



Financing Firms in Hibernation during the COVID-19 Pandemic

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The coronavirus (COVID-19) pandemic has imposed a heavy toll on economies worldwide, nearly halting economic activity. Although most firms should be viable when economic activity resumes, cash flows have collapsed, possibly triggering inefficient bankruptcies with long-term detrimental effects.

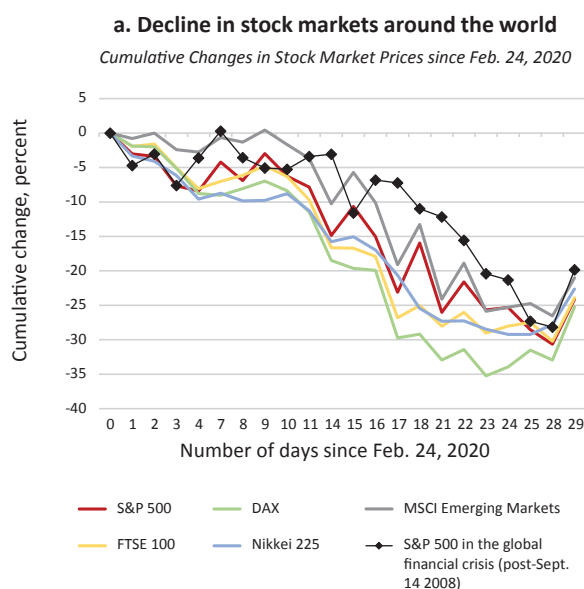
The coronavirus (COVID-19) outbreak has imposed a heavy toll on economic activity worldwide. The shock has been sudden and concurrent across countries, and has been characterized by significant uncertainty regarding its magnitude and duration.

Policy makers around the world have rapidly deployed a wide arsenal of tools to cope with the inevitable economic recession, pledging aid to private firms in Europe and the United States equivalent to their entire profits for the past two years (The Economist 2020).

policies complement other efforts by governments to support households. The continuously growing policy trackers compiled by the International Monetary Fund (IMF 2020), the World Bank (2020), and Yale School of Management (2020), and discussed in places like Econfip (2020) and Elgin et al. (2020), provide just a glimpse of the many initiatives being implemented or proposed.

This Research and Policy Brief discusses three broad issues related to the financing of firms during the COVID-19 pandemic and the challenges for policy makers: first, why the COVID-19 crisis is different from previous financial crises in how it affects the financial sector; second, why the nature of the COVID-19 crisis implies that it is beneficial to provide credit to firms to keep them alive to maintain their relationships with stakeholders,

Figure 1. Magnitude of the COVID-19 Shock across Countries and Industries



b. Decline in U.S. stock market prices by industry

Table with 4 columns: Industry, Covid-19 Pandemic (Delta Stock Prices, Rank), and GFC 2008-09 (Delta Stock Prices, Rank). Rows include Telecommunications, Technology, Health care, Consumer services, Consumer goods, Utilities, Basic materials, Transportation, Industrials, Financial services, Real estate, Energy, Simple Average, and S&P 500 Index.

Source: Refinitiv. Note: This table shows the stock market decline across industries in the United States, measured through iShares exchange-traded funds (ETFs). The changes in stock market prices are cumulative changes calculated over 30 days starting on February 24, 2020 for the Covid-19 pandemic, and September 12, 2008 for the global financial crisis (GFC).

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Acknowledgement: We received very useful comments from Alvaro Aguirre, Steen Byskov, Charlie Calomiris, José Ignacio Cuesta, Augusto de la Torre, Andrés Fernandez, Michael Fuchs, Alfonso García Mora, Cristobal Huneus, Alain Ize, Aart Kraay, Norman Loayza, Fernando Mendo, Ernesto Pasten, and Rekha Reddy.

Objective and disclaimer: Research & Policy Briefs synthesize existing research and data to shed light on a useful and interesting question for policy debate. Research & Policy Briefs carry the names of the authors and should be cited accordingly.

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The Nature of the COVID-19 Crisis

The economic crisis triggered by the spread of the COVID-19 virus is radically different from past economic crises. This time, the shock did not originate in the financial sector and was not the result of financial intermediaries or companies behaving irresponsibly due to ex ante moral hazard. This distinction has important implications for how the shock has transmitted throughout the economy. It also matters for the menu of options available for policy makers. If firms that behaved well before the crisis do not survive the cash crunch while the outbreak persists, the shock could have long-term lagged and cumulative effects (hysteresis). Key relationships between firms and their stakeholders—including workers, suppliers (of intermediate inputs, plant and equipment, commercial real estate, and so forth), customers, governments, and creditors—would be broken.

Past economic crises (such as the Debt Crisis of the 1980s, the 1997–98 Asian Crisis, and the 2008–09 global financial crisis) originated in financial vulnerabilities. Typically, financial intermediaries (such as banks) took excessive risks, got in trouble, suffered runs, lost access to funding, and, in turn, stopped lending to the real sector. In other cases, debt markets froze as borrowers became unable to rollover existing liabilities. These problems in the financial sector transmitted to the rest of the economy, generally causing a recession.

In contrast, the root of the COVID-19 crisis lies outside the financial sector: a highly contagious virus transmitted from animals to humans. In a few months, since being spotted in Wuhan, China, the virus has spread throughout populations across the world. The highly contagious nature of the virus has meant that many people have gotten sick at once, and a historically high percentage of those have required intensive care, rapidly overwhelming existing hospital capacity.

To diminish the number of concurrently infected people and to accommodate proper hospital care for the sick, policy makers were forced to take a dismal policy decision: impose social

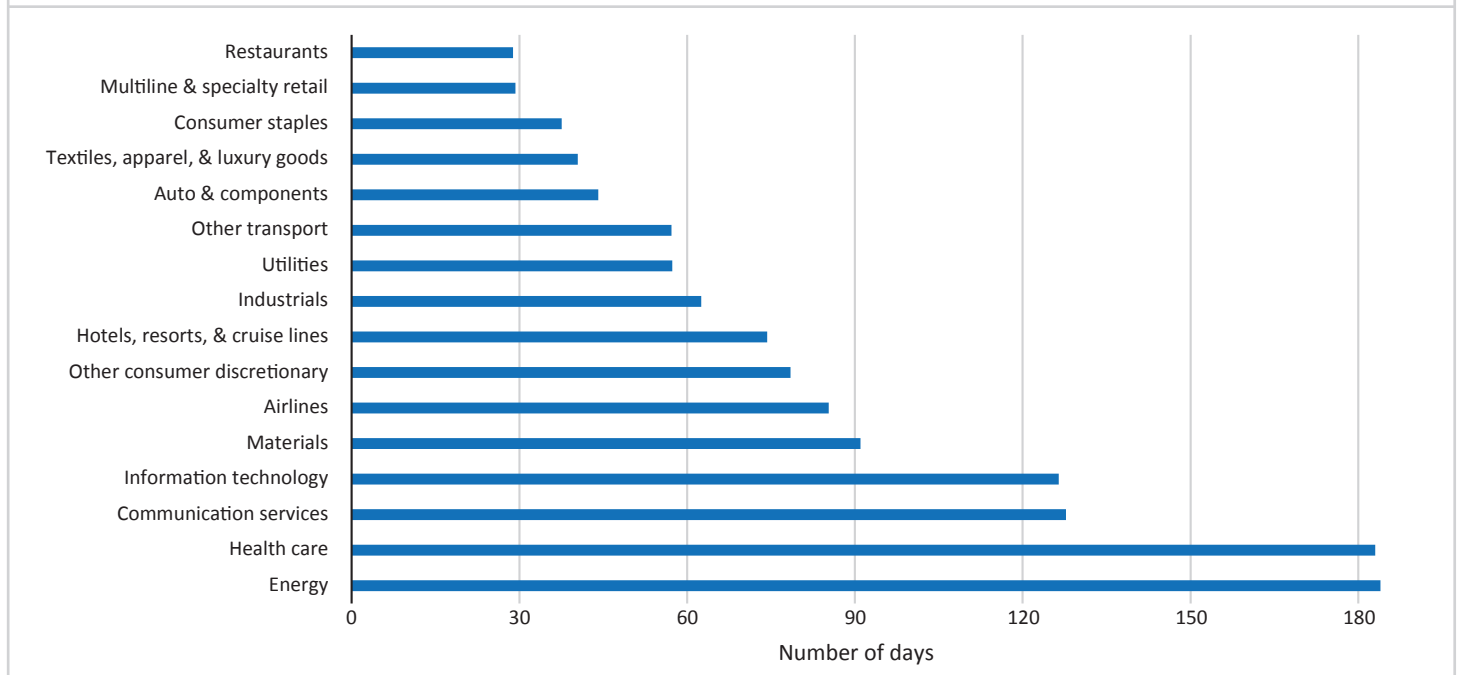
distancing to flatten the curve of infections and give health care systems a greater chance to treat the infected population. Cities have shut down, mandatory quarantines have been implemented, and borders have been closed. Containment measures save lives, but bring economic activity to a near halt.

Unlike in previous global crises, during the COVID-19 outbreak economies have faced a combination of a supply shock (most immediately, employees cannot go to work, impairing production, disrupting supply chains, freezing investments) and a demand shock (notably, households and firms cannot buy certain goods and services), which reinforce each other (Eichenbaum et al. 2020; Guerrieri et al. 2020; Rogoff 2020). The shock has transmitted throughout the economy, affecting firms and industries across the board. Importantly, it has also disturbed a wide range of economic relationships, like those between firms and their several stakeholders.

With business revenue plummeting, corporate cash flows have collapsed at an unprecedented scale. Firms have struggled to survive as their working capital gets depleted. The ensuing cash crunch can be depicted by the average number of days that firms can continue to pay for their operating expenses with the cash they historically had on hand (figure 2). Some of the industries that have been hit hard by the pandemic crisis, such as restaurants, retail stores, and service firms (hospitality, leisure, and hotels) will last for only a few weeks if revenues cease. A firm's ability to continue operating during the pandemic shock thus depends on whether it can raise additional financing, as well on its ability to adjust expenses, such as payroll, supplier payments, other overhead costs, and taxes.

The resilience of the corporate sector is also tightly linked to the magnitude and duration of the pandemic shock and how much of the economic losses are borne by the different stakeholders that interact with the firms. Because the source of the crisis this time around is specific to the COVID-19 pandemic, once a vaccine or an effective treatment is found, the source of the crisis could basically disappear. That is, the health shock is transitory in nature. Nonetheless, there has been a high degree

Figure 2. Days of Cash on Hand across Industries



Source: Compustat.
 Note: Days of cash on hand refers to days of operating expenses covered by cash held, across U.S.-listed firms by industry. The figure shows 2000–16 averages.

of uncertainty about its severity and the ramifications on the overall economy. The longer the heightened levels of uncertainty and paralysis last, the tougher it will be for firms to withstand and survive the shock. The losses incurred during the pandemic will need to be absorbed over time.

Fundamentally, as long as the shock does not persist for too long, most firms should remain viable: that is, their net worth will still be positive. However, firms have faced a temporary slowdown or even a pause in business as a consequence of the COVID-19 pandemic and the containment measures taken by governments around the world. Furthermore, the shock has led to a sharp and widespread increase in credit risk, as not all firms can survive a long-lasting lockdown, and those that do survive might lose lines of business or customers. Industries as a whole will weather the shock and survive. For example, the restaurant industry will not disappear and neither will the airline industry. But the same cannot be said about individual firms. Some will cope with the shock or scrape by. Others will end up defaulting and breaking contracts with their different stakeholders, even if they do not shut down entirely.

In fact, the heavy cost that the COVID-19 outbreak has imposed on the world economy will eventually be borne by all parties. Shock-hit firms have already suffered a collapse in revenues. Shareholders have already lost a significant fraction of their stakes in firms. Workers have been laid off or accepted wage cuts. Suppliers have postponed receivables. Creditors have started to renegotiate debts. However, if firms start to default on their debts, they risk being pushed into bankruptcy. To avoid reaching this situation, credit in the form of rollover of payments coming due and/or new financing could help.

Despite the desirability for more credit, existing crisis resolution mechanisms and bankruptcy codes, revised after previous financial crises, are not designed to deal with an exogenous systemic shock such as the COVID-19 pandemic. They are focused on mitigating the spillovers of shocks that originate from the financial sector, and on preventing those shocks from materializing in the first place (such as deposit insurance, lender of last resort, and Basel III bank capital regulation). During past crises rooted in the financial sector, policy makers would step in, resolve the financial intermediaries or creditors in trouble (the "bad apples"), while shielding the rest of the system from a collapse. Once policy makers addressed the main problems in the financial sector, bank lending to the real sector resumed, and economic activity started to recover.

This time around, because the problem does not emanate from the financial sector or from a particular firm or industry, the solution is significantly more challenging. Policy makers must be creative until the health crisis gets resolved, in the meantime adopting policies that mitigate the shock and the impact of the social containment measures on the real sector. This involves working with the financial sector to improve the likelihood that viable firms are not pushed into default and bankruptcy by a financial infrastructure that is not prepared to deal with a pandemic. It also involves policies related to the financial sector itself, which has been affected by the shock like all the other sectors in the economy, and which would naturally tend to reduce lending in these circumstances. Because financial systems play a key intermediary role in channeling savings to productive activities, failure in this function could aggravate significantly the already sizable economic impact of the pandemic shock (Buera et al. 2020). Preserving the financial sector in good standing is essential, and would avoid even

greater damage to the overall economy. Although financing alone is not enough, a well-functioning financial system can help firms stay alive and preserve their relationships.

Using Credit to Maintain Relationships during Hibernation

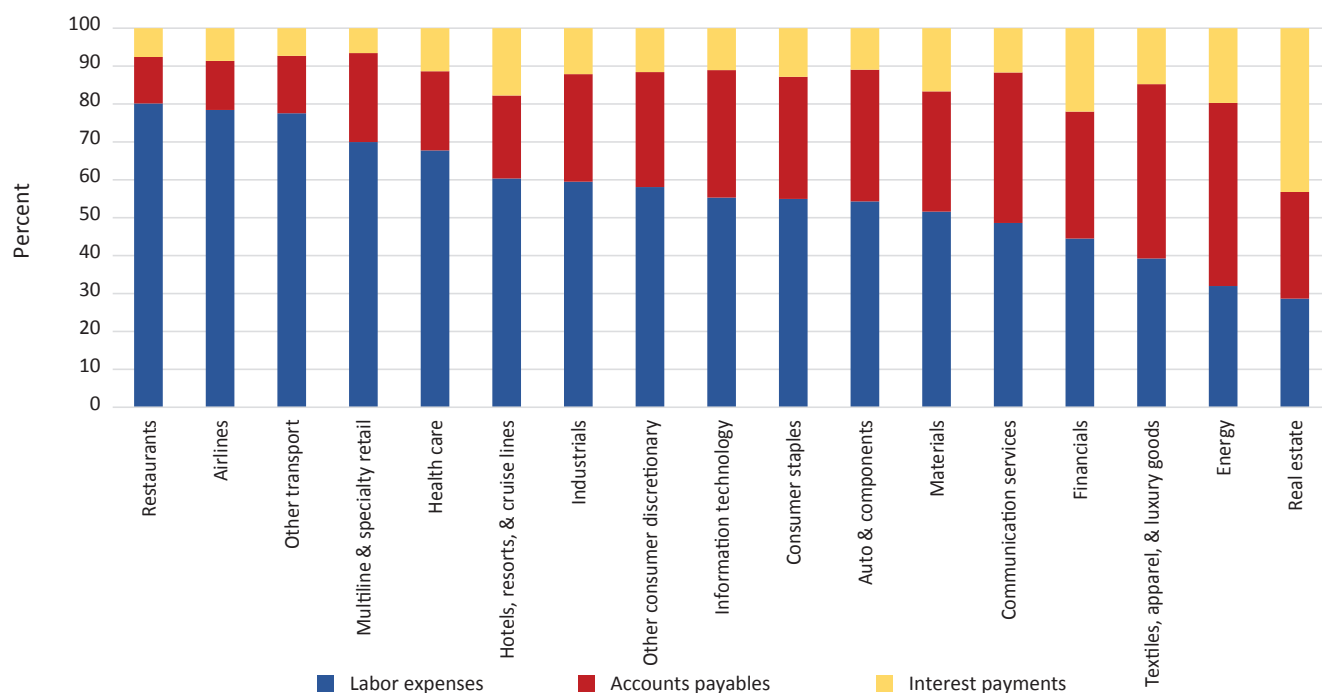
Firms depend on key and unique relationships with different stakeholders, such as workers, suppliers, customers, governments, and creditors. The relative importance of operational expenditures to these different stakeholders varies significantly across industries, depending on the nature of businesses activities (figure 3). These relationships are costly and time-consuming to build, maintain, and adjust. Firms generally spend resources in building the best relationships for their needs. They usually require relationship-specific investments that involve the creation of knowledge and reputation. For example, firms must find the best workers, suppliers, and creditors that match their production processes. To do so, they must learn about workers' skills and capabilities, develop methods to adapt specific intermediate inputs to production lines, and seek investors that might be better suited for their financing needs. Firms also have long-term relations with governments that allow them to operate and with customers that have become loyal to their products and services. These relationships or matches, and the knowledge embedded in them, can be thought of an important intangible asset or organizational capital of firms.

Pushing firms into bankruptcy would mean that the different relationships would need to be redeveloped in the recovery following the crisis. Such a churning process of destroying and then recreating relationships and contracts is far from efficient, as it is generally slow and costly, leading to hysteresis. It is, thus, inefficient to destroy the relationships between firms and their stakeholders, even during the lockdown phase of the COVID-19 pandemic shock. A transitory shock that destroys a significant mass of relationships could lead to long-term scarring economic effects and a slow recovery.

Avoiding bankruptcy for all, however, is not a forgone conclusion, given the uncertainties about the magnitude and duration of the pandemic shock. Although temporary, the shock has already been large and widespread. Many firms have suffered massive declines in revenues and severe cash crunches. In this context, honoring all preexisting commitments to the different stakeholders could quickly turn liquidity problems into solvency ones.

Given the transitory nature of the shock, a good option might be hibernation: slowing the economy until the pandemic is brought under control, while using fiscal policy to compensate for some of the many losses that the economy needs to withstand. Hibernation means using the minimum bare cash necessary to withstand the pandemic. This would imply different thresholds for firms in different industries and countries. Some firms would be effectively shut down while the restrictions last (such as movie theaters and restaurants with no takeout or delivery options), whereas other firms could adapt and operate at a much reduced capacity (such as airlines maintaining some flights and retailers selling only online). Hibernation is intended to freeze the firms' relationships with their stakeholders, but not to freeze firms or the economy per se. Even firms that have ceased operations during the lockdown would need some minimal funds to stay alive and remain ready to reopen when the lockdown passes (akin to the energy animals such as bears need during their hibernation).

Figure 3. Payments to Key Stakeholders across Industries



Source: Compustat.

Note: Payments to key stakeholders refer to the share of operating expenses owed to stakeholders, across U.S.-listed firms by industry. The figure shows 2000–16 averages.

Hibernation would not be a simple solution, as the relationships between firms and their different stakeholders, and the contracts that support them, might need to be renegotiated to somehow share the burden of the inactive period. Borrowing to maintain all preexisting contracts—assuming business as usual—could generate a high and perhaps unbearable debt burden on firms by the time the recovery starts. An ensuing debt overhang problem could linger for years.

Given the uncertainties about the duration and magnitude of the shock, a key question is the extent to which different stakeholders could absorb part of the losses associated with the hibernation phase. That is, firms could increase their likelihood of surviving the pandemic if they had some flexibility in negotiating payments to their different stakeholders, while using their cash and borrowing capacity to cover the reduced costs of survival during the lockdown period.

The relationships with the different stakeholders are tightly linked. For instance, the ability of firms to pay creditors depends on whether they have enough money left over after paying other stakeholders, especially while businesses are temporarily halted. The flexibility in contracts with the different stakeholders will ultimately determine which relationship firms adjust to weather the pandemic. For example, if part of a firm's suppliers' payments is variable, with room for adjustments, then suppliers could absorb a share of the costs of continuing the business. This, in turn, might allow the firm to fire fewer workers and also provide some slack to pay its creditors. Exploiting the flexibility of some relationships could help firms adjust their expenses, keep important relationships active, and reduce costly churning, while improving their prospects for the recovery.

Creditors could provide a crucial margin of adjustment for firms, especially if they could offer extra financing that would allow firms to avoid breaking up their other relationships. In addition to internal financing options, which can be limited in

the short term, firms could turn to external financing from banks (such as credit lines, leasing, receivables, and term loans) and capital markets (bonds and equities). However, there are three unique set of challenges related to firm financing during the pandemic shock.

First, the private sector debt built up after the 2008 global financial crisis means that many firms have entered this shock with high levels of debt. There was about US\$75 trillion of nonfinancial corporate debt outstanding in the world in September 2019 (IIF 2020). Nonfinancial corporations in emerging markets alone will need to pay back or refinance more than US\$700 billion during 2020, which does not include the new financing needs that arise as a result of the COVID-19 crisis. Such high corporate indebtedness represents an important source of fragility and could impose significant constraints on firms' ability to borrow, especially for emerging economies with debts denominated in foreign currency, as many domestic currencies have plummeted.

Second, firms might have limited capacity to substitute across external financing sources during this crisis. During a typical financial crisis, if the banking sector shuts down and banks stop providing loans, some firms are able to substitute away from bank loans toward bond financing. During the COVID-19 crisis, all markets across all countries have been simultaneously hit; financing from both banks and capital markets has dried up for many firms. They have been left with no obvious source of financing, during a period in which access to finance might determine their own survival.

Third, and maybe most importantly, creditors in general and banks in particular have become reluctant to lend to firms, unwilling to absorb the higher credit risk of firms. Amid widespread uncertainty regarding the magnitude and duration of the shock, creditors have faced challenges in evaluating the likelihood of firm survival, given that assessments of credit risk under these circumstances have significant margins of error.

Firms that can cut workers' wages or renegotiate accounts payable with suppliers would pose lower credit risks for creditors. Yet, the crucial challenge for creditors is that they have imperfect information about such flexibility in the contracts that firms have with their other stakeholders. Thus, they might cut financing across the board. Furthermore, there could be externalities. Individual creditors might not look beyond their immediate contractual requirements or narrow self-interest to fully understand the general feedback loop over time: firms that are able to obtain financing during the hibernation phase would have greater chances of survival. Such market failures alone justify a role for policy intervention in order to restore firm financing.

Policy Interventions to Sustain Firm Financing

Policy makers could play a role in stabilizing the economy by working with the financial sector to keep firms afloat. This would improve the likelihood that viable firms are not pushed into default and bankruptcy. Financial sector policies, including forbearance, are complementary to the other actions that firms take with both private and public stakeholders to adjust previous commitments in response to the pandemic shock.

Policy makers around the world have tirelessly worked toward stabilizing the economy amid the pandemic shock. A number of policies have focused on working with the financial sector to help firms manage their liabilities with different stakeholders, while improving their odds of survival. These policies could complement other possible efforts by governments, such as being the backstop for absorbing losses for both the real economy and the financial sector (Beck 2020), acting as a payer of last resort (Saez and Zucman 2020), exploring taxation tools such as a negative lump sum tax for small and medium enterprises (SMEs) (Drechsel and Kalemli-Özcan 2020), or extending a liquidity life-line to cash-strapped firms (Brunnermeier et al. 2020). Because payments to the different stakeholders are tightly connected with one another and jointly affect firms' prospects, the various policies are also closely interconnected. For example, a government policy that pays a portion of wages for workers that stay at home reduces the financing needs of firms to cover such costs. Prompt coordination across policy makers—central banks, finance ministries, and regulators—is thus essential to ensure policy effectiveness during this crisis.

An important goal of public policies for the corporate sector during the lockdown phase of the pandemic shock is to ensure that credit flows rapidly to firms, especially those facing severe cash shortfalls due to the collapse in their revenues. This means not only refinancing existing credit lines, but also extending new financing to existing and new clients, given that funding needs will likely increase with the ensuing economic recession.

It is important to take into account the trade-offs underlying the different policy options that can foster firm financing, as well as the incentives they generate. The effectiveness and fiscal costs of the different alternatives are also key considerations. Not all governments would have the fiscal or monetary space to implement the much-needed mitigating policies and might need to borrow from the international community.

We group policies along two different and broad dimensions. One set of policies relates to adapting the institutional framework to meet the challenges imposed by the pandemic shock. A second set of policies is linked to the provision of credit to firms.

Adapting the Institutional Framework

Although financial systems have worked as expected, they are ill equipped to cope with a shock like COVID-19 because they are geared toward detecting idiosyncratic risk when it arises. Legal and regulatory frameworks have been established to prevent shocks and allow a clear plan of action whenever shocks happen, with the idea of safeguarding the stability of the overall system. For example, when a firm fails to meet a payment, banks are required to increase provisions to reflect the higher risk. In addition, the credit score of the firm is reduced.

During the COVID-19 crisis, signaling firms in trouble would not be very informative or helpful, given that most firms have suffered a sizeable and unexpected negative external shock. To the extent that financial sector stability can be preserved, allowing forbearance and avoiding undue increases in borrowing costs might be needed; otherwise, applying the standard procedures when firms cannot repay their liabilities would hurt these firms even more.

Because unnecessarily liquidating firms will impose even larger costs to the economy in the longer term, policy makers around the world have started to adapt the legal and regulatory structures to the unique nature of the COVID-19 shock. Several of these policy measures are geared toward existing credit lines. For example, some financial regulators have allowed banks to freeze the credit classification of firms to what they were before the shock (say, December 2019) and their provisions when they renegotiate the terms of a loan with a client. As long as the loan is not classified as nonperforming, the renegotiation would not affect the firm's credit score. Other policies, such as evergreening loans so that only the interest payments must be made, might also prove useful and deserve more attention (Brunnermeier and Krishnamurthy 2020).

An important margin of adjustment for these measures is the choice of which set of firms to apply such forbearance measures. Some countries have provided differential treatment to certain firms, whereas others have applied them to all firms, such as implementing automatic postponement of loan repayments. Whereas universal application is easy to implement and provides relief for all firms, thus increasing their likelihood of survival, it creates significant risks for banks, especially because it imposes no conditions on firms, such as having a good credit standing before the crisis. It also places banks at a disadvantage with respect to other creditors, which would be in a better position to act faster against failing borrowers. This type of measures might, in fact, encourage the survival of zombie firms by overriding banks' ability to act on hard and soft information regarding firms' prospects and ability to repay. They could also discourage new lending by increasing the probability of further blanket forbearance measures (like a broad moratorium on payments to all creditors or automatic stays in court orders and bankruptcy procedures) if the crisis deepens further. In contrast, policies that allow for some screening of firms—drawing for example on good behavior before the crisis (say, those in good standing before the shock hit)—would probably entail smaller transfers and reduced fiscal costs, though screening could delay implementation and it would not offer the same chance of survival for all existing firms.

In applying forbearance, it is important that regulators and creditors do not provide the wrong incentives for borrowers to engage in moral hazard ex post and to fail to repay their loans. This is usually hard to achieve, but to the extent that regulators and creditors can use tools to penalize firms engaging in bad

behavior, they might want to deploy them. For example, creditors could use convertible subordinated loans that transform into equity should firms be unable to repay. In addition, it is important to closely monitor the implementation of such measures and their potential impact to ensure the soundness of financial institutions, to preserve the stability of the financial sector, and to signal the exceptional nature of the changes while the COVID-19 crisis persists.

Providing Credit to Firms

Policy makers around the world have considered several options to enhance the provision of credit to firms. We divide these policies into monetary and regulatory policies, on the one hand, and policies aiming to transfer risk to the government, on the other.

Monetary and Regulatory Policies

Central banks have quickly responded by lowering interest rates. However, standard monetary policy measures might have limited effects during the COVID-19 outbreak. In normal times, monetary policy rate reductions by the central bank can lower the cost of funding for firms, thereby increasing firm revenues. With pandemic-related containment measures in place, as well as the uncertainty about the magnitude and duration of the shock, corporate investment in general might not be very responsive to lower interest rates. Moreover, in many countries, interest rates were already low before the pandemic hit, reducing the space for interest rate cuts. Other monetary policies related to the provision of credit (for example, through quantitative easing) can be linked to the policies discussed below.

Some central banks have also extended liquidity lines to banks, at low cost, with incentives to expand lending to the real economy. However, unlike a typical financial crisis, banks have generally not encountered major liquidity problems. Instead, they have had to deal with a discrete, sizeable, yet unknown risk—the increased credit risk of firms that depends on the magnitude and duration of the pandemic shock. Liquidity policies would work to the extent that banks pass through the higher liquidity from the central bank to firms. Likewise, some financial regulators have reduced Basel III capital requirements charged to banks, such as countercyclical capital buffers, conservation buffers, and systemic risk buffers. To be effective, banks would need incentives to convert the released capital into greater lending to firms in the context of increased credit risk, and these measures alone might not provide sufficient incentives for them to do so.

Transferring Credit Risk to the Government

Because uncertainty is high and lenders have retrenched, governments have stepped in and absorbed the increased risk in credit provision to ensure that firms have sufficient resources during the hibernation phase. Among other things, governments have capitalized state-owned banks; scaled up public credit guarantee programs (typically covering 70 percent to 90 percent of the loans); and supported large-scale purchases of portfolios of loans. The feasibility of rapid delivery of these different policy options varies across countries and depends on the institutional setting. For example, while some countries have important state-owned banks, others do not. Also, some countries have guarantee programs in place, while others do not. To the extent that new distribution channels may need to be created, challenges to implement this set of policies will arise (El-Erian 2020).

When considering policies addressed to transfer credit risk to the government, it is useful to distinguish between large corporations and SMEs. Whereas large firms use a combination of both bank credit and capital market financing, SMEs tend to rely mostly on bank financing. Also, large firms have larger spillover effects and generate greater externalities in the economy than individual SMEs. The failure of a large corporation could lead to more workers being laid off, possibly affecting local labor markets; more suppliers being unpaid, possibly disrupting supply chains; fewer exports, possibly affecting the availability of foreign exchange in the country; and default on large debts, possibly affecting the liquidity and solvency of its creditors. At the same time, precisely because of their size, larger firms also have stronger bargaining power relative to their stakeholders than SMEs, and might thus be better able to cope with the shock.

To the extent that SMEs' only access to external finance is through banks, channeling funds to large firms through the banking system may be inefficient because it could crowd out SMEs from this funding source. Some governments have supported financing to large corporations through capital markets. For example, they have provided a transitory capital injection by purchasing corporate liabilities traded in capital markets. That is, large firms issue securities (either senior corporate debt or preferred equity), which can then be directly purchased by the government or the central bank. Once the shock subsides, these large firms are expected to recover. The government would then sell the securities purchased to others in the market, recouping its initial investment. Because there are generally only a few large firms in each industry, governments can monitor them closely (and, in some cases, even regulate them) if and when such funding is provided.

Regarding SME financing, some countries have capitalized state-owned banks, which in many cases have explicit mandates to lend to SMEs. Other countries have scaled up public credit guarantee programs, which are focused on the public provision of guarantees to loans made by banks to SMEs. Because these programs absorb part of the firms' credit risks—in case of default, the government bears a significant fraction of the costs—they provide incentives for banks to lend to such firms. Other countries with fairly well-developed capital markets have moved toward allowing the central bank or the government to engage in large-scale purchases of portfolios of SME loans. Under this arrangement, banks sell securities backed by those loans and in case of default, the government bears the risk. This also gives banks some incentives to lend to SMEs. Other central banks have developed lending facilities to encourage investors to purchase securities collateralized by the portfolio of SME loans. Both securitization policies can potentially have a multiplier effect in the financing available to SMEs if lenders were to use the capital obtained through those transactions to lend again to SMEs. The effectiveness of these policies could be enhanced if they were to include both existing as well as new bank credit to SMEs.

Policies aimed at transferring credit risk to the government should be designed to minimize the cost to public coffers. Policy interventions would benefit from two characteristics. First, scale is crucial to allow for risk diversification, both across industries (some industries have been hit harder than others) and across firms within industries (not all firms in the same industry will go bankrupt because of the shock).

Second, providing incentives for both creditors and debtors is also important. For example, public credit guarantee schemes should be partial, so that banks retain some "skin in the game," and thus have incentives to monitor and screen borrowers. Similarly, in the securitization policies, banks should keep a fraction of the loan portfolio in their balance sheets. Regarding firms, the challenge is to avoid the ex post moral hazard problem of firms not repaying their loans, which could turn out to be very costly for credit providers. This source of concern becomes more acute the longer the shock lasts. If the shock lasts for many months, firms might find it more efficient or profitable to declare bankruptcy (with all its costs of broken relationships) and avoid repaying their creditors, only to then "reproduce" the business with new credentials—like closing down one restaurant only to open another one next door shortly thereafter. It would be difficult for creditors under such systemic shock to disentangle whether firms defaulted strategically or not. But even when firms repay, another potential problem with incentives is that firms might not internalize the social value of the knowledge embedded in their relationships and might be willing to destroy more matches than is socially optimal.

Conclusion

Governments have limited resources so they need to prioritize and evaluate the trade-offs associated with different policies. For example, they need to make decisions on how much to allocate to large firms versus SMEs, to firms that have relationships that are more difficult to reconstruct, or to firms that would be more disruptive for value chains if they were to go bankrupt. They might even be pushed to decide whether some essential industries (such as basic infrastructure, health, and education) or industries hit hardest by the shock (such as travel, tourism, and many services) are worth assisting over others. Governments also need to think about how to allocate resources over time. Firms might be in hibernation and need funds for several months, using bridge financing to make it through the lockdown period. During this critical time, government assistance might be needed the most, as banks and investors face higher uncertainty about the length of the pandemic and the related probability of firm survival. Eventually, surviving firms will need additional lines of credit to restart or jumpstart their operations when they stop hibernating. Private lenders might be more willing to lend at that stage when uncertainty has diminished and they would be in a better position to assess firms' prospects and credit risks.

There are stark differences between developed and developing countries, as well as among countries within each

group, regarding the scope for policy action. Their different initial conditions determine the set of policies they are able to implement and which costs they will face (Hausmann 2020; Loayza and Pennings 2020). Countries with shallower financial markets, less fiscal space, and more constrained central banks will face greater challenges to channel credit to firms so as to avoid a breakup in their relationships. Nonetheless, the fact that developing countries generally have more informal firms might help them reestablish relationships faster once the lockdown measures are eased. Moreover, pressure from households and firms with fewer resources could make the lockdown period shorter, triggering a higher rate of infection and more rapid herd immunity, at a tragically higher mortality rate, but requiring fewer resources for the quicker hibernation phase.

With the rise in global risk, developing countries have faced a sudden stop in capital inflows, high costs to issue new debt in capital markets, and sharp depreciations of their domestic currencies. These significant macroeconomic challenges, combined with the large financing needs that have arisen with the pandemic shock, could trigger widespread sovereign debt restructurings (Blanchard 2020; Gourinchas and Hsieh 2020). In turn, they could be followed by widespread turbulence in the corporate sector, especially in countries where firms entered the shock with high outstanding debt levels. The liquidity issues in developing countries might thus rapidly turn into solvency problems—and not only at the firm level. Multilateral policy action, involving international financial institutions and creditor countries, might help resolve a problem that becomes common across developing countries.

In designing policies for both developed and developing countries, it is useful to acknowledge the transfers across different agents that can occur as a consequence of the responses to the pandemic. The lockdown policies will tend to protect the more vulnerable older generation, while restricting the economic activities of the younger generation, which has a lower risk of becoming seriously ill. This effectively induces transfers from the young to the old, given that some of the costs of such policies will not necessarily be recovered (Reis 2020).

However, policies to keep firms alive do not produce the same type of intergenerational transfers. Whereas they will be paid mostly by the young, that same generation will also benefit the most from keeping the relationships between firms and their different stakeholders alive. Within the young generation, the socialization of losses still entails transfers. Those that have the resources to survive the lockdown without public assistance will in effect subsidize those that receive such help.

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