The COVID-19 pandemic crisis and corporate finance

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The COVID-19 pandemic can be considered the third major shock to have hit the United States and the global economy in the first two decades of this century. First, we experienced the September 11, 2001, terror attacks, then the 2008–2009 Financial Crisis, and now the COVID-19 pandemic. Each of these crises confronted the global economy, and the financial system in particular, with different challenges, with the COVID-19 crisis likely to be the worst. According to the World Bank (2020), the global economy is expected to shrink by 5.2% this year, representing the deepest global recession since the Second World War.

The human loss due to the COVID-19 pandemic continues to be horrific. As of the time this note is written (August 2020), there have been more than 22 million cases of COVID-19 worldwide, and almost 800,000 deaths. The economic cost has also been severe. For example, at the end of July 2020, it is estimated that gross domestic product (GDP) in the second quarter of 2020 fell by 9.5% in the United States, compared to the previous quarter, and by 10.1% in Germany. The social costs, of lost employment and the resultant negative impact on the well-being of individuals and communities, cannot be emphasized enough. Job postings for the United States tanked by 40% in April 2020 compared to the same month in 2019, then slowly recovered, but still stood at -20% as of July 2020. Job postings in July 2020 are (approximately) at -40% in France, -35% in Italy, -50% in Spain, -55% in the United Kingdom, and -25% in Germany, compared to the same month in 2019 (Financial Times 2020).
Through our research, we are called on to make a positive contribution to our communities. As Editors of the *Review of Corporate Finance Studies*, we have decided to devote a special issue to the economic impact of the COVID-19 pandemic on corporations. We felt it was our obligation and a worthwhile contribution to the bigger debate happening in our communities on how to, first, lessen the economic toll from the pandemic, and, second, best rebuild and reallocate resources once this event is behind us. Corporations, whether small, medium, or large, or young or old, are at the very heart of these two challenges, and academic research will be needed to guide policy making.

With this objective in mind, we have collated this issue featuring papers that are among the best of the early research we have seen written over the last few months. We cast as big a net as possible in the area of corporate finance, to mirror the impacts engendered by the pandemic. The pandemic has upended the cash flows of a large number of corporations in many countries, with certain segments being significantly more affected than others. Larger companies, the so-called “workhorses” of most of our empirical work in corporate finance, face significant headwinds, including financial distress in some cases. But medium-sized and smaller companies, which seldom feature in our empirical work, will have their very survival on the line, in part because of frictions on the financing side. Thus, the issue features work on both small and large, as well as private and public, firms.

The issue is organized into three main themes. One set of papers (Li, Strahan, and Zhang 2020; Acharya and Steffen 2020; Halling, Yu, and Zechner 2020) considers the “dash for cash” by firms in the United States during the early part of the pandemic. It is notable that firms were able to raise substantial amounts of external financing at this time, both by drawing down lines of credit from banks and by accessing the public markets. Thus, in the early part of the crisis, financial institutions and markets (helped also by the strong intervention of the Federal Reserve Board) performed one of their key functions—allowing corporations to raise external capital—as well as we could have hoped for.

A second set of papers (Carletti et al. 2020; Schivardi, Sette, and Tabellini 2020) considers the impact of COVID-19 and the associated lockdown on the liquidity and equity positions of a large number of firms, including private firms, in Italy. Two main messages come through: when the immediate COVID-19 storm has been weathered, equity shortfalls and debt overhang will be major hurdles for firms in the longer term, and the issue of zombie financing is likely to become very relevant.

The third set of papers (Ramelli and Wagner 2020; Albuquerque et al. 2020) examines the corporate characteristics, both those related to firms’ balance sheets and their business models, that drove stock market
reactions of firms in the early part of the pandemic. In this period, firms that were especially exposed to China significantly underperformed, whereas those with high ES (environmental and social) scores performed relatively well.

Finally, the paper by Brunnermeier and Krishnamurthy (2020) considers the intersection between corporate financing decisions and macroeconomics. The authors highlight some fruitful directions for future research in these areas, including the consideration of macroeconomic effects and related externalities in corporate bankruptcy procedures.

1. Financing of Corporations: Supply Side

Corporations’ cash flows have been severely hit. While the effect is temporary for some firms, many firms will experience it in the longer term, leading to financial distress. For example, some firms have business models that are incompatible with social distancing; firms in the industrial and energy sectors will suffer from falling demand for their products; and, financial firms may engage in more reaching for yield in a scenario of zero short-term rates.

Under these circumstances, funding for corporations becomes crucial to stop liquidity challenges from morphing into solvency ones. External funding becomes central but, as existing evidence shows, high leverage can hamper new funding. Overall, the nonfinancial corporate sector in the United States entered this crisis carrying high levels of debt on their balance sheets. Considering corporate bonds, bank loans (including leveraged loans), and institutional leveraged loans, nonfinancial corporate debt stood at almost $12 trillion as of 2019, a significant increase from $8 trillion in 2008. These highly leveraged balance sheets for the nonfinancial firms pose at least two large threats. First, during the crisis, financing of the business model becomes problematic when cash flows drop in a persistent way. Second, when the recovery starts, the debt overhang problem will pose a very big obstacle to investments.

In this issue, we have three papers that shed light on the supply side of funding during the first stages of the crisis, examining the subject from different perspectives. The so-called “dash for cash,” as Acharya and Steffen (2020) argue in this issue, becomes a primary objective for survival. An important question is how did firms raise cash: through banks (e.g., drawdowns under existing or new credit lines, term loans, and the like), bond issuances, or equity issuances?

Banks could be a first line of defense. But were banks able to provide liquidity arising from a large economy-wide shock? Suffice it to say that March–April 2020 can be seen as an unexpected real-life “stress test” on many banks. Li, Strahan, and Zhang (2020), in their paper “Banks as
Lenders of First Resort: Evidence from the COVID-19 Crisis,” show that firms in the United States immediately turned to their banks for the provision of liquidity as the crisis started. Firms drew funds from preexisting lines of credit at an unprecedented scale, with large banks providing most of the required funding. Interestingly, location mattered: Li, Strahan, and Zhang (2020) find much larger lending increases in banks located in communities that suffered the most from the COVID-19 outbreak. An important point to note is that banks entered this crisis in a significantly healthier position compared to the 2008–2009 financial crisis. The various policy interventions since the financial crisis have led to safer bank balance sheets and allowed banks to meet corporations’ funding needs when the COVID-19 pandemic hit.

Which firms felt the most need to raise external financing? One important answer comes from the firms’ ratings: firms on the cusp of being downgraded to non-investment status are likely to behave most aggressively to buttress their cash position and reduce the likelihood of becoming fallen angels. The background is important here, as the volume of BBB-rated debt has more than quadrupled since the last financial crisis. Indeed, ratings risk induced by the COVID-19 shock is important not only for nonfinancial firms but also for regulated financial institutions that may have to engage in fire sales of bonds that lose their investment-grade status. Acharya and Steffen (2020) investigate this theme in the paper “The Risk of Being a Fallen Angel and the Corporate Dash for Cash in the Midst of COVID.” They BBB-rated and non-investment-grade firms increased their cash-holdings in the first quarter of 2020 significantly more than AAA- to A-rated firms (and also unrated firms). How did these firms reach that objective? The authors find that firms from different rating spectrums used different funding sources: while BBB-rated and non-investment-grade firms mostly drew down their credit lines with banks, AAA- to A-rated firms managed to maintain access to public capital markets and issued both bonds and equity.

Access to public capital markets is further investigated by Halling, Yu, and Zechner (2020) in the paper “How Did COVID-19 Affect Firms’ Access to Public Capital Markets?” What were the cross-sectional differences in firms’ access to external capital markets and which firm characteristics drove these differences? The paper starts with an important result: corporate bond issues increased substantially since the onset of the pandemic crisis both for bonds rated A or higher as well as for bonds rated BBB or lower. The surprising aspect is that even companies that were one notch above non-investment-grade issued bonds. Considering that capital regulations impose heavy costs on financial institutions carrying these bonds in case a downgrade happens, this result is quite unexpected. Another surprising result: firms chose to issue bonds with longer maturities during the crisis, in contrast to existing evidence that
suggests the opposite happened during previous crises. Equity issues had the opposite behavior: a marked slowing down. The results suggest that the Federal Reserve’s corporate bond purchases had a positive impact on firms’ ability to tap the bond market when equity issues may have been either very costly or impossible to carry out.

The overall message from these papers is that financial markets functioned smoothly during the early part of the crisis in the sense that firms were able to raise financing quickly when the lockdowns began and cash flow shortfalls emerged. This fact is in marked contrast to the financial market disruptions we saw at the start of the 2008–2009 financial crisis and suggests that lessons from that crisis have helped inform the policy response to COVID-19.

2. Equity Shortfall and Zombie Lending

When the immediacy of the shock will subside, the next significant question will emerge: what are the best policies that should be put in place to help firms recover? Broad economic recovery and employment growth will crucially depend on firms’ ability to get back to normal. To do so, we should first understand how much equity has been burnt during the crisis and, thus, how significant is the financial distress (and the scale of bankruptcies) we will face. The papers discussed above show that in the short-term firms were able to raise substantial amounts of debt. But higher indebtedness and default risk will lead straightaway to the well-known problem of debt overhang, resulting in lower future investments at a time when growth will be necessary. Thus, it is important to investigate equity erosion and its cross-sectional heterogeneity across firms and industries.

The paper “The COVID-19 Shock and Equity Shortfall: Firm-level Evidence from Italy” by Carletti et al. (2020) is a first attempt at answering this question. The paper uses data from Italy—the first country in the Group of Seven (G7) to be hit by the pandemic and to enact lockdowns—to simulate equity shortfalls. Using almost 81,000 firms, the authors find staggering impacts. Firms face an aggregate annual profit decrease of €170 billion (approximately 10% of the 2018 GDP) after a 3-month lockdown and, for loss-making firms, an aggregate equity erosion of around €117 billion. The shock will force about 13,500 firms to have negative net worth, putting at risk the employment of over 800,000 workers (almost 9% of employment of the firms). This will be a bigger employment loss than that caused by the double-whammy of the 2008 financial crisis and the 2012–2013 sovereign debt crisis together. The equity shortfall of these distressed firms will call for an equity injection of €31 billion. The COVID-19 recession is likely to have larger effects on small and medium-sized firms, which are the engines of employment
growth in most countries. These findings give rise to a number of questions. Will firms be able to raise equity from capital markets? If yes, how will their ownership structure change after the entry of new shareholders? What should be the role of governments: should they take ownership stakes in these firms, at least the larger ones?

In the short term, governments and central banks in many parts of the world have put into place emergency measures to inject liquidity into the corporate sector. In the longer term, a potential danger that arises is that firms that should have been shut down, instead, are kept alive as “zombie firms” through the provision of subsidized financing. Existing literature shows that allowing zombie firms to survive generates costs to the economy: such companies drag down productivity growth and make employment reallocation to more productive firms problematic. But how can we determine which firms are potential zombie firms when a corporate liquidity crisis can easily evolve into an insolvency crisis, engulfing all sectors? In the paper “Identifying the Real Effects of Zombie Lending,” Schivardi, Sette, and Tabellini (2020), Schivardi et al. (2020) argue that the literature may suffer from a serious identification problem. Often implicitly, and sometimes explicitly, firm performance is used to identify zombie firms. This is problematic, because a downturn in an industry may be associated with not only the declining performance of healthy firms but also a narrowing of the performance gap between healthy and weak firms. There will, therefore, be a bias toward finding that healthy firms too suffer in a sector with a high proportion of zombie firms. In analyzing the effects of COVID-19, determining the extent to which zombie financing is a problem will be an important issue both for policymakers and for researchers. Indeed, Brunnermeier and Krishnamurthy (2020) argue that if we expect a return to the pre-COVID-19 era soon (e.g., after a vaccine is developed), there may be less of a need for reallocation of assets across sectors or firms than in a typical recession. In such a setting, the typical concern about providing credit support to zombie firms in a recession may be less of a concern.

3. Firm Characteristics and Stock Prices

Another phenomenon we have witnessed as the crisis unfolded has been massive stock price movements in the United States, with initial significant falls and then a recovery after the announcement of the rapid intervention of the Federal Reserve Board and the various programs enacted by the federal government. One question of interest is whether firm-level characteristics played an important role in these deep stock price movements.
In this issue, we have two papers that address this question from two different perspectives. In the paper “Feverish Stock Price Reactions to COVID-19,” Ramelli and Wagner (2020) find causal evidence of the firms' exposure to international trade for corporate value. In the initial stages of the pandemic, internationally oriented firms, especially those more exposed to China, underperformed. As Europe and the United States suffered from the contagion, prices moved in a “feverish” way as well but there were important patterns indicating cross-sectional heterogeneity. Both investors and analysts seem to have shifted their focus to important firm characteristics: high corporate leverage and the survival chances of firms with scarce cash. This result links well with the “dash for cash” and the related papers mentioned above. The results in the paper show how the tail risks faced by firms, this time from a pandemic, were amplified in the stock markets through financial channels.

One firm-level characteristic that has attracted a lot of attention in recent years is the extent of corporate social responsibility professed by the firm. The pandemic, with its heavy toll on human lives, unemployment, and financial distress, should be an important acid test for firms’ professed investments in their responsibility towards society, as captured by the Environmental, Social, and Governance (ESG) scores. Whether these scores capture real commitment or window dressing is still a big open question in the literature. In the face of a massive shock, such as COVID-19, we can better understand how to interpret these scores.

The paper “Resiliency of Environmental and Social Stocks: An Analysis of the Exogenous COVID-19 Market Crash,” by Albuquerque et al. (2020) has this objective. The authors show that firms in the United States with high environmental and social (ES) scores suffered lower stock price declines compared to other firms. The authors then investigate how ES policies build resiliency and look at theories of customer and investor loyalty. Firms with high customer and investor loyalty experienced the strongest stock price performance during the widespread market declines caused by the pandemic. Customer loyalty translated into higher operating profit margins of firms with high ES scores, even at a time when the economy as a whole was suffering through the first stages of a contraction. Looking at other performance measures, the authors find that volatility of stock returns was lower for firms held by investors with a preference for ES scores. Overall, the results in the paper lend support to the view that consumer and investor loyalty play important roles in making high ES firms more resilient during stressful times.
4. Conclusion and Future Research Directions

The COVID-19 shock has been distinguished by both the scale of the economic devastation it has led to and the speed with which events have unfolded in the early stages of the crisis. In this issue, we have put together some of the best early research in corporate finance related to the COVID-19 crisis. The papers examine which firms in the United States raised external capital when the crisis hit and how they did so, what can we expect in terms of equity shortfalls and potential bankruptcies in Italy, the difficulty of determining which firms may be zombie firms, and some driving factors of cross-sectional heterogeneity in stock market returns.

The paper by Brunnermeier and Krishnamurthy (2020) in this issue adds another dimension to the issue by considering the connections between macroeconomics and corporate finance. In corporate finance, it is common for us to consider firms and their decisions in isolation. The authors point out that when an adverse event affects a large number of firms, there are important macroeconomic consequences that stem from externalities or spillovers across firms. On the theoretical side, research should take these externalities into account when recommending optimal policies, as well as seriously considering dynamic models that can be quantitatively applied to the data. On the empirical side, fruitful directions for research include the effect of government interventions on firm financing and the effect of nontraditional and FinTech lending on small firms.

As economies around the world begin to recover from the COVID-19 crisis, in many cases corporations will be significantly levered and will continue to be under financial stress. It will be important both to understand the extent to which debt overhang is a barrier to investment and to devise policies, such as equity injections into firms, that may mitigate this friction. Other open questions include the extent to which ES scores will be driving stock returns once we return to normal times. Overall, we hope that the topics touched on by the papers in this issue, and the many thoughts they raise, will provide a springboard for future research into the effects of COVID-19, and the lessons we can take away, for the next several years.

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