markups, product prices, investment, and productivity, with an increase in material and labor costs.[f] A recent study found that across fourteen advanced economies, the prevalence of zombie firms among nonfinancial firms rose to 12 percent between the late 1980s and 2016, with upticks occurring specifically during times of economic downturn and lower interest rates.[g] Academic estimates on the proportion of zombie firms among Chinese industrial enterprises during 2013–2014 ranged from 3.3 percent to 13.46 percent.[h]

Zombie apocalypse

As interest rates stay low and governments continue to support struggling firms, the risk of zombie firms increases.[i] A recent study found that the ratio of zombie firms increases as the company size decreases,[j] raising concerns of a growing number of “invisible” walking dead among smaller firms. Piyush Gupta, CEO of Singapore-based DBS bank, expects the issue of zombie firms to be a real challenge among SMEs and predicts a wave of defaults that will add pressure to the financial sector, posing a question policymakers need to confront: “Do you keep…using public finances to support companies or do you let creative destruction happen à la Schumpeter?”[k]

Sources: a. Caballero, Hoshi, and Kashya 2008. b. Brooke 2002. c. Caballero, Hoshi, and Kashya 2008. d. Caballero, Hoshi, and Kashya 2008. e. Acharya et al. 2009. f. Acharya et al. 2009. g. Banerjee and Hofmann 2018. The BIS study defined zombie firms as firms with a continuous lack of profitability. h. Kajitani 2017; Lam et al. 2017; NIE Ronghua et al. 2016. i. Financial Times 2020a. j. Goto and Wilbur 2019. k. CNBC 2020.

5. Governance: Who decides which companies to assist?

The previous section addressed how policymakers should seek to target their policy objectives by different categories of firms, and the financial constraints and market failures specific to each. For instance, it is rarely the best use of taxpayer resources to support firms that will fail anyway. Conceptually, this is a relatively straightforward exercise. However, in practice, differentiating between businesses that fall into each category and determining the nature and level of support to provide to each is difficult.

This section provides principles for determining the preferred governance of decision-making, with relevance at a national and supranational level.

5.1 HOW SHOULD THE VIABILITY AND NEEDS OF INDIVIDUAL FIRMS BE DETERMINED, AND BY WHOM?

Policymakers need to establish whether the private sector can determine the viability and needs of the firms in question, or whether and what governmental action is required. This will depend to a large extent on local institutional capabilities.

Decision-makers could be:

Public actors:

- Local, national, or supranational agencies
- Central bank or fiscal authorities

Private actors:

- Banks, other financial institutions, markets, or private capital
- Managers and owners of the firms needing assistance.

The high degree of uncertainty that characterizes this crisis means this "identification" of firms in different positions will be difficult. That said, traditional data sources and analytical techniques should suffice to differentiate to some extent. Further, big data and machine learning show promise of considerably enhancing the ability to differentiate viable from unviable firms.

To inform who decides, it will be instructive for policymakers to consider:

- Who has the money, information, and expertise?
- What are the externalities?
- What are the social and political considerations and constraints?
- What criteria should be used to justify government intervention?

5.1.1 WHO HAS THE MONEY, INFORMATION, AND EXPERTISE?

In most cases, governments will want to rely on private sector expertise and markets to differentiate among companies with different needs and to target interventions and allow for market discovery. However, there will be cases where this is not sufficient. Design will need to consider where existing local institutional expertise and capacity lies or can most quickly be developed, which may influence the desired role for public and private sector actors. In those countries where there is greater mistrust of private sector capital, governments may need to explain the advantages of involving the private sector.

An important development of the last decade (as described in section 3.1) has been an increase in the scale and scope of alternative investments including private equity and private debt. This patient capital creates a potential source of due diligence and structuring expertise, and capital for policymakers to channel in their response to the current crisis.

Governments may have a role in helping generate the information required to allow the market to act even in cases where they want to rely on private sector expertise. Progress in the availability of rich and diverse forms of data (such as tax or payment data), the quality and comprehensiveness of which varies across jurisdictions, can enable improved differentiation among firms.

5.1.2 WHAT ARE THE MARKET AND GOVERNMENT FAILURES?

Institutional choices will have knock-on effects on actors and outcomes beyond their direct policy effects. Understanding such externalities is essential to informing the role that governments play in deciding which companies to rescue, and how to do so. Examples include:

Knock-on effects of firm failure: Given the uncertainty of the crisis, it is likely that in the absence of government intervention there would be an excessively large wave of bankruptcies. It is also important to recognize that industries do not exist in isolation, but in ecosystems with interdependencies, including between small firms and large corporates. For instance, a large hotel company closing a local property may make local SMEs that serve it unviable. Thus, excessive liquidations or losses due to delays in bankruptcy resolutions could lead to externalities that result in the destruction of value of some economically viable firms, and high unemployment and its economic and social effects through the broader ecosystem in which bankruptcy firms operate.

Moral hazard effects of government action: Moral hazard risks from certain government interventions seen to "reward" firms that entered the crisis with excessive leverage may persuade governments not to take actions that would otherwise be desirable.

Effects on the banking sector: Use of the banking sector as an allocation mechanism for government assistance could weaken the financial system. For instance, incentives to evergreen existing loans and pressure of moral suasion by officials and concern about reputational risk could alter bank behavior, with harmful consequences.

Regional or global effects: Where spillovers of the pandemic effects and the policy responses extend across borders, regional or global coordination of decision-making is likely to be desirable. Recognition of potentially harmful economic knock-on effects among European Union countries, for instance, underpins the rationale for a €750 billion pandemic recovery fund.

5.1.3 WHAT ARE THE SOCIAL AND POLITICAL CONSIDERATIONS AND CONSTRAINTS?

Policymakers will need to balance economic objectives with political considerations, including anticipating how the public may respond to different interventions. Governments may consider it desirable to be a direct decision-maker, or otherwise shape decisions, in order to impose conditionality that can control some externalities (for instance, not laying off employees or limiting management compensation) or achieve broader social objectives. Of course, there is also the danger of trying to achieve too many purposes at the same time or falling back on overly simplistic requirements. Furthermore, some decisions influenced in part by domestic political considerations could have undesirable byproducts, including unnecessarily disrupting global supply chains. Specific considerations and constraints include:

Strategic priorities: Many governments will be tempted to use the current crisis and necessary public spending to support strategic priorities at an industry level, for instance promoting specific sectors seen as critical to long-term industrial prosperity, or broader objectives such as environmental sustainability.

Welfare systems: Decisions may be affected by the ability of individual countries' social welfare systems to protect lives and livelihoods in the case of business failure.

Attitude toward risk-taking behavior: Policy design will have to take into consideration the need to set the right incentives, including in relation to the long-term consequences of risk-taking. In particular, investors in companies that have been caught by the pandemic crisis with high levels of leverage may have to share the extra risk created by an aggressive capital structure. Social attitudes toward debt vary greatly across countries and may shape the actions of policymakers.

Attitude toward takeovers: There is a potential role for stronger firms to take over weaker firms. Where this includes foreign investors, governments will need to form a view on their attitude toward takeovers by foreign firms, balancing issues of the strategic importance of domestic ownership and public perception with the benefits of firm rescue by private funds. Foreign investment could be a particularly important source of funds to rehabilitate the private sector in emerging and developing economies.

International obligations: In the case of some countries, most notably EU nations, domestic policies may need to align with important international obligations. For instance, some support measures in the EU may be subject to constraints in EU law and regulation, especially governed by the Competition Directorate of the EU Commission, although many such EU rules have been suspended to give national governments greater flexibility in their response to the current crisis.

5.1.4 WHAT CRITERIA SHOULD BE USED TO JUSTIFY GOVERNMENT INTERVENTION?

Where government does decide to intervene, it should do so in a transparent way, ideally based on objective criteria (see Box 3). This will help create accountability; avoid generating additional uncertainty for the market, which could deter private sector activity; and support the government in managing wider public expectations in a consistent way. One such criterion may be that for government "bailouts" of major firms to be considered, the company must be able to show that all private sector options have been explored and exhausted, although that may have the downside of preventing speedy actions that may prove necessary.

BOX 3. Example of criteria for determining nationalization or part-nationalization

In one advanced economy, some of the criteria used to support ministers' determination of whether to nationalize or part-nationalize individual firms include:

- The scale of the individual firm within the industry
- Prospects for future success (including consideration of performance pre-crisis and competitive position)
- Contribution to employment relative to the local job market(s).

In the case of this particular country, just because a firm could be argued to be "strategically important" does not in itself warrant government support, at least in part to avoid giving the impression to firms that they do not need to exhaust all private market options before seeking government support, thereby giving the market every opportunity to "work" before government stepping in.

6. Design and implementation: How to assist them?

This section outlines the various tools policymakers may wish to draw on in their ongoing response to the current crisis and in their preparation for future crises, and offers suggestions for how individual interventions could be structured.

Responding to the challenges posed by the coronavirus recession requires governments to (re)evaluate what the role of the state should be. This includes deciding when and how to harness private sector expertise and market forces versus government playing a more interventionist role, and the design of partnerships between public and private sector players.

To determine how to assist companies in practice, policymakers should answer four key questions:

- What public support could be provided?
- How should the chosen intervention be structured?
- When should the interventions be made, and for how long?
- Are additional actions needed to prevent spillovers to the financial sector?

6.1 WHAT PUBLIC SUPPORT COULD BE PROVIDED?

Our primary focus is on three broad types of intervention that policymakers can consider to:

1. **Better target credit** to support firms where it is appropriate for credit to be extended
2. **Encourage the infusion of equity or equity-like investments** to restore the balance sheets of otherwise viable firms
3. **Improve restructuring and bankruptcy procedures** to encourage speedy and cheap exchanges of debt for equity, the restructuring of loan terms, or other actions.

We briefly explore a fourth tool, focused primarily on future pandemic risk, to:

4. **Prepare for future pandemic business interruptions through government-backed insurance**

Subsection 4.4 set out the need to differentiate policy focus across five broad categories of firm, differentiated by the nature of their financial constraints and relevant market failures. The five broad types of intervention identified here will be applicable to different categories of firm (see Figure 5). For example, while better-targeted credit programs will be relevant to firms struggling to access finance (Category 2) or that are in need of additional liquidity (Category 3), they will not be appropriate for solvency-constrained firms (Category 4) for which additional debt would further weigh on their balance sheet.

While some policymakers may decide it is best to pursue a combination of all of these interventions, others may decide their policy objectives are best supported by focusing resources on a smaller number of these tools.

Mergers and acquisitions may have a role to play in dealing with troubled companies, both those that are structurally sound but financially challenged and those whose business model needs restructuring. Detailed consideration of policy measures related to merger and acquisition activity is outside the scope of this report; however, policymakers should consider how to avoid creating unreasonable obstacles to this sort of activity or considering whether those constraints that do exist should be maintained in their current form.

FIGURE 5. Policy toolkit by category of firm

Policy tool	Intervention primary focus by category of firm				
	1. Healthy	2. Financing-constrained	3. Liquidity-constrained	4. Solvency-constrained	5. Structurally unsound
Primary focus on current pandemic impact					
Targeted credit programs					
Infusions of equity or equity-like investments					
Improve restructuring and bankruptcy procedures for viable businesses[a]					
Primary focus on future pandemic risk					
Government-backed business interruption (re)insurance against future pandemic risks					

Note: a. Primary relevance for supporting Category 4: solvency-constrained firms, but potential to support Category 3: liquidity-constrained firms, too.

There are other important areas of intervention for policymakers outside the scope of this report, which focuses specifically on the corporate solvency crisis. These include:

- Wider economic policy responses to the recession, such as fiscal and monetary policy stimuli
- Policies designed to support broader national objectives such as digitalization, environmental sustainability, or the promotion of new or strategic industries (we reference these only in passing, where most relevant to our toolkit and decision framework)
- Responding to the implications for individuals of business failures; by accepting that some firms should be allowed to fail, governments will need to ensure their social safety nets are robust and provide support for retraining and entrepreneurship.

6.2 HOW SHOULD THE CHOSEN INTERVENTION BE STRUCTURED?

Design and delivery of the intervention should make best use of available private sector expertise. Governments are usually less able than private actors to pick winners and losers and to structure capital injections that properly align incentives. Private sector expertise is conducive to better governance as it reduces adverse selection problems, ensuring that the scarce capital reaches the most productive firms. However, the use of the private sector as a distribution network also has limitations, and design of such interventions should reflect where the public sector needs to step in in the face of market failures and significant social costs.

Many times, the optimal solution will be to provide government incentives to encourage or channel private sector investment. In addition, some countries have substantial investment expertise and financial resources in long-term capital pools, including sovereign wealth funds and development banks, that can complement private sector expertise.

The design of the intervention will depend on available government resources, institutional capabilities, and social and political priorities.

Available resources: All countries have to assess programs based on whether they are a good use of resources, particularly in helping engender robust economic growth, recognizing that any government costs today will eventually have to be paid for. To the degree that a country faces constraints on borrowing or higher borrowing costs, as is especially true of many emerging markets and developing countries, they will have to make tougher trade-offs in the targeting and scale of possible interventions, and place more emphasis on harnessing foreign investment flows. Some developing countries will first need to restructure their sovereign debt to give them the capacity to respond, which will require collaboration from developed countries. In countries where a larger share of the financial and corporate sector is state-owned, there will be less scope for private risk-holders to absorb some costs. To the extent that governments choose to use banks as a distribution channel and where banks retain some risk in doing so, banks' concern about hitting capital constraints may limit the volume of support that can be delivered through such a mechanism. These constraints may be particularly binding on equity investments.

Institutional capabilities: In countries where there is a strong privately owned banking sector and well-developed private capital markets, there will be greater opportunity to use the private sector to target and deliver support than in others. Some countries, including some emerging markets and developing countries, have significant public sector investment capability to draw upon through sovereign wealth funds and development banks. Those countries with independent, government-sponsored long-term pools of capital that have a record of successful partnership with the private sources of capital have certain advantages when responding to this type of crisis. Many countries' initial policy responses have failed to take full advantage of the expertise of the private sector, for instance through injections of government funds directly into large companies or provision of credit guarantees that neuter traditional lending practices. Private actors will typically be better at targeting support than government decision-makers. Interventions in the next wave of responses should be structured to harness the expertise of private actors wherever possible, for instance through co-investments and public-private partnerships where government intervention is deemed necessary. The nature of existing bankruptcy systems will determine the extent to which they can be relied upon in the crisis versus demanding other intervention, and the degree to which their modification is a priority.

Social and political priorities and constraints: The exceptional circumstances mean conventional resistance to certain measures, such as full or partial state ownership of firms, may be waived. However, social and political considerations specific to each jurisdiction will still shape the feasibility and desirability of certain responses. For instance, cultural attitudes toward debt forgiveness and second chances for bankrupt individuals and firms may place design constraints on adjustments to restructuring and bankruptcy measures. In the case of the EU, constraints on permissible support to companies may shape the response of individual nations.

Other, key design considerations include how to minimize contribution to future moral hazard issues, and how risk for taxpayers can be minimized and the upside maximized.

Moral hazard issues: Where companies entered the crisis with significant debt leverage, assistance programs triggered a danger of creating a moral hazard problem. Governments should avoid overly generous policies that contribute to future moral hazard issues, while at the same time avoiding an excessive focus on assigning blame that can cripple essential business support measures for the sake of society as a whole.

Minimizing risk and maximizing upside for the taxpayer: Where possible, government support measures should limit risk for taxpayers. Specifically, staged deployment of capital, which enables the government to act gradually based on realized macroeconomic information, enables mitigation of such risk. Some measures could be designed to provide taxpayers with some potential upside, such as through a share of future profits.

Crucially, the design of interventions will often need to be differentiated for SMEs, which are afflicted by different market failures and have needs different from large corporates.

We now discuss how these contextual factors and design considerations apply to policy options across each of the five broad areas of potential intervention, drawing specific policy examples where appropriate.

6.2.1 BETTER-TARGETED CREDIT PROGRAMS

Company focus: Category 2 (Financing-constrained) and Category 3 (Liquidity-challenged)

Description: Government programs or guidance to encourage lending to viable, solvent firms while discouraging indiscriminate lending

The design of government credit programs in the initial response to the coronavirus recession, and laws and political pressure requiring banks to lend, have restricted the use of traditional credit underwriting and pricing approaches. This means there is a high likelihood of pushing debt onto some firms that cannot make best use of it or have become zombie companies. This ties up resources without generating corresponding economic value, and creates the potential problem of firms going bust in the future. While in many cases these approaches were necessary at the start of the crisis to allow a suitably fast response and avoid mass waves of unemployment, policymakers should act as soon as feasible to move to a more differentiated approach that avoids leaving companies overleveraged.

Policy options and design considerations

Policies here seek to encourage appropriate lending. Credit programs should target credit to firms that are fundamentally sound and for which further debt would be affordable, but which currently present excessive risk for lenders to step up at rates that are reasonable for the borrower. Policy design therefore aims to improve the risk/return tradeoff for lenders, and make use of private funds and private sector ability to underwrite and price credit where without intervention (or without adjustment of program design) these would not be used due to excessive perceived risk. Governments will also want to consider whether there are ways to avoid the allocation of scarce public resources toward firms that do not need them.

We propose four levers that governments can use to improve the targeting of credit programs and address the shortcomings of many credit programs in the initial response to Covid-19:

1. Lower the guarantee percentage
2. Guarantee against extreme negative outcomes on loan portfolios instead of individual loans
3. Encourage a wider range of credit spreads to allow more risk-sensitive pricing
4. Use stricter minimum credit underwriting standards

Lever 1: Lower the guarantee percentage

Government can phase out schemes with ultra-high government credit guarantees (of up to 100 percent) that were used to quickly ensure the availability of credit in the initial response to Covid-19, and replace them with lower guarantee levels. Lower guarantee levels will increase the incentive for lenders to use conventional credit underwriting procedures.

Historical precedents suggest that a reasonably high loan guarantee rate is required to persuade banks to participate, and the response of lenders to lowering of credit guarantee rates should be carefully monitored. It may deter lending in the immediate term if lenders think there is a likelihood of guarantee rates increasing again in the future, so governments should avoid setting a precedent for reducing and then increasing guarantee rates again.

Guarantee levels could be differentiated by sector to reflect different levels of uncertainty or perceived riskiness, and to reflect any sector prioritization by government, although such sectoral preferences would need to be politically defensible and transparent.

Lever 2: Guarantee against extreme negative outcomes on loan portfolios instead of individual loans

Policymakers can move away from guaranteeing individual loans and instead take on the risk of extreme bad results on portfolios of loans. This measure may be attractive where private sector ability to underwrite and price credit are strong, but incentives are still required for lenders to make loans that would otherwise seem excessively risky. It will be most effective when applied to large portfolios of loans, with the benefit of diversification.

Lever 3: Allow risk-sensitive pricing

Governments can move toward having varied loan pricing to reflect risk, as is the norm for private institutions. Implementing risk-sensitive pricing could use relatively simple criteria and require only two to three price levels. Adjusting for risk can be more efficient as it would drive default rates down by encouraging reliable borrowers to participate and discouraging weaker borrowers. Risk-sensitive pricing would also allow for a fairer distribution of subsidies across borrowers by ensuring a more even difference between the private market rate and the government rate.[27] Although adjusting loan pricing to reflect risk will influence loan eligibility, and could prompt a backlash from some would-be borrowers, it is ultimately fairer for taxpayers and borrowers with different levels of risk. To the degree that these programs are administered through banks (with appropriate incentive alignment for the bankers—see section 5), performance pricing, which dynamically links loan interest rate spreads to borrowers' credit quality metrics, should be used to facilitate automatic repricing in line with changes in observable risk characteristics. The devil will be in the details, of course, but even the use of simple financial measures such as leverage would generally be preferable to treating all firms as equivalent.

Lever 4: Use stricter minimum credit underwriting standards

New programs could be designed with stricter mandated underwriting standards. These could still be looser than those in normal times so as not to overly restrict lending, but go some way to mitigate the risks presented by highly relaxed or nonexistent underwriting that has characterized some government-backed lending in the initial crisis response (see Box 4).

Both risk-sensitive pricing and sound underwriting standards can be ensured by administering the policy response through the private financial sector, while ensuring the appropriate alignment of incentives for financial intermediaries (detailed further, below). Some combination of some or all of these four levers may be appropriate. For instance, individual firm loan guarantees could be combined with portfolio-level protection against extreme outcomes, simultaneously with encouraging a wider range of credit spreads and stronger underwriting standards.

Some flexibility should be ensured, as governments might look to incorporate new information by changing the rules of existing credit programs or introduce new programs and phase out existing programs. Since the start of the crisis response, some governments have already adapted early credit guarantee programs to better target credit.

In addition to these four levers to better target credit, policymakers should consider several additional considerations in their program design.

- **Duration:** Government credit programs should be designed with a specific lifetime in mind, thereby reducing the political challenge of removing schemes. In many cases, this may entail defining, up front, objective criteria that would determine when a program will end, or to partner with an institution (such as a central bank) with a degree of political independence.[28]
- **Anticipating later issues as a result of restructuring:** Credit programs should be designed to have a restructuring option "prewired," such as debt that can be converted to equity under certain future scenarios.
- **Fairness and moral hazard:** Safeguards should be used to ensure funds are used for the intended purpose to deliver business continuity, rather than bail out existing shareholders and debtholders. This also helps minimize concerns over moral hazard. In practice, this may include:
    - Banning dividend payments and limiting debt reductions for recipients of support
    - Making taxpayer-funded credits senior in the event of future restructuring
    - Using stock warrants or convertibles to deliver benefits to the public purse from future increases in corporate valuations, especially for listed companies.[29]

While there should be no "free lunch," any restrictions will likely reduce the attractiveness of the program either to lenders or borrowers, so policymakers need to find the right balance.

- **Accounting rules and the loan versus guarantee trade-off:** Government accounting rules, often set by independent bodies such as the International Accounting Standards Board, can influence the tradeoffs politicians need to make regarding the design of credit programs. In most countries, loan disbursements

27 Elliott 2011.
28 Elliott 2020.
29 Becker, Hege, and Mella-Barral 2020.

BOX 4. How the US, German, and Australian governments have updated original Covid-related lending programs to better target credit

Many governments rapidly launched government-backed loan programs to provide firms with continued liquidity in the first wave of the response to Covid-19. With the benefit of more time, policymakers have refined the rules of some lending programs to better target credit.

Germany

On April 6, 2020, Germany introduced the Quick Loan Program, a new fully guaranteed loan program to support SMEs, after lenders were reluctant to take on risk under the earlier government program, which offered a partial guarantee.[a] The earlier program, the Kreditanstalt für Wiederaufbau (KfW) 2020 Special Program, launched on March 23, 2020, offered an 80 or 90 percent credit guarantee with low interest rates to all-sized firms. However, given the economic uncertainty in March, lenders were unwilling to take on more risk. After lenders pressed the government to extend the program's guarantee rate, the Quick Loan Program was launched as a new loan program offering SMEs loans up to €800,000 with a full guarantee and 3 percent interest.[b]

United States

The Paycheck Protection Program (PPP), launched on April 3, 2020, is a critical crisis response by the US that offers forgivable loans to small businesses to use for business expenses (some of which includes salaries, benefits, rent, and debt interest). The program was revised in late April to better target small businesses, especially after receiving a backlash for giving millions in loans to large, solvent companies.

In the second round of loan distributions, the Small Business Administration (SBA) announced a series of adjustments made to better target small businesses and exclude larger firms, and to target small lenders. All loans are capped at US$20 million for a single corporate group, and for firms seeking a loan greater than US$2 million, there must be verification that the firm needs the credit to sustain operations. To ensure that smaller lenders have access to the program, there are designated operating hours for the SBA to accept loans from institutions with less than US$1 billion in assets. In addition, any single bank can only lend up to US$60 billion.[c]

Australia

The Coronavirus SME Guarantee Scheme, initially introduced on March 22, 2020, and intended to expire at the end of September 2020, was extended until June 2021 and updated to provide SMEs broader access to financial support. The second phase of the program extends the loan size up to A$1 million to be repaid over five years, rather than the previous three-year loan of up to A$250,000. The use of the loans was expanded to cover broader business purposes, including investments, and now makes secured loans eligible on top of the original unsecured loans. In the first phase, loans had an initial six-month repayment holiday; however, in the next round, a repayment holiday is not offered, and the interest accrued over the period will be spread throughout the rest of the course of the loan.[d] The program's update enables access to more affordable credit over a longer period as firms adapt to the foreseeable future of the coronavirus. The adjustments to the loan program are aimed to promote growth; for instance, enabling the loan to be used for investment will hopefully lead to a greater uptake. Furthermore, including secured lending will make banks more willing to lend to borrowers.[e]

Sources a. Jennen 2020. b. German Federal Ministry for Economic Affairs and Energy 2020. c. Yale School of Management 2020. d. Australian Government 2020. e. Karp 2020.

are treated as expenses, and repayments as revenues. This tends to encourage more indiscriminate "hidden lending" through guarantee programs, which avoid initial outlays that would count as expenses if made as loans but could end up costing more over time. By contrast, US government accounting rules require an intelligent net present value analysis, following the Federal Credit Reform Act of 1990. This approach forecasts future inflows and outflows, whose present value is determined using government bond interest rates. This approach ensures guarantee and loan programs are evaluated on a level playing field.[30]

Enabling the banking system to operate and disperse loans effectively

In most contexts, policymakers will rely on the existing banking system to target and disburse loans. Policymakers should therefore consider a set of steps to make best use of the existing banking system. Such measures may include:

- Aligning credit underwriting criteria between banks and those embedded in government guarantees
- Developing eligibility criteria that are simple to document and verify, minimizing both operational barriers and fraud
- Supporting development banks to pivot toward smaller corporates[31]
- Adjusting regulatory and supervisory conditions to encourage lending, and provide reassurance to banks that they will be treated fairly and consistently by regulators and supervisors later in the crisis and recovery if they act on the basis of temporary adjustments to certain conditions in the short term.

6.2.2 INFUSIONS OF EQUITY OR EQUITY-LIKE INVESTMENTS

Company focus: Category 3 (Liquidity-challenged) and Category 4 (Solvency-challenged)

Description: Policies to make, or encourage the infusion of, equity or equity-like investments in viable firms

A key feature of the policy response to date has been to encourage borrowing, including through government subsidies or guarantees. This has added further debt burden to a corporate sector which, in many countries, was already highly leveraged. Equity or equity-like instruments can provide funding to companies and insulate them from shocks to their revenue streams, unlike loans, which can increase balance sheet fragility. Complementing lending with equity capital (or equity-like instruments) can help reduce the risk of viable companies failing, thereby destroying "going concern" value, or continuing to operate in zombie form.

Equity and equity-like financing is also an attractive route when compared with debt markets, in the current context, given the wide range of potential financing sources. These include private equity and debt funds, and several large institutions with direct investment programs in privately held assets, including sovereign wealth funds, pension funds, and family offices. These may be domestic or international, and can drive foreign direct investment, which may be especially important for some emerging markets.

Ideally, markets would deliver equity capital without government intervention; however, where private markets fail to mobilize the rescue capital on acceptable terms, government action may be required. Market failures (discussed further in section 4.3) that policy action can seek to address include a general failure of financial markets to facilitate equity investments for SMEs, a high degree of uncertainty, insufficient information about firms, and inexperienced negotiators or concerns over undue influence of investors.

Targeting is required to ensure that infusions of equity are directed at companies that are viable, once they achieve their target balance sheet, to avoid wasting private or public money on companies that even with such adjustments would not be going concerns. In countries and sectors where expertise is held by private players, governments should create the conditions for the market to operate effectively, and selectively magnify its impact where required. In others, more direct government intervention will be required. In addition, interventions should be designed to avoid just bailing out creditors.

Our primary focus is on intervention where there is no public equity market, and only under exceptional circumstances would we expect government-provided equity to be provided to support publicly traded firms. Indeed, with some public stock markets at record highs, providing any incentives or encouragement for equity investments may seem counterintuitive and unnecessary. There are at least

30 Elliott 2020.

31 Moynihan 2020.

three reasons why this is not the case. First, many sectors of the market are down considerably, with technology and some other firms dominating the bull market. Second, private companies are not getting the same runup as some large corporates, and the process of accessing public stock markets for the first time carries significant costs, making the public stock market not a viable capital source, especially for SMEs. Third, not every country has a sufficiently liquid and active public equity market, thus making the situation and the need to encourage privately held equity investments vary by country.

Policy options and design considerations

As a general principle, governments will want to make best use of available expertise in the private or public sector. In most markets, private sector investors will be best placed to make investment decisions. However, they may have insufficient incentives to invest under current conditions. In these circumstances, policymakers should seek to design incentives to harness the expertise of private sector investors and encourage investment where such expertise exists. This may include co-investing or taking steps to drive investment in long-term equity funds. Where banks are used as a distribution channel and retain some risk, capital constraints and the requirements of Basel III may sharply limit the volume of equity support they can provide.

However, in some contexts, particularly in some emerging markets, private investors may lack the expertise to make investment decisions. In circumstances where private expertise is limited, government must resort to taking the lead independently or with private investors as passive participants. Some governments, including those in emerging markets, may have access to existing investment expertise, including that of sovereign wealth funds. Direct investment may also be a last resort where the market failure is so severe that co-investment, incentives, and other actions are insufficient to drive adequate private sector investment.

Where government does need to invest (directly, indirectly, or by mandating/encouraging investment) because of a failure of private investors to meet the demand for capital, these investments can take several forms.

In the design of interventions that involve taking equity or equity-like stakes using public funds, governments should be mindful of maximizing the potential upside for taxpayers and minimizing the potential downside.

Direct government investment

Direct government investment can take several forms.

- **Convert loans backed by governments into equity or equity-like instruments:** This may be attractive where large volumes of government-guaranteed loans already exist, and where for political or economic reasons government wants to take a stake in the upside against the risk it bears anyway. Particularly when smaller firms are the primary beneficiary, for whom transaction and monitoring costs associated with equity investments will be disproportionately prohibitive, instruments that are equity-like may be more appropriate than "traditional" equity. Converting loans into such instruments can support viable firms to improve their balance sheets and reduce the likelihood of default. Such conversions could take the form of redeemable preferred equity or agreements for firms to pay higher taxes on future profits in exchange for investment now, as proposed by Blanchard, Philippon, and Pisani-Ferry (2020). It is important to bear in mind the real risk of an adverse selection problem, whereby less healthy firms will be more inclined to give up equity than stronger firms, especially when the equity stake comes with substantially greater government and public scrutiny than would be true of firms taking government-guaranteed loans. In some cases, liquidation may be a better solution. There are significant complexities in seeking to operationalize such measures. For instance, recouping public investments via taxes would impose a potentially significant administrative burden on tax agencies.
- **Nationalize companies or take significant government stakes:** In some cases, governments may decide it is necessary to take a direct stake in companies. Given the nature of the decision-making involved, this is only really practicable for larger corporates. Where this is deemed to be necessary, risks associated with state control (including undue influence) should be managed appropriately, with a roadmap for state exit planned at the outset. Direct nationalization or part nationalization should be used as a last resort, such as in cases when other avenues are not available for strategic industries or those employing large numbers of people, and governments should try to establish clear criteria under which they are justified. Ideological views and historical context may make such intervention untenable in some countries. Generally, this should be avoided when

it precludes spending on interventions that magnify private money and will therefore go further.

Where government takes equity stakes in firms, existing private lenders should in most cases be forced to take some level of write-down to avoid direct transfers to these lenders.

Government co-investment

Co-investment is attractive for harnessing private sector expertise, while magnifying the ability of private sector investment to meet equity needs, helping to tackle shortages in capital availability. It is likely to be most suitable for SMEs and mid-caps, and leaves potential upside for the government as an investor. However, direct co-investment requires significant infrastructure, may have an unclear exit strategy (unless designed through equity-like instruments with fixed terms or other built-in exit mechanisms), and may be inefficient for smaller businesses due to transaction and monitoring costs. Such co-investment could be delivered through direct or indirect investments.

Co-investment will be desirable in certain industries that experience particularly high capital shortfalls, including in sectors characterized by high uncertainty in the current crisis. In some countries such interventions may need to be widespread; however, even in countries with well-developed equity markets (such as the United States), certain parts of the market may still warrant such assistance.

Unless government invests on terms identical to those of private sector participants, there is a need for careful consideration of the appropriate balance of risk and reward for both sides. This includes accounting for potential political implications if government (and indirectly taxpayers) is perceived to be getting a "worse deal" than private investors.

Singapore is one of a number of countries that has used public-private co-investments in response to Covid-19, helped by preexisting institutional characteristics (see Box 5).

Government investment to incentivize private sector investment

There are a number of (non-mutually exclusive) steps policymakers can consider to incentivize and support private sector investment (see Box 6).

- **Invest in funds that buy equity (or equity-like instruments) in favored sectors:** Where suitable funds with appropriate expertise already exist within a well-functioning market, government can channel investment through such preexisting channels.
- **Subsidize equity investments in certain sizes of firm or sectors:** By subsidizing certain equity investments, government can help encourage private sector investments. This could take several forms, such as making some investments partially tax deductible, or providing government subsidies or dividends to investments in certain sectors or under certain conditions. Government could agree to pay an annual dividend or offer a partial tax credit on the original investment. In designing such a measure, government would need to consider whether to deliver subsidies to the businesses receiving investment or the investors. While these should theoretically be factored into price negotiations and therefore represent similar economic value, administrative, tax, or political reasons may favor one route over the other. Government would also need to determine the level of the subsidy, and the sequencing of payment over time, and could mandate a minimum holding period for the initial investor. A variant on this would be to give the government warrants with high strike prices so that taxpayers share in the upside if companies do well, or to have the government buy such warrants upfront.
- **Manage excessive risk:** Excessive or unquantifiable risk may deter private investors. Risk may be specific to specific companies or sectors (such as aviation), or macroeconomic (associated with uncertainty regarding the overall shape and magnitude of the recession and recovery). In these cases, government could provide some form of guarantee. Governments would likely choose to limit this to guaranteeing losses over a certain level on portfolios of investments (rather than individual investments) held by expert investors only. Governments could also consider creating "insurance" against extreme negative macroeconomic tail events.

Boxes 5 and 6 give examples of programs using equity or quasi-equity instruments as the primary means of delivering an injection of funding. Generally, the dividend that accrues on preferred equity is equivalent to interest on debt. However, if the firm cannot afford to pay the preferred dividend, this does not constitute a default, although the dividend may automatically accrue until a time when the company is ready to distribute cash. This conditionality on company profitability makes preferred

BOX 5. Recent approaches to public-private co-investments

This box provides two examples of targeted government co-investment programs in 2020 that build on private capital investment expertise to provide partial assistance through equity-like capital injections.

UK – The Future Fund

Creation of the Future Fund was announced on April 20, 2020, to provide "bridge" financing assistance to high-potential UK companies during the Covid-19 pandemic. Through this program, the government co-invested £250 million alongside private capital. The program was set up as an "investor-led process" in which a private investor applies in association with an eligible company, and the Future Fund matches the private investor's contribution up to £5 million on a *pari passu* basis.[*] The investments are made as convertible debt—that is, debt convertible into equity—with a minimum non-compounding interest rate of 8 percent, a minimum 20 percent conversion discount rate, and maturity of at least three years. The interest on the loans accrues until the loan converts. The program further requires that the loan cannot be used to pay any other borrowings, dividends, bonuses, or advisory fees. Among other criteria ensuring that the capital is channeled to UK companies and employees, the program was restricted to companies that have raised as least £250,000 in equity in the last five years.[a] The program began approving applications in early June, and as of August 16, there were 902 applications of which 590 loans were approved with a total value of £588.3 million.[b] At the time of this report, the government planned to increase the fund's size due to the program's popularity.

Singapore – Special Situation Fund for Startups (SSFS)

Singapore's extensive support for companies, while principally in the form of employment subsidies and loan guarantees, included a S$285 million Special Situation Fund for Startups (SSFS).[c] The program is designed to leverage domestic and international private capital expertise, with the government co-investing on a one-to-one basis, via convertible debt, on a *pari passu* basis. The SSFS builds upon existing government schemes. For example, the government had earlier committed an additional S$300 million to the Startup SG Equity program, which aims to catalyze private investments in Singapore-based deep-tech startups in key emerging sectors.

Sources: a. British Business Bank 2020. b. HM Treasury 2020. c. Enterprise Singapore 2020; Startup Singapore 2020.

Note: **pari-passu* meaning ranked equally.

BOX 6. United States – 2009 Public-Private Investment Program

The 2009 Public-Private Investment Program (PPIP) is an example of a successful public-private partnership with distressed assets using quasi-equity instruments. Established in March 2009, the PPIP US Treasury program was created to aid the residential market-backed securities (RMBS) and commercial market backed securities (CMBS) market in the aftermath of the 2008 financial system collapse. Rapid deleveraging in 2008 put substantial pressure on the prices of RMBS and CMBS. Many financial institutions were stuck with these assets on their balance sheets, which in turn reduced credit availability, especially for consumers and small businesses. The PPIP aimed to bring private, patient capital into the RMBS and CMBS market by providing financing on attractive terms, along with equity investments from the US Treasury, for the purpose of investing in troubled assets. Part of the PPIP's stated investment objective was "to generate attractive returns for taxpayers and private investors through long-term opportunistic investment in [Eligible Assets] by following predominately a buy-and-hold strategy."[a]

Following these principles, the government sought to maximize purchasing power by investing tax dollars alongside co-investments with private partners. These partnerships shared both the upside potential and the downside risk between taxpayers and private fund managers. The government also wanted to avoid overpaying for assets; thus, the program encouraged private fund managers to compete and establish prices.[b]

Originally, the PPIP included both a Legacy Securities Program and a Legacy Loans Program. The Legacy Loans Program aimed to help banks remove devalued loans from their balance sheets through **Federal Deposit Insurance Corporation** (FDIC) guarantees and Treasury equity co-investments. However, the Legacy Loans Program was postponed indefinitely in June 2009 after banks were able to successfully raise capital without selling their legacy assets to the program.[c]

Legacy Securities Program Structure and Participation: The program contained a set of restrictions on eligible securities; otherwise, the private fund managers maintained control of all asset selection, pricing, trading, and disposition. The program was structured as a closed-end fund with eight-year terms (three years to make investments). The funds' profits would be distributed to private investors and the Treasury in proportion of their equity after meeting the Treasury's debt financing requirements. In addition, the Treasury held warrants that gave it the option to collect a fixed percentage of private investors' profits above their contributed capital. The original program had attracted broad attention from the investment community, with approximately 100 applications filed. Ultimately, nine prominent private investment firms with deep expertise in debt markets participated in the program. The applications were vetted on several criteria, including demonstrated ability to raise at least US$500 million of private capital, demonstrated experience investing in the eligible assets, a minimum of US$10 billion of eligible assets under management, and demonstrated operational ability to manage the funds per the Treasury's stated investment objective while protecting the taxpayers.[d]

Legacy Securities Program Performance: Initially, the Treasury deployed around US$12 billion in debt and US$6 billion in equity (of a US$22 billion total cap). Private investors raised US$8 billion in equity for the funds. Overall, about 83 percent of available funds was deployed. At the end of Q3 2013, the Treasury reported that all eligible assets were sold, and gross distributions totaled US$32 billion. The Treasury realized a net profit of US$4 billion, resulting in the multiple on invested capital (MOIC) of 1.55x. The private managers' reported net internal rate of return ranged from about 18 to about 25 percent, and the multiple of paid-in capital ranged from 1.13x to 1.76x, ultimately making it an attractive private investment that had been useful for the stabilization of the financial system, and resulted in attractive returns for US taxpayers.[e]

Sources: a. US Department of the Treasury 2012a. b. US Department of the Treasury 2012b. c. Federal Deposit Insurance Corporation 2009. d. US Department of the Treasury 2012b. e. US Department of the Treasury 2013.

equity similar to government programs that are intended to be paid back through future tax collection, since tax collection is senior to equity distributions but is conditional on firm profitability.

Enabling environment

Policymakers can take further steps to create the broader regulatory and market conditions that support the functioning of private equity investments.

- **Remove barriers created by tax laws, regulations, or accounting rules, and use them to create incentives:** Many countries have tax, regulatory, or accounting rules that create unnecessary obstacles to equity investments. Tax and other incentives could be used to support equity markets and make equity investments more attractive, although some measures may take time to implement. Fiscal and administrative barriers to capital-raising that could be reduced include simplifying regulations on equity issuance to reduce associated costs, removing tax advantages that favor debt over equity, and increasing tax deductibility of capital losses on investments. It may be appropriate to modify state aid applicability for certain companies, for instance, those under a certain size.

- **Ensure access to the information required by investors:** It can be difficult to access timely, reliable information that equity investors typically require to make investment decisions, particularly for SMEs. Policymakers could consider creating a centralized data utility or encouraging a private sector initiative to fulfill the same function.

6.2.3 REVISED BANKRUPTCY FRAMEWORKS AND BALANCE SHEET RESTRUCTURING

Company focus: Category 4 (Solvency-challenged)

Description: Enable restructuring of the balance sheet to be achieved rapidly and inexpensively for qualifying businesses, including through modified bankruptcy processes and workout procedures

Economic stresses from Covid-19 and growing debt burdens will trigger bankruptcies or otherwise force balance sheet restructurings. Enabling restructuring of the balance sheets of viable but solvency-challenged businesses in a way that preserves their going-concern value is preferable to the punitive approaches in most countries' bankruptcy systems that destroy value. In addition, without the avoidance and/or modification of formal bankruptcy proceedings, the bankruptcy system in many countries may be overwhelmed by the volume of bankruptcies, and unnecessarily destroy value of firms. Policymakers should therefore be wary of "cliff effects" if a number of firms enter bankruptcy or need restructuring simultaneously. This may influence broader policy actions, for instance, seeking to attenuate the rate at which firms enter insolvency proceedings to avoid the system being overwhelmed by providing targeted credit guarantees for longer than might otherwise be optimal. Some governments made temporary adjustments early in the crisis to avoid insolvency proceedings being initiated (see Box 7).

At the heart of the challenge is the fact that while the current crisis is producing a much larger number of firms with sound underlying business models but unsound balance sheets, most jurisdictions have insolvency procedures that essentially assume a firm with an unsound balance sheet is a structurally unsound business. Recognizing that many firms with unsustainable businesses are still fundamentally sustainable firms encourages a different approach to insolvency.

Some common issues policymakers should seek to address are outlined below.

Bias toward liquidation over restructuring: Senior creditors tend to push for liquidation, as they are not invested in the continuity/upside of the firm, and swift and relatively certain resolution through liquidation might be the

BOX 7. Insolvency process reforms in response to Covid-19: The UK and Singapore

UK 2020 Solvency Reform

On March 28, 2020, the UK government announced plans to reform the insolvency and corporate governance framework due to the Covid-19 crisis, and on June 26, 2020, the Corporate Insolvency and Governance Act came into force. The law had three main goals: to provide new tools for the insolvency and restructuring process to help companies maximize their likelihood of withstanding the crisis, to protect companies from creditor action and support trading through the crisis without the threat of personal liability by temporarily suspending aspects of insolvency law, and to provide temporary easements on company filing and annual general meetings requirements.[a] The bill introduced both permanent and temporary changes to insolvency and corporate governance law.

Among the permanent changes, the reform created a moratorium during which legal action cannot occur against a company without the court's leave. This moratorium gave companies "formal breathing space to pursue a rescue plan." Second, the bill gave the court the right to force the plan on to objecting creditors. The procedure aimed to ensure that a single class of creditors could not block a plan that was in the company's and the creditors' interest. Further, the government introduced a permanent prohibition of termination clauses after a company enters insolvency procedures, the new moratorium, or restructuring procedures. Essentially, the legislation prohibited suppliers from threatening, or stopping supply to, a company that has entered into insolvency or restructuring, regardless of contractual terms.[b]

The bill also introduced several temporary measures to specifically address the Covid-19 crisis. In addition to a set of measures related to safety, the bill temporarily removed the threat of personal liability for wrongful trading for directors who attempt to rescue their company.

After facing Covid-related financial difficulties, Virgin Atlantic received approval from the English High Court to finalize its recapitalization plan, representing one of the first companies to use the UK's new Corporate Insolvency and Governance Act. All four classes of creditors approved the plan at the hearing, so the court did not need to exercise its new power that allows them to sanction the plan even if only one legitimate class of creditors approved it, known as "cross-class cram down."[c] The recapitalization expects to raise £1.2 billion by 2022. Shareholders are providing £600 million of support, while creditors are providing support with £450 million of deferrals, and new money providers are giving £170 million of secured funding.[d]

Singapore's Simplified Insolvency Program

Singapore's Simplified Insolvency Program was introduced to Parliament on October 5, 2020, as a simplified prepackaged option for micro and small firms to restructure or liquidate. To be eligible for the program, the firm must have no more than 30 employees, no more than 50 creditors, an annual sales turnover no greater than S$10 million, and liabilities no more than S$2 million. For the simplified winding up process, their realizable assets, excluding any asset that is subject to a security arrangement, cannot be greater than S$50,000.

Key innovations in the simplified debt restructuring program include:

- Only one application will be required for the High Court, rather than two, which was common for the previous prepackaged scheme (Singapore's Insolvency, Restructuring and Dissolution Act 2018)
- An automatic moratorium will be put in place when the company is in the simplified debt restructuring process
- The creditor approval threshold will be lowered from three-quarters to two-thirds.

Key changes in the winding up program include:

- The process will be based on a voluntary winding up, so no longer requires a court application
- If their assets are not great enough to meet the winding up costs, the firm will be able to dissolve early without requiring the realization of their assets
- The scope of the liquidator's function will be reduced, since the complexity and cost of the conventional winding up process is not suitable for the simplified version
- If a firm in the simplified winding up program is seen to be unsuitable for it, the court will be able to order it to enter the more complex winding up process.[e]

Sources: a. UK Government 2020a. b. UK Government 2020b. c. Stevens & Bolton 2020. d. Ashurst.com 2020. e. Ministry of Law Singapore 2020.

best outcome from their perspective. This problem gets amplified when the remaining value of the company vis-à-vis its outstanding debt is low. Such is the case, for SMEs, as well as large companies that have been heavily using the leveraged loan market in the past decade. The fundamental challenge therefore is to set the right incentives for the creditors to restructure, forbearing short-term obligations in exchange for higher returns in the future. In cases where multiple debtholders are involved, this could be further complicated by diverging incentives of individual creditors. More broadly, insolvency laws that create more losses for creditors cause them to charge more for credit risk, so incentivizing restructuring to take place can reduce the cost of debt in the long run.

Capacity constraints of conventional systems: In normal circumstances, if continuity of the business is desirable, an in-court system that enforces such an outcome sets a benchmark that often facilitates out-of-court restructuring (for example, the Chapter 11 system in the United States). Alternatively, a competitive banking sector with a flexible investment mandate might lead to a similar outcome (for example, the French bankruptcy system). A system biased toward liquidations might be favored for its simplicity but carries a deadweight cost for the economy. The existing systems, however, are not well-suited to handle the potential solvency crisis. The sheer number of firms looking to restructure their financial obligations are likely to overload the courts and jeopardize the effectiveness of their normal operations.[32] The same is true for out-of-court restructurings, as capital becomes scarce and processes become inflexible.

Duration and uncertainty of restructuring: It is important to consider that uncertainty surrounding timely resolutions of financial distress tends to erode businesses, as suppliers might not be willing to extend trade credit, the management team's valuable time might be consumed by negotiation with creditors and survival tactics, talented employees might leave, the firm might be forced to cease its capital expenditure, and failure stigma might alienate the client base. (This observation also supports the general bias toward liquidation for SMEs, as few can survive the restructuring process.) It is through this channel that the ultimate economic cost of restructuring and bankruptcy is likely to be amplified, potentially generating broader costs for the economy.

Individual responsibility and continuity of management: Many existing bankruptcy systems are rooted in the idea that significant responsibility for the wrong capital structure—the cause of the solvency problem—falls on the shoulders of the existing management and shareholders. While some firms entered the current crisis with significant levels of leverage, in many cases their existing management may have been effective, but could not reasonably have foreseen the nature and depth of the losses related to the Covid-19 outbreak. In such cases, reviving the firm by restructuring claims, and permitting existing management to remain in place where appropriate, may be more feasible and desirable for the economy overall than a more "punitive" approach.

With these challenges as a background, we propose the following actions:

- In dealing with the solvency crisis, governments should consider instituting temporary processes that facilitate and enforce speedy resolution between existing stakeholders of the firm through the power of "cramming" up or down the resolution decision. At the same time, governments must be careful not to cause confusion on what priority structure will be respected, which could drive uncertainty in debt markets.
- A holistic review of the bankruptcy process should not be ruled out, and might not be avoidable in those countries where liquidation or dismissal of the existing management tend to be required. Moreover, clear and informed restructuring procedures, over time, facilitate growth of specialized private capital, which helps with out-of-court restructurings.
- The temporary resolution system needs to be suited to handle significant flows of restructuring, and, as such, will have to adhere to clear processes, and judgement criteria, and rely less on human judgement. Part of that could be achieved by encouraging prepackaged insolvency solutions whereby the company and its creditors reach an agreement in line with the voting rules established by the formal resolution system, which enables fast formalization of the restructuring plan upon formal filing.

32 Iverson 2018.

- The restructuring process cannot be feasible without a new injection of funds, especially as businesses struggle to ensure their continuity. Such funding is typically provided on senior terms. (Simply put, if junior rescue capital injection were available, the formal restructuring process would not be necessary.) While, typically, the very purpose of restructuring is to open the flow of capital to the firm, the government should consider guaranteeing post-restructuring financing.[33] This however would be in line with the dictum of "lend(ing) early and freely (that is, without limit), to solvent firms, against good collateral."[34]
- To avoid the moral hazard problem, in jurisdictions with a significant rise in corporate leverage prior to the Covid-19 outbreak (such as the United States, the UK, and several other European markets), the resolution must recognize the pre-crisis financial risk-taking behavior of the existing management by ensuring that equity holders bear a significant share of the losses (see Box 8).
- Typically, the members of the board of directors face personal liability for voting to pursue bankruptcy or formal restructuring, which can be an important obstacle to voluntary restructurings. As part of the temporary actions, government should consider limiting personal liability to encourage boards of directors to pursue timely restructurings.

The practical restructuring tools available in the Chapter 11 context are well documented elsewhere.[35]

6.2.4 GOVERNMENT-BACKED (RE)INSURANCE AGAINST PANDEMIC-RELATED LOSSES

Company focus: Category 1–Category 4 (Economically viable businesses)

Description: Provision of government insurance or reinsurance against pandemic business interruption

The interventions discussed so far are focused primarily on supporting the corporate sector in the current pandemic crisis. However, this pandemic has stimulated debate regarding how governments and the corporate sector could be better prepared for future pandemics. One potential tool under consideration is government-backed business interruption insurance against pandemic risk. There is an active debate among public and private stakeholders regarding whether such schemes are desirable and feasible, and we seek to highlight key arguments on both sides.

The great bulk of direct losses for firms from Covid-19 was the result of interruption of their business activities. Many companies over the years have purchased protection against business interruption, but the insurance policies virtually always exclude coverage for losses from a pandemic. The unwillingness of insurers to provide such coverage can be attributed to the difficulty in quantifying and pricing the unpredictable risk of a pandemic, the inherent difficulty in diversifying a global risk, and the reluctance of businesses to pay an actuarially fair price for a risk that manifests itself so infrequently. Box 9 discusses the one attempt to offer such a product, which ultimately failed. Even if private insurers could successfully design and sell pandemic business interruption insurance, they would not have the financial capacity to offer coverage on a large enough scale to protect against anything close to the size of the current pandemic.

Provision of pandemic business interruption insurance on a widespread basis would therefore necessitate government intervention. In the absence of such insurance, governments with the fiscal capacity to do so are being forced to intervene in an ad-hoc manner, for free, to support firms hit hardest by the pandemic. Cover to provide a first layer of support to prevent viable firms from going under in the event of a pandemic could provide more certainty to businesses and their lenders about the finances of affected firms at the outset of a future crisis, and allow for a faster response. It could also incentivize the private and public sector to be better prepared for future pandemic risks and adopt more mitigation efforts over time.

Governments could either directly provide insurance or provide reinsurance to the insurer. Either way, businesses would be insured by an entity (a government or a private insurer), and the government would bear the bulk of the

33 See, for example, Harmon, 2020.
34 Tucker 2009.
35 See, for example, Harmon 2020.

BOX 8. Europe's Restructuring and Second Chance Directive

The EU Restructuring and Second Chance Directive[a] was formally adopted by the European Council in June 2019 and seeks to provide an efficient insolvency framework to promote growth rather than bankruptcy. Its three goals are to save viable firms from liquidation so that innovation and jobs can be preserved; to have homogeneous restructuring rules across the EU, which would encourage cross-border investment; and to support restructuring instead of bankruptcy, with the aim of enabling firms to repay their loans, providing credit to banks to lend again.

The directive aimed to establish a set of minimum standards that ensure that (a) all viable companies in financial trouble have access to a national preventive restructuring framework that would allow them to maintain operations, (b) all honest entrepreneurs have access to full debt discharge, and (c) the restructuring, insolvency, and debt discharge process was improved and shortened. Among other measures, the directive mandated a time-limited stay of up to four months from enforcement to encourage negotiation and successful restructurings. Currently, a court stay is not standardized and is often not defined, making in-court restructuring an ineffective solution. The directive also issued a cross-class cram-down, in which minority creditors who oppose the restructuring may be outvoted and bound to the restructuring plan by a judicial authority.[b] Finally, in line with debtor-in-possession financing under US bankruptcy law, the directive protected new financing to support the success of the restructuring plan.

Some commentators have argued that the directive will not restrain states from putting in place competing frameworks[c] and are concerned over how effectively legislation will be implemented.[d] Others argue that the directive is a helpful start that will precipitate further legislative changes down the line.[e] Several debt market participants interviewed in the preparation of this report expressed enthusiasm about upcoming changes.

Sources: a. *Official Journal of the European Union* 2019. b. European Commission 2019. c. *Lexology* 2019. d. Field 2018. e. Wallace and Pilkington 2019.

BOX 9. PathogenRX – The insurance no one wanted until it was too late

PathogenRX is a pandemic and epidemic insurance product launched in 2018 through a partnership among Marsh, Munich Re, and Metabiota. At its heart, the policy covers loss of gross profit and revenue, and extra expenses incurred, from an infectious disease event once the event reaches a certain threshold, such as mortality or infections over a specified level in a given area. Infectious disease risk models help inform estimation of potential losses, and coverage can be tailored to each firm's needs.[a,b]

No firms bought PathogenRX's coverage prior to the emergence of Covid-19. Although since January 2020 firms are reported to have attempted to buy the coverage, the provider decided to not sell coverage at that point given the growing warning signs about the potential risks of Covid-19 and the lack of any accumulated premiums.[c]

Sources: a. Banham 2020. b. Marsh 2020. c. Ratliff 2020.

risk. With the government in a reinsurer role, it would make better use of the private sector's distribution and administration expertise than if government acted directly as an insurer.

Governments could reinsure the risk taken on by private insurers in order to support a viable pandemic insurance market offering affordable coverage. The government would share losses with the private insurers by pledging to cover a share of the pandemic-related losses after private insurers meet a deductible through claims. The partnership would allow access to private market capital, and therefore has the potential to maximize the benefits of pooled capital and minimize public sector exposure, limiting government involvement to only the highest-loss events,[36] and the presence of private insurers gives governments access to knowledge, resources, and expertise. A program for pandemics could be modeled on existing terrorism risk insurance schemes (see Box 10).

Government-backed insurance or reinsurance would only work in countries with a strong fiscal capacity. Coverage would likely not be priced on an "actuarially fair" basis, but would probably be priced significantly lower, since it is essentially substituting for government aid that would have been provided for free. Governments would want to consider how to prevent large public sector losses without undermining the objectives of the insurance, for instance, by capping exposure against extreme losses, charging a premium for the reinsurance, or recouping losses from policyholders after a catastrophic event through a post-event premium surcharge on all policy holders.[37]

As an alternative to a public-private partnership, government could also create a fund to build up reserves that could be used to pay out claims to cover "uninsurable" pandemic-related risks that are outside existing insurance offerings. Some argue that since a pandemic is so unpredictable and severe, a public fund may be more sustainable, and provide more immediate relief than a public-private partnership.[38]

In the current pandemic, discussion regarding potential pandemic business interruption insurance programs has been widespread, and mostly looked toward public-private partnerships (see Appendix A). In developing a national pandemic risk pooling mechanism, policymakers should consider:

Coverage scope: Policymakers need to decide whether coverage is mandatory or voluntary, what level of coverage is provided, and whether the product is stand-alone or incorporated into existing policies.

Distribution and operating model: Policymakers may prefer to use private insurers and brokers with existing client relationships, infrastructure, and technology rather than establish a new pandemic insurance entity, although additional infrastructure and technology may still be required.

Claims process: Design of triggers, and payment values and schedule, will need careful thought to ensure the product meets its objectives in the event of a crisis, but pays out only when appropriate.

Funding model: Funding models could incorporate different funding contributions of participating insurers and the government and be pre- or post-funded, and will require careful governance.

Risk mitigation: The design should encourage resilience by incentivizing companies to take preventive measures or reinvesting pooled reserves in initiatives to improve community resilience.

Policymakers will want to carefully evaluate the merits of government-backed pandemic business interruption (re) insurance for their jurisdiction, and consider how to mitigate potential disadvantages through design of their program.[39] Key points to aid this evaluation are outlined below.

Advantages of government-backed (re)insurance:
Certainty and speed. Businesses and their lenders would know in advance that a certain level of reimbursement would be available for these losses.

36 Marsh 2020.
37 GAO 2017.
38 Sclafane 2020.
39 Many of these considerations hold true as policymakers consider their approach to supporting the corporate sector in the face of large-scale cyber risks, for which a similar government-backed insurance approach may be appropriate.

BOX 10. Lessons from terrorism risk insurance for the design of public-private pandemic risk insurance

US Terrorism Risk insurance

The Terrorism Risk Insurance Act (TRIA) requires commercial property and casualty insurers to offer coverage to businesses against acts of terrorism. It was enacted following the September 11, 2001, terrorist attacks and the subsequent reaction of many insurers to exclude terrorist attacks from coverage. Under TRIA, the government shares 80 percent of costs after insurers have met their deductible, with the federal backstop covering up to US$100 billion each year. The government does not charge insurers a premium but can recoup some losses from policyholders following a terrorist attack. TRIA has enabled affordable terrorism risk coverage and created a credible public-private partnership, whereby by 2017, optional terrorism coverage was purchased by 78 percent of insureds.[a] As the program has matured, the government was able to shift more risk to the private sector by decreasing its reinsurance responsibility from 90 percent in 2002 to 80 percent in 2020, while increasing the insurer deductible from 7 percent of premiums to 20 percent over the same period.[b] While TRIA has many proponents, some commentators consider it to be an undesirable corporate subsidy.

United Kingdom's Pool Re

The UK's terrorism reinsurer, Pool Re, was created in 1993 after the IRA bombing in the Baltic Exchange in 1992 and market wide coverage withdrawal from the private sector.[c] In the event of a terrorist attack, Pool Re reimburses its members the cost of terrorist-related claims after the insurer has met its deductible. Simultaneously, Pool Re also buys protection from the government to protect against a very costly attack, providing Pool Re with an unlimited government loan.[d] Pool Re and the government's backing of it make it affordable for private insurers to offer coverage and access reinsurance. £2.4 billion of reinsurance coverage was purchased in 2019,[e] and Pool Re has amassed a £6.5 billion buffer.[f]

Sources: a. Federal Insurance Office, US Department of the Treasury 2018. b. Dixon and Saunders-Medina 2020. c. *Insurance Journal 2020*. d. *Financial Times* 2020b. e. Marsh 2020. f. Pool Re 2020.

Targeting. Governments and insurers could tailor the coverage to do a better job of covering actual losses than we have seen from some ad-hoc responses.

Depoliticizing a part of the crisis response. There is less cause for political conflict during the crisis about this portion of the aid.

Prefunding. To some extent (depending on design), funds would be accumulated in advance to cover the losses, rather than aid being provided completely free by the government.

Fitting with existing insurance approaches. This approach allows the coverage to fit hand in glove with existing business interruption insurance.

Potential disadvantages include:

Tying the hands of government. Policymakers would lose some ability to tailor responses to the pandemic and associated recession. This constraint may be mitigated by providing only partial coverage, leaving optionality for how and where to allocate further aid.

Exceeding fiscal capacity. It could be too expensive for governments to absorb. For this reason, fiscal capacity is important, and it is desirable to limit the level of coverage.

Customers may not be willing to pay a fair price. Products priced to reflect the actual risk could be unattractive to many potential buyers. However, this government-backed insurance should be viewed primarily as an aid program, not true insurance, so could be priced below the actuarially fair pricing.

Additional business expense. If mandated and with a premium, such a scheme becomes essentially a new business expense, reducing profitability and government tax revenues, which may partially or fully offset financial gains from premiums.

While some policymakers may decide pandemic business interruption insurance is not desirable for their jurisdictions, others may consider that the benefits, including reduced uncertainty and increased speed of response in the case of a future crisis, will justify pursuing such a scheme.

6.3 WHEN SHOULD THE INTERVENTIONS BE MADE, AND FOR HOW LONG?

Policymakers need to consider the lifetime and staging of interventions to drive the greatest benefits at lowest cost to the taxpayer.

Lifetime of interventions: It is important to differentiate between interventions that are likely to be short term and should be introduced with a clear view of how and under what circumstances they would be removed, and those likely to have longer-lasting applicability. In addition, some interventions (such as a major bankruptcy reform) might be desirable in general but unachievable in time to help with this crisis. Policymakers will therefore find it useful to classify potential interventions into one of the following three categories:

- Temporary crisis responses that should be introduced quickly but should not become permanent.
- Responses that are helpful in the current crisis and are desirable to keep, perhaps in a scaled-down form. Many of these have always been needed, but it has taken the crisis to provide sufficient motivation to achieve them
- Responses that are helpful but are principally aimed at the future, as they are unlikely to yield benefits in time to help in this crisis.

Staging of interventions: One of the hardest decisions for policymakers will be to trade off spending to support the corporate sector now, and holding back some spending power to help reboot the economy once the effects of the pandemic are reduced. There are also potential benefits of some form of staging as a way of managing public spending in the context of such great uncertainty.[40]

The downside, of course, is that less aid is therefore available in the short term, when it might have the greatest impact. A full exploration of potential "restart" measures is outside the scope of this paper. However, it will be valuable for policymakers to consider what support could be provided to the corporate sector later in addition to, or in place of, spending more now, and the value they place on reserving "optionality" for spending later. Such measures could include providing support for entrepreneurs to establish and grow new businesses, and training and reskilling of the workforce, which may to some extent be seen to "counterbalance" lower spending and higher rates of business failure of suitable firms in the near term.

We, and the great majority of government officials, central bankers, private sector executives, and academics with whom we spoke in the preparation of this report, lean strongly toward the view that greater, earlier intervention is likely to be the better choice.

6.4 IS ADDITIONAL ACTION NEEDED TO PREVENT SPILLOVERS TO THE FINANCIAL SECTOR?

While this report is focused specifically on the nonfinancial corporate sector, policy design should consider the effects of interventions on the banking and broader financial sector. These considerations should include preventing spillover of harmful effects, and taking opportunities to strengthen and empower the financial sector to support economic recovery and resilience.

In particular, additional policy actions may be required to encourage efficient and effective methods of dealing with large volumes of bad debt generated by the crisis.

Measures could include:

- Governments buying bad assets, or partially guaranteeing portfolios of bad assets. The ability to do this will be limited by fiscal capacity, and within the EU by rules and procedures pertaining to government subsidies
- Encouraging establishment of "bad bank" structures
- Encouraging the use of specially designed asset management companies to take on nonperforming assets and minimize the public and/or private costs of restructuring and better optimize nonperforming assets.

40 Stein 2020.

ENCOURAGING AND FACILITATING RESTRUCTURING AND DEBT MANAGEMENT

A key focus for the many countries with bank-dominated financial systems will be the management of bank loans where there are expected to be large numbers of nonperforming loans. There are a range of models from less to more interventionist that governments can consider in order to encourage and facilitate the restructuring of viable companies and management of debt (see Table 2). In countries such as the United States, where markets are more involved in credit provision than other markets, there may be additional considerations, although for SMEs, banks still play a dominant role.

Distributed model: In a distributed model, banks will continue to manage their own restructurings and recoveries. Policymakers can act, though, to improve the efficiency and effectiveness of the process. For instance, government can create a code of conduct and a somewhat prescriptive credit policy, and can state their objective function explicitly. Government may need to incentivize performance, for instance, by providing subsidies or cheap funding for qualifying restructurings to encourage swift action (while being aware of moral hazard issues). Government could also define additional monitoring and transparency requirements. For instance, public reporting of certain outcomes can help to avoid conduct issues and the potential mistreatment of borrowers, and price transparency on loan sales could be useful in making the market more liquid.

For governments, this approach may appeal as it requires no new infrastructure or government capabilities, while banks maintain a direct relationship with their clients. However, government may have to fund incentives for banks to work to maximize recovery of debt where it is protected by government guarantees. There is also a risk of prices being driven down by banks selling off SME assets simultaneously, and more fundamentally, this approach is unlikely to be scalable to deal with expected volumes of restructurings and recoveries triggered by Covid-19. It also does not solve the challenge of conflicts of interest between creditors in relation to the same debtors.

For these reasons, a more interventionist approach is likely to be required in many cases. This can take the form of a private sector-led shared utility model, or a government-led centralized restructuring model. Precedents for each model were developed following the global financial crisis (see Box 11 and Box 12).

Shared utility model: A shared utility model can solve a number of the potential shortcomings of a distributed approach. Private sector actors establish an industry-led utility to support coordination and servicing; however, loans continue to be held by banks. Government could set the objective function and encourage or mandate participation to support desired outcomes and sufficient scale. Banks could participate to different degrees, and management could be conducted on an individual exposure basis or a creditor basis.

This model addresses the issue of conflicts of interest between or among creditors in relation to individual debtors. It also mobilizes private expertise and investors, giving the expertise and scale required for restructuring and recoveries of the debt of operational companies. It therefore achieves the benefits of a centralized model but without the requirement for government to create new infrastructure. However, again government may need to incentivize participation, and incentivize banks to chase debt where it is protected by government guarantees. It also depends on the design and acceptance of a fair value allocation mechanism.

Centralized model: In a centralized model, government establishes a centralized restructuring platform that has its own balance sheet. Banks would transfer NPLs from their own balance sheets to the platform according to an agreed transfer price calculation, and the platform would then manage the restructuring and recovery process. This model has the benefit of avoiding the systemic challenge related to many banks selling SME assets simultaneously. It also enables the mobilization of specialists in distressed debt and recoveries, and allows banks to offload unwanted assets from their balance sheets. However, in many jurisdictions this may prove excessively difficult to achieve. Operationally it is complex to implement, and depends on effectively aligning incentives of banks, government, and investors, and requires a transfer price calculation. Precedents include Ireland's National Asset Management

TABLE 2. Potential models for government intervention to encourage and facilitate restructuring

	Least interventionist >> *Most interventionist*		
Model	**A. Distributed model**	**B. Shared utility model**	**C. Centralized model**
Description	• Defined approach to recovery • Banks restructure, service, and recover debt directly • Loans held by banks	• Management via voluntary industry-led utility • Pure recovery objective function, or with objective function defined by government • Loans held by banks	• Public sector establishes a centralized restructuring platform with encouraged or required participation • Banks transfer NPLs from their balance sheet to the platform
Role of government	• Defines approach to recovery, for instance, creating code of conduct and somewhat prescriptive credit policy • Could additionally demand monitoring rights and public reporting on outcomes	• Could play a role in defining objectives for the platform • Could additionally mandate or encourage bank participation	• Establish platform to take on NPLs and manage restructuring and recoveries • Encourage or mandate bank participation
Role of banks	• Manage own assets, use servicers, divest some assets	• Establish an industry-led utility to support coordination and servicing	• Transfer NPLs to centralized restructuring platform and servicer
Role of other actors	• Limited role	• Mobilizes private sector expertise and investors through servicer	• Enables mobilization of distressed debt specialists, recovery specialists, and others through dedicated platform
Examples	• Typical bank model	• Greece's Solar platform (see Box 11)	• Spain's SAREB; Ireland's NAMA (see Box 12)

Agency (NAMA), and Spain's Sareb, established as bad banks following the global financial crisis and ensuing sovereign debt crises (see Box 12).

Governments can consider a special form of asset management company to purchase assets such as commercial real estate to maximize value from their sale while managing the impact on the real estate (and financial) markets. One such historical entity is the US's government-owned Resolution Trust Corporation, which operated between 1989 to 1995 following the US savings and loan crisis of the 1980s.

BOX 11. A private sector shared utility restructuring approach: Greece's Solar platform

Greek authorities and regulators were determined to reduce their banks' bad debt, which had accumulated to €92.4 billion in nonperforming loan (NPL) exposures between the beginning of the Greek financial crisis in 2010 and 2018. To address the exposure, the Solar framework was launched to facilitate a collaboration between the public and private sector to restructure common NPLs among banks. The Solar platform brought together four systemic banks, serviced through doValue Hellas (previously named doBank), an Italian credit servicer. It has been operating since 2018 and aims to manage €1.8 billion worth of NPLs of 300 SMEs held by the top four Greek banks.[a,b]

Prior to Solar, banks would compete for the recoveries of SMEs, and interbank blockages led to lengthier processes. Solar is able to address the conflicting recovery strategies of each bank by providing banks the opportunity to agree on a fair value allocation mechanism via the servicing agreement, so that every bank shares the upside and no bank is left worse off. Strategy is delegated to doValue to maximize value, increase SME sustainability, and enable faster revovery.[c,d] The shared utility restructuring approach mitigates the need to create an entirely new entity to carve out NPLs, as in the case of a centralized model, and allows loans to be held by banks, therefore avoiding transfers, while still making use of private expertise.

Soruces: a. Reuters 2018. b. Reuters 2017. c. Piraeus Bank 2018. d. *Market Screener* 2018.

BOX 12: Designing a "good" bad bank: Lessons from Ireland and Spain after the global financial crisis

In the wake of the global financial crisis and the bursting of their real estate bubbles, Ireland and Spain established "bad banks" to purchase NPLs from banks and dispose of them. In Ireland, whose real estate market was one of the worst hit among advanced economies, the National Asset Management Agency (NAMA) was established in 2009. Spain was able to get through the initial crisis thanks to high capital buffers and a less severe economic downturn. However, growth lagged, driving bad assets further up banks' balance sheets, and prompted the creation of Sareb, in 2013.[a]

NAMA's €32 billion deleveraging program was 94 percent complete at the end of 2018, making a profit of €795 million in that year.[b] Sareb has been less successful, and had sold 51 percent of its NPL portfolio and 35 percent of its overall portfolio as of the start of 2020.[c] Slower progress is in part due to Sareb holding more individual assets and depending on the retail channel for sales income, rather than the institutional-investor channel. The macroeconomic environment also played a role. NAMA's success was fueled by the early improving economic environment in the UK as property prices began to recover around 2010, which removed pressure from selling Irish assets until the Irish market improved. The real estate market in Spain, however, was slower to recover and initially more limited to a certain areas. Both interventions are thought to have helped stabilize their respective financial sectors, in which the state-aided banks that benefited from NAMA and Sareb were able to become profitable after a few years.

The design and experiences of NAMA and Sareb provide insight into factors to consider when seeking to develop a "good" bad bank.

- **Asset focus:** Transferring only similar assets allows greater efficiency, as administration and legal considerations are aligned and economies of scale can be reached. NAMA has benefited from having homogenous assets made up of large land and development loans. Sareb, while still predominantly real estate focused, has had difficulty offloading some assets, in part due to a varied portfolio that includes small value property loans and collateral, many of which are residential.[d]

- **Structure:** NAMA and Sareb both have centralized structures, allowing for bad assets to be pooled into a single workout entity. This promotes expertise and standardization of workout practices. The concetration of bad assets also attracts investors looking for larger portfolios.
- **Ownership:** Public-private ownership allowed Sareb to attract 26 private financial entities to invest in their equity structure, demonstrating investor confidence in Sareb. As the majority of NAMA and Sareb are privately owned, senior bonds are able to be kept off the government balance sheet.
- **Data:** Accurate and comprehensive asset data are critical when forming an objective valuation and optimal portfolio for sale. Many asset-related documents NAMA had were either missing or imprecise, such as unaudited and self-certified documents or unconfirmed guarantees.
- **Legal powers:** Proper legal powers need to be granted to allow asset management companies to restructure assets efficiently. For instance, NAMA was granted legal powers to collect loan payments more efficiently, leading to quickened asset disposal and a steady source of rental income.
- **Expertise:** NAMA and Sareb outsourced asset servicing activities and recruited skilled staff with private sector experience (with the added benefit of signalling their separation as a stand-alone entity).
- **Valuation framework:** Providing an asset valuation framework from the beginning provides more certainty on financial performance. Sareb released their valuation framework only in 2015, which led to higher impairements and a write down of assets, which added to Sareb's previous years' losses.

Sources a. Medina Cas et al. 2016. b. NAMA 2020. c. Sareb 2020. d. Medina Cas et al. 2016.

DESIGNING A RESTRUCTURING APPROACH

The potential advantages and disadvantages of the different models are described above. Policymakers will want to decide their approach after consultation with their banking sector. Regardless of the specific model chosen, policymakers should seek to align and agree on several key design choices with participating banks, which include:

- **Assets in scope,** which may become more diverse over time once the program is up and running
- **Recovery strategies and cooperation framework,** to align on a common overall approach
- **Realization and allocation of benefits,** to allow planning, including for allocation of costs and benefits across parties
- **Mandate of different parties,** including the role of banks and third-party servicers
- **Servicing model,** identification of the activities and organizational structure of the servicing approach.

7. Recommendations for policymakers: Putting this into practice

To support policymakers in developing their policy response to support the corporate sector, we offer:

- A set of universal principles to guide the response
- A decision framework to follow when designing a response tailored to their own jurisdiction.

We also illustrate how these tools could be applied in the context of different archetypal jurisdictions.

7.1 TEN CORE PRINCIPLES FOR POLICYMAKERS

We recommend a set of core principles that are critical for success. These fall within three broad areas of focus for policymakers.

- **Focus on the long-term health of the corporate sector.** The duration of the pandemic forces us to focus on structural issues and solvency, rather than buying time through a focus on liquidity. This also means we need to shift from broad-based to targeted measures, allowing reallocation of resources to occur.
- **Focus on the most productive use of resources.** It is critical that public policy is geared at this stage towards a strong economic recovery. This is one reason for taking advantage of private sector capacities where they exist, in order to leverage scarce public resources, as well as make use of private sector expertise to evaluate the viability of businesses. This also means that the choice of strategies aimed at achieving other societal objectives, such as greening of the economy or digitalization, should be based on their synergies with our efforts to accelerate the recovery. Finally, the design of any scheme to support the corporate sector should contain the risks of adverse selection, with weaker players seeking to take greater advantage of such support.
- **Focus on preventing collateral damage.** The main example of this is avoiding unintended consequences for financial stability, including preserving the ability of the financial system to sustain lending and otherwise support the recovery.

We believe policymakers should rely on a set of ten core principles to help put into practice these areas of policy focus.

1. **Act urgently to tackle the growing corporate solvency crisis.** This crisis threatens prolonged economic stagnation, and harm for households and workers, if it precipitates a "cliff edge" wave of insolvencies or the creation of masses of zombie firms. Many measures to support the recovery will take time to deliver and should be initiated early. Some nations have already made significant progress in this area.
2. **Carefully target public support to optimize the use of resources and help economies emerge fitter and stronger.** Policymakers need to consider how to allocate scarce resources, and how to facilitate appropriate loss absorption by existing stakeholders, since indiscriminate support carries the danger of imposing a significant burden on taxpayers. Not all struggling firms should receive public support. Resources should not be wasted on companies that are ultimately doomed

to failure or that do not need public support. Moreover, firms that would otherwise be successful should not receive unjustified windfalls.

3. **Adapt to the new business realities rather than trying to preserve the status quo.** The business sector that emerges from this crisis should not look exactly like it did before due to permanent effects of the crisis and the pandemic's acceleration of existing trends such as digitalization. Governments should encourage necessary or desirable business transformations and adjustments in employment. This may require a certain amount of "creative destruction" as some firms shrink or close and new ones open, and as some workers need to move between companies and sectors, with appropriate retraining and transitional assistance. However, even governments that support such adaptation in principle may need to take measures to manage the timing of creative destruction to account for the knock-on effects of excessively rapid shifts, such as for insolvency regimes that could become overwhelmed.

4. **Market forces should generally be allowed to operate, but governments should intervene to address market failures that create substantial social costs.** Some existing market failures are particularly troublesome in the current crisis, such as the longstanding difficulty in funding SMEs effectively. Other market failures are artifacts of this specific crisis, such as the high degree of uncertainty that can deter private investment.

5. **Private sector expertise should be tapped to optimize resource allocation where possible.** Properly functioning markets can help allocate resources (and costs) using existing expertise and funding channels. Governments are usually less able to pick winners and losers and to structure funding injections that properly align incentives. Harnessing private sector expertise is also likely to reduce adverse selection problems. When combining private and public sector expertise and resources, often the optimal solution will be to provide government incentives to encourage or channel private sector investment. Some states additionally have substantial investment expertise and financial resources in long-term capital pools, including sovereign wealth funds and development banks, that can complement private sector expertise.

6. **Carefully balance the combination of broader national objectives with business support measures.** Many countries are interested in using their policy responses to solvency and liquidity crises to accelerate strategic changes, such as the greening of the economy or digitalization. This is a legitimate choice, but requires a careful balancing of the desire to direct the change process against the need to avoid imposing excessive constraints on struggling businesses or too narrow an allocation of support into too few business sectors or specific firms. In many cases, other policy levers may be better suited to advancing national objectives.

7. **Minimize risk and maximize upside potential for taxpayers, while ensuring stakeholders share in losses and do not receive unjustified windfalls.** Where possible, government support measures should limit risk for taxpayers, such as through staged deployment of funding, and come with some direct upside, such as through a share of future profits.

8. **Be mindful of moral hazard issues without undermining the core objectives.** Where companies entered the crisis with excessive debt leverage, there is the danger of "bailing out" owners and managers who took too much risk, which could also create moral hazard problems, through the expectation of future rescues. At the same time, governments should avoid an excessive focus on assigning blame or withholding support; such an approach could cripple essential business support measures necessary for the sake of society as a whole.

9. **Get the timing right in the staging and longevity of interventions.** The duration of the pandemic, the shape of the economic recovery, the long-term consequences for demand, and the structural impacts on businesses are still unknown. Policymakers should move quickly but should design their programs to reflect this uncertainty and to mitigate political and bureaucratic tendencies to make temporary programs effectively permanent. Policy interventions should be designed to phase out when they are no longer needed. Policymakers may also wish to keep some "dry powder" available for later interventions, although this must be balanced against the benefits of the strongest possible early intervention to head off later problems.

10. **Anticipate potential spillovers to the financial sector to preserve its strength and enable it to help drive the recovery.** While this is primarily a crisis of nonfinancial firms, government may need to intervene to protect or bolster the ability of the financial sector to support the economic recovery. Further, policy choices should avoid actions that would significantly weaken the financial sector, such as forcing banks to make bad loans as a way of supporting the economy.

7.2 DECISION FRAMEWORK

We recommend that policymakers consider nine key questions to help structure decisions regarding how they target, govern, and deliver assistance.

Targeting: Which companies to assist, and why?

1. **What are your priorities?** This includes being clear about attitudes toward firm failure, protecting jobs and assets in SMEs versus large corporates, the importance of broader strategic objectives such as preservation of critical industries or encouraging the greening of the economy, and the balance of cost burden sharing across different stakeholders.
2. **What resources do you have available?** Clarity over available resources (both domestic and through foreign investment) will drive the targeting and scope of support measures.
3. **Where are there market failures with substantial social costs?** Identify for different types of firms whether there are sufficiently significant market failures to require interventions, and the barriers to the private sector in resolving them. In addition, identify where the costs of financial distress and the social costs of business failure are substantial.
4. **Which firms should be assisted through public policies to address these market failures?** Define your policy objectives for the different categories of firms defined by their size, financial constraints, nature of any market failures, and costs of business failure. This will depend on social and political priorities.

Governance: Who decides which companies to assist?

5. **How should the viability and needs of individual firms be determined, and by whom?** Establish whether the private sector can determine the viability and needs of the firms in question, or whether and what governmental action is required. This will depend on local institutional capabilities. Where government does intervene, it should do so in a transparent way, with clear accountability to provide clarity to the market and the wider public.

Design and implementation: How to assist them?

6. **What public support could be provided?** Identify the desired intervention or interventions to support firms in different situations.
7. **How should the chosen interventions be structured?** Design the delivery of the intervention, making best use of private expertise. The design of the intervention will depend on available government resources, institutional capabilities, and social and political priorities.
8. **When should the interventions be made, and for how long?** Determine when interventions should be introduced to have the greatest effect at lowest cost, and consider for how long they should last.
9. **Are actions needed to prevent spillovers to the financial sector?** Identify if there is risk to the health of the financial sector that justifies government action to ensure it remains resilient and capable of supporting the recovery.

7.3 PUTTING THESE RECOMMENDATIONS INTO PRACTICE

The "optimal" response will vary by jurisdiction. It will be influenced by dimensions including the magnitude and scope of the pandemic impact, the characteristics of the corporate sector, resource availability and institutional capability to support the policy response, and a range of social and political considerations.

Countries with greater fiscal capacity, a stronger market-focused system with a larger non-bank private capital market, and a healthier banking sector will be best equipped both to rely on market forces to deliver support and to step in with government-backed support where required, for instance, to SMEs without access to private capital markets. Some emerging economies will face highly limited fiscal capacity, poorly developed private capital markets, and a weaker banking sector. In jurisdictions facing these constraints, policy priorities are likely to focus on efforts to extend sovereign borrowing capacity to allow provision of some government-backed support in highly targeted areas, and instituting appropriate restructuring procedures.

8. Conclusion

The Covid-19 health crisis created a unique and significant shock for the corporate sector. What started as a corporate liquidity crisis is fast becoming a solvency crisis for many countries, sectors, and individual firms around the world. The first wave of the policy response in many parts of the world necessarily focused on liquidity. With growing pressure on the fiscal capacity of governments, there is a need for a nuanced policy response to a growing corporate solvency crisis.

Since resources are finite and the costs of the pandemic large, policymakers face tough decisions in deciding where costs should fall, and how this should be determined. For this reason, the first step in our decision framework recommends answering the question "What are your priorities?" This includes consideration of which stakeholders (across current and future generations) should bear the cost burden.

We have not attempted to recommend a single prescriptive policy response or set of responses, given differences in the nature of the pandemic, available resources, institutions, and social and political context across jurisdictions. Instead, we have offered a set of principles that we believe hold true globally, regardless of context, a set of tools for policymakers, and an actionable decision framework to guide their design and deployment.

These principles provide a guide for the difficult and often unpopular choices that most governments will have to make. These choices include:

- **Reducing the broad support of businesses and moving to more targeted measures focused on those firms that need support but are expected to be viable in the post-Covid 19 economy.** Our interviews with government officials, central bankers, private sector executives, and academics demonstrated a broad consensus in favor of targeting business support measures to firms viable in the long run that face temporary financial problems. A key task will be to communicate these aims clearly, and manage the inevitable pushback against winding down broad, untargeted support programs and allowing some businesses to fail. It is equally necessary to provide support to displaced workers, to help them transition into new areas of growth.

- **Limiting government support of businesses to those circumstances where there is a market failure.** Again, there was broad support in our interviews for saving government resources for those situations where private sector mechanisms were not adequate to solve problems effectively.

- **Partnering with the private sector to finance necessary balance sheet restructurings.** Virtually every serious analyst recognizes that governments face severe practical and political constraints in targeting loans and investments to firms that will be viable in the long term but need support now. Banks and private sector investors usually have substantially more expertise in evaluating viability, and they certainly face less political pressure as they make those decisions.

- **Investing in equity and quasi-equity of businesses.** Now is the time for many businesses to increase the amount of their equity funding and to limit their debt, to give themselves a greater margin for error and to decrease repayment burdens. Governments can get the most "bang for their buck" by encouraging that balance sheet restructuring through incentives for new equity and quasi-equity in these targeted firms or by making such investments themselves. Properly structured, these government initiatives can generate substantial investment earnings to partially or fully offset the cost of the incentives or the losses governments incur from firms that collapse.

- **Changing bankruptcy laws or introducing new restructuring schemes for firms that would otherwise go bankrupt.** There has been a strong consensus for years that most countries have bankruptcy laws that are ill-suited to a situation like the current one, where there are many firms with sound underlying businesses, but unsound balance sheets. This crisis increases the need to tackle reforms of insolvency laws or to try new schemes that would facilitate contractual debt restructurings without the use of bankruptcy procedures.

There is an urgent need to act before it is too late to mitigate a "cliff edge" of insolvencies. Many governments have already acted decisively, and this report should help in assessing and revising their overall policy response.

The direct and indirect costs of Covid-19 around the world have been significant and continue to grow. Providing support to the corporate sector in the most efficient and effective way is essential to protecting living standards around the world, and to preparing the ground for long-term economic resilience and growth once the worst effects of the pandemic have abated. We hope that this report can support the development of policy actions that achieve these important goals.

APPENDIX A

Emerging pandemic business interruption insurance proposals post-Covid 19

Emerging proposals are primarily based on a risk sharing partnership between the government and private insurers, borrowing ideas from terrorism insurance plans.

UNITED STATES

A number of schemes have been proposed in the United States. Under the Pandemic Risk Insurance Act of 2020 (PRIA), proposed in May 2020, the government would offer a Pandemic Risk Reinsurance Program, a US$750 billion backstop paying up to 95 percent of all losses once the insurer deductible (of US$250 million in losses aggregated by the insurers) is met.[41] The proposed Business Continuity Protection Program (BCPP), with similarities to the National Flood Insurance Program, would provide three months' worth of partial financial protection and payroll support to members of the private sector when a national health emergency is declared. The assistance would be purchased by businesses through insurers, but the aid would be from the Federal Emergency Management Agency (FEMA), meaning the federal government would carry all the risk.[42]

FRANCE

The French Ministry of Finance has created a working group comprising France's insurance association, public reinsurer CCR, lawmakers, and business lobbies.[43] A proposed pandemic-related insurance, CATEX, would have private insurers and reinsurers provide up to US$2.2 billion a year for small business interruption due to a pandemic. Beyond that, the state would act as a public reinsurer. The coverage would be funded by premiums paid by firms, integrated into existing policies, and a public-private funding partnership.[44]

UNITED KINGDOM

The UK's Pandemic Re project committee has six working groups with members from insurers, academia, and more, and has been working with Pool Re, an existing government-backed terrorism-risk insurance scheme, to generate recommendations.[45] Simultaneously, Lloyd's of London is working on its own proposals, ReStart and Recover Re. ReStart would offer business coverage for future Covid-19 waves by pooling market participants' capacity, specifically aimed at small businesses. Recover Re would be a public-private partnership offering small and medium-sized enterprises "after-the-event" immediate relief for non-damage interruption protection against Covid-19 and other pandemics.[46]

41 Dixon and Saunders-Medina 2020.
42 Dixon and Saunders-Medina 2020.
43 Reuters 2020.
44 French Insurance Federation 2020.
45 *Financial Times* 2020c.
46 Lloyd's of London 2020.

APPENDIX B

China's asset management corporations to tackle nonperforming loans

CHINA'S NPL PROBLEM

In the summer of 1997, parts of East and Southeast Asia were gripped with currency devaluations and other events that led to the Asian financial crisis. While China avoided the worst of the financial crisis, their banking sector concurrently suffered from institutional problems and weak regulations leading to a daunting accumulation of nonperforming loans (NPLs) at the end of 1997. The People's Bank of China estimated the NPL stock at the end of 1997 to be US$180 billion, or about 20 percent of GDP. NPL levels continued to accumulate because central and state governments encouraged lending to financially distressed state-owned enterprises (SOEs). Forty percent of all NPLs originated from loans extended under the instruction of central and local government. State-owned banks also lacked strong internal credit risk controls and regulations.[47] In the 1990s, the government was forced to close many weak SOEs, leaving state banks with high NPL ratios.[48]

THE INITIAL RESPONSE

To address the growing NPL problem, the government passed several reform measures in 1999. Some measures included injecting equity into state-owned banks, allowing banks to issue subordinated bonds, and fast-tracking bad loan write-offs. The government also created four state-owned asset management companies (AMCs). The four AMCs (Huarong, China Orient, China Great Wall, and Cinda) were created to buy bad debts from the four major state-owned banks, with the aim of disposing of them through ten-year bonds backed by the finance ministry.[49]

The NPL problem persisted into 2004, with state-owned banks continuing to accumulate NPLs, prompting efforts to address the corporate governance issues at larger banks and loosen their grip on credit allocation. The Chinese authorities allowed foreign capital investments in banks and encouraged banks to list on foreign stock exchanges, while also transferring a second round of NPLs from large state-owned banks and injecting more capital into the system. The participation of foreign capital and bank involvement in overseas' markets incentivized banks to adopt stronger corporate governance and improve efficiency.

Since their establishment, the four original AMCs have progressed to become diversified financial holding companies involved in fund management, broking, commodities trading, securities, insurance, and other financial services. China's AMCs allowed the previous unregulated system to shift to an environment with defined principles and regulations.

RESURGENT CONCERN OVER NPLS

Recently, China has seen an emerging NPL problem among some smaller banks, where there is an estimated RMB 3.7 trillion (US$560 billion) of NPLs that have accumulated among banking financial institutions.[50] Consequently, the Chinese government approved in March 2020 the creation of a fifth national AMC to deal with the small bank problem. The fifth AMC, China Galaxy, has a background in securities. China Galaxy gives China the opportunity to open their NPL market further to domestic and foreign markets, institutions, and investors.[51]

47 Xia 2020.
48 The Economist 2013.
49 Xia 2020.
50 CBIRC 2020.
51 Jie et al. 2020.

China's experience provides lessons for other countries to consider when handling their NPL problem. First, after the initial carveouts, governance reform and hard budget constraints need to be put into place to prevent further accumulation of NPLs. Second, the process of bailing out big banks is costly but necessary: the total cost associated with the NPL cleanup and capital injections to save the Big Four was estimated at RMB 2.5 trillion, about 30 percent of China's 1999 GDP. A massive NPL cleanup, along with the coordination to create national AMCs, required the involvement of the central bank, fiscal powers, and foreign investors.[52] However, not bailing them out may prove more costly. The cleanup of the Big Four banks helped prevent a financial crisis and paved the way for a stronger banking sector through adoption of international governance standards and the elimination of government involvement.

52 Xia 2020.

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