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"Economic Fragility: Implications for Recovery from the Pandemic"

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The views expressed today are my own, not necessarily those of my colleagues on the Federal Reserve Board of Governors or the Federal Open Market Committee.

Good morning, and thank you for the opportunity to speak with you today, albeit, virtually. I particularly regret not being able to meet with you in person, given the many years I enjoyed living and visiting Wisconsin – first as a graduate student at University of Wisconsin-Madison, and then later, when visiting my daughter during her four years in medical school at the Medical College of Wisconsin.

I am honored to join the ranks of economists you have invited to give the Marburg Memorial Lecture at Marquette University. Perhaps appropriately, most of the previous speakers have been distinguished academics. Today, I share with you the perspectives I've gained from a different role, which is that of a policymaker.

The stated goal of the Marburg Memorial Lecture is to provide a forum for the discussion of moral, philosophical, and social dimensions of economic issues.[1] Economists discuss the social dimensions of economic issues all too rarely. At this time, in the grip of a worldwide pandemic, the breadth of the effect of the virus on society has made COVID-19 of crucial concern to many disciplines, and economics is certainly no exception. It is an essential time for economists to be considering the social implications of economic policy, as the nation remains affected by a virus that has taken more than 210,000 lives. As we head into the colder months, we continue to see a high rate of positive COVID cases across the country (including a troublingly high infection rate in Wisconsin and much of the Midwest), which underscores that the human tragedy of the pandemic continues to unfold even as the economy has reopened and improved noticeably.

It is important to note that both the negative public health effects, and economic repercussions, of the pandemic have not been felt evenly in society. The virus itself has

disproportionately affected minorities who, statistically, tend to live in more dense urban areas and rely on public transportation to get to work, and who are more likely to be employed as frontline and essential workers. Such jobs cannot easily be performed remotely, and despite being deemed essential, often involve modest pay. In addition, these workers are often in service-related industries that have been particularly hard-hit by the crisis, and so they have been disproportionally affected by job losses.[2]

Unfortunately, the uneven effects of recessions are not unique to the current one. But the current situation is severe. As the pandemic is dragging on, and consumers remain wary of engaging in activity that requires close social contact – restaurants, hotels, and retailers are beginning to close – with the consequence of permanent job losses for the typically lower-wage workers in these industries.[3]

Businesses closing, making job losses permanent, is one example of the so-called recessionary dynamics that often take hold during an economic downturn.[4] Importantly, the state of the economy as it enters a downturn – especially the health of the financial system – can play an important role in recessionary dynamics and how the recessionary burden is spread across the economy.

In my remarks today, I will explore an economic issue that definitely has social and even moral dimensions and implications, consistent with the Marburg lecture series – whether the United States economy, as currently configured, is particularly vulnerable to economic disruptions and in turn those recessionary burdens. In terms of this vulnerability to disruptions, it is possible that no one could have predicted that a worldwide pandemic would occur *precisely* in 2020 – but one could have anticipated that having highly levered firms and excessive

concentrations of commercial real estate lending at some institutions would make the economy more vulnerable to a variety of disruptions, including a pandemic or other shock.

You might be wondering why I would bring up losses from financial instability in the same breath as the pandemic and its uneven economic and public health burdens. I do so because losses due to financial shocks affect a wide range of stakeholders – not only shareholders, but also of course the workers in the affected industries. A wave of unnecessary bankruptcies resulting from such shocks can cause a spike in permanent job loss and a significant scarring of labor market participants – particularly, though not exclusively, those at the lower end of the income distribution. These lower-wage workers, who tend to have little if any financial cushions, are the individuals least prepared to endure an economic downturn.

American novelist Ernest Hemingway famously – and succinctly – captures some of my concerns in this dialogue from his breakout novel, *The Sun Also Rises*: "'How did you go bankrupt?' Bill asked. 'Two ways,' Mike said. 'Gradually and then suddenly.'" Many businesses are, unfortunately, facing the "suddenly" part right now. In recent years, many of these firms had gradually increased risk by taking on more leverage, which magnifies returns with good outcomes – but also magnifies losses when bad outcomes occur.[5]

This increase in risk-taking is more likely to take place in a low-interest environment, like the one which prevailed in the aftermath of (and as a result of) the financial crisis and Great Recession. Low interest rates encourage households and firms to accumulate more debt by making it easier to meet the cash flow needs to service the debt associated with buying a house or making a business (capital) investment, or even share buybacks by firms. But when a bad economic shock occurs, financial buffers for households and firms alike tend to fall, and the debt

service and potential repayment of the debt can become quite problematic. Financed assets – be they companies or shopping malls – will also lose value in a recession, making it much harder to refinance that debt by taking out a new loan, as might be done in normal times.

During economic downturns, monetary policy accommodation helps to stimulate the economy by lowering interest rates and encouraging households and firms to take more risk – a desired effect during the depths of a recession, when many households and firms become overly risk-averse and limit their spending. (One might think of this as pump-priming to rein in the downward spiral of the economy and initiate a recovery.)

However, there are potential adverse consequences from low rates persisting for an extended period even after the economy has made progress in the recovery. Abnormally low rates for a long period during times when economic slack is no longer a concern can result in excessive risk-taking, as businesses and firms take on additional debt and accumulate more risky assets in search of better returns – potentially bidding up asset prices to unsustainable levels. The financial pressures associated with such behavior build gradually, and only become clear in the next economic downturn. When the ensuing recession occurs, often suddenly, and more severe recessionary dynamics take over, the impact tends to be greatest on workers and firms that are least able to adjust and adapt.

My remarks today focus on some of the mechanisms that contribute to financial instability and tend to amplify the effects of economic downturns, and how these mechanisms are likely to impact the economic recovery. While these observations apply to downturns in general, they are certainly relevant in the present particularly challenging episode.

- First, I will highlight an important mechanism that plays a role in recessionary dynamics – the *tightening of credit terms and credit availability* during an economic downturn. In part, the importance of this channel is amplified by a low interest rate environment during the preceding economic expansion when households and firms accumulated loans, oftentimes in real estate. A prime example in the current downturn is commercial real estate, where the high leverage build-up before the crisis and the severe hit from the crisis have led to a noticeable tightening in credit conditions. With tighter credit conditions, it becomes even more difficult to roll over maturing loans, which are plentiful due to the increased leverage.
- I will then show that low rates for a long period of time not only compound bank exposures in real estate, but also increase firms' *reliance on debt,* making cash flow disruptions from the pandemic more severe.
- Finally, I will highlight that this build-up in financial risks has *implications for labor market conditions* – which, unfortunately, likely means a slower and more painful recovery than if we had more aggressively addressed the build-up of risks in the corporate and banking sectors prior to the pandemic.

All of this has important policy implications – for both monetary and supervisory policy. First, it has implications for how long monetary policy should remain highly accommodative; and second, it has implications with respect to the lack of a coherent framework in the United States for conducting supervisory policy that effectively addresses the build-up of financial stability risks. Policy improvements in this area should not be seen as dry or abstract notions –

given the opportunity to make downturns less severe, hasten recoveries, and alleviate some of the human toll of job losses and economic insecurity.

Tightening of Credit Conditions

The tightening of credit conditions frequently occurs in economic downturns, as lenders become more concerned about the ability of borrowers to pay off their loans, and the value of collateral – and become more uncertain about the evolution of the economy more generally. **Figure 1** shows the results of the bank lending survey for commercial and industrial loans conducted by the Federal Reserve. For both large and small borrowers, lending standards have tightened appreciably, relative to the time prior to the pandemic, and are currently approaching the peaks we saw in the financial crisis and Great Recession.

In **Figure 2**, it is clear that one major difference between the current pandemic-driven recession and the last recession, at least to date, is the better financial condition of U.S. banks. During the financial crisis that began in 2007, a large number of bank failures occurred, as banks held too little capital for the shock generated from the fall in real estate prices, particularly as it involved highly leveraged households.

Even though bank failures are currently low (Figure 2), and many banks are better capitalized, why are financial conditions tight (Figure 1) at least for commercial and industrial lending? One possibility is that as the pandemic drags on, the likelihood of more severe outcomes for borrowers, and their lenders, has risen. As uncertainty increases, banks tend to be less willing to take on risk, at any price. Also, a significant depletion of capital, even if it does

not cause a bank to fail, can lead to banks tightening their lending standards applied to potential borrowers.

In particular, falling commercial and residential real estate prices were a major reason for losses on loans during the last financial crisis. **Figure 3** shows that of late, nonperforming real estate loans have turned up, but have yet to rise dramatically. The most recent data come with a couple of caveats. First, the data tend to lag fairly significantly; the peak in the previous recession was well after the recession ended. Second, and relatedly, many banks reportedly provided their customers forbearance in the spring and summer – including, but not limited to, forbearance for real estate loans backed by retail stores or hotels, which have been particularly impacted by the pandemic, and also for residential borrowers through regulatory mandates.[6] Because of the forbearance, borrowers are meeting current contractual arrangements, but are likely to struggle once the forbearance ends if economic activity remains suppressed by the pandemic.[7]

This concern with future loan defaults, along with low net interest margins in a low-interest-rate environment, likely helps explain why bank stock prices have remained so depressed, despite a significant rebound in broader stock indices, as shown in **Figure 4**. U.S. bank stocks are at only 60 percent of their value from the beginning of the year, while the broader S&P 500 stock index is now above levels seen in January.

In part, these concerns also focus on the commercial real estate loans made by many banks. As **Figure 5** illustrates, the largest banks hold only a little over 5 percent of their assets in commercial real estate loans, while small and mid-sized banks have approximately 25 percent of their assets in commercial real estate. One reason for this divergence is that large banks with

more investment opportunities – and in part, with their CRE portfolio subject to annual stress tests that feature adverse scenarios for real estate – have chosen a smaller CRE portfolio relative to smaller banks, where CRE lending is often the most straightforward collateralized lending for many small and medium-sized businesses. Over time more commercial real estate loans have migrated to small and medium-sized banks.[8]

While banking data do not yet reflect significant problems in commercial real estate, given the forbearance I mentioned and the lagging nature of indicators, we can obtain an approximation of likely problems from the recent equity performance of real estate investment trusts. These are companies that seek exposure to specific sectors of the commercial real estate market. As **Figure 6** shows, equity indices focused on two commercial real estate sectors – retail real estate and hotel real estate are particularly depressed since the pandemic hit. For example, the hotels and resorts REIT index is at about 50 percent of its pre-pandemic level. I would add that many of the loans in bank portfolios are more likely to be smaller hotels and retail strip malls, which might have been even more adversely impacted by the pandemic than their larger peers, given their lack of direct access to bond and equity markets.[9]

Note that travel and hotel firms have been hurt by a variety of events over the past 20 years. They were depressed after the September 11, 2001 terrorist attacks, during the financial crisis of 2007 and 2008, and now. This is an industry where tail events should not be all that unexpected. A highly levered hotel can be quite profitable during good times, but during a severe economic downturn may face a significant challenge to survive.

It is worth noting that the early 1990s credit crunch, the financial crisis and Great Recession, and likely this pandemic-driven recession all provide examples of the prominent role

real estate has played as a headwind to recovery due to the losses incurred from real estate assets held inside and outside the banking sector. However, when sectors regularly contribute to the severity of downturns, one wonders whether it is time to note that reaching-for-yield behavior during a low interest rate period may exacerbate a subsequent economic downturn, to the detriment of many people beyond the sector.

Build-up in Leverage

Figure 7 shows the build-up in nonfinancial corporate business debt relative to GDP. But for cyclical fluctuations when GDP fell in recessions, the extended low interest rate environment after the Great Recession helps explain why the leverage ratio rose over the past 10 years. Corporations increased their leverage as the prevailing low interest rate environment provided more capacity to take on debt.

However, in an economic downturn, greater leverage – with its principal and interest repayment demands – may prove problematic for firms, or by extension the economy. This can result in firms being forced into bankruptcy, which hurts a wide range of stakeholders in addition to lenders and investors, including customers, suppliers, and employees.

Figure 8 provides an example involving retailers.[10] During normal times, retailers can have a relatively predictable revenue stream. This makes it attractive to increase debt, either by management decision or as part of a private equity acquisition. However, when the unexpected occurs, as the pandemic has shown, it can interrupt firms' revenue streams, forcing them to slash employment to continue meeting debt service requirements and survive. The figure shows the

debt to EBITDA ratios for publicly held retailers with a default in 2020 (retailers whose financials are publicly available). As shown, most of these firms have a debt to EBITDA ratio that would disqualify them from participation in the Federal Reserve's Main Street Lending Program (where ratios of four times adjusted EBITDA for loans with less security, and six times adjusted EBITDA for loans with more security, represent the maximum allowed debt load). Leverage not permissible for a troubled borrower lending program, but standard for many retailers prior to the crisis, highlights that the significant build-up of leverage is a contributing factor to the bankruptcies we have already seen – unfortunately with more quite likely in the coming months.

Implications for Labor Markets

The firm closures and layoffs associated with recessionary dynamics mean that debates about corporate leverage involve more than issues of finance; they involve the welfare of workers. The build-up in risks in commercial real estate, and leverage in the corporate sector, prior to the COVID-19 pandemic are likely to result in more bankruptcies and higher unemployment during this crisis than if less risk had been taken.

If the costs for taking on the extra risk were borne only by investors knowingly taking that risk, it might not be so problematic. While less levered businesses still face disruptions in the current environment, they will hopefully recover and rehire workers and re-engage with suppliers and customers. A leveraged business is more likely to declare bankruptcy, permanently severing its many formal and informal contracts with customers, suppliers, and employees. The human toll can be immense.

Of course, large declines in employment in particular sectors of the economy can be costly, and slow to recover from, because workers need to not only find new work but also potentially must develop skills for working in a new occupation or industry. While this can occur with or without leverage contributing, clearly excessive leverage can exacerbate job losses from temporary demand shocks, and make the recovery process slower and more painful than it would have been without the leverage.

Figure 9 shows that since the beginning of the year, the number of employees permanently unemployed has risen. **Figure 10** shows that long-duration unemployment is on the rise. As the pandemic drags on much longer than originally hoped, the likelihood increases that many job losses that firms and employees hoped would be temporary, become permanent. This makes it much more difficult, of course, for the economy to return to full employment.

Not only does it take time for workers to get retrained and find jobs in new areas, but many workers lose the will to continue looking for work. Such discouragement effects could be particularly prevalent among second earners in a household, and people nearing retirement. We can see this effect with another measure of slack in the labor force, the labor force participation rate, shown in **Figure 11.** As people become discouraged with their prospects for employment, they stop looking for work. As more people are not employed and not looking for work, the labor force participation rate declines. The roughly 2 percentage-point decline in the labor force participation rate indicates that the labor market recovery may prove challenging. It is also noteworthy that loss of jobs have been concentrated in industries that employ a significant number of women, and as schools continue to impacted by the pandemic, more women are leaving the labor force – possibly in part to address inadequate support for school-age children.

As a reminder of the root cause of all these challenges, **Figure 12** shows the COVID-19 infection rate in the United States and in Wisconsin. As the figure shows, there are rising infections in many parts of the country, including Wisconsin.

Addressing the public health crisis is the prerequisite for resolving the economic crisis.[11] The increases in infections since March, which has already resulted in hundreds of thousands of deaths in the U.S., also has dire economic consequences. Firms and households are unlikely to resume pre-pandemic economic activity and spending until the public health situation improves, and activities that require close social contact are less of a concern.

Concluding Observations

Clearly a deadly pandemic was bound to badly impact the economy. However, I am sorry to say that the slow build-up of risk in the low-interest-rate environment that preceded the current recession likely will make the economic recovery from the pandemic more difficult.

The increased risk build-up, such as the reaching-for-yield behavior in commercial real estate or increased corporate leverage, make economic downturns including this one more severe. These are issues that I and others spoke about quite extensively in the years before the pandemic hit, in particular with respect to questions about the need for accommodative interest rates when the economy was doing well, and the potential for a build-up of financial stability risks.[12]

In the United States, we do not have a cohesive set of regulatory and supervisory tools to moderate risk build-ups. And while we do have the Financial Stability Oversight Council, we do

not have a regulatory and supervisory body endowed with tools and structures that can be deployed to limit financial stability risks – as, for example, the U.K. has.[13] If we expect to remain in a low-interest-rate environment for a protracted period of time, we need to take more precautions against financial stability risks for when the next economic shock hits.

An important area of research, going forward, is to understand how the changes in risk-taking behavior have made the economy more susceptible to severe and protracted downturns that resist recovery. The urgency of these topics is underlined by the fact that the economic impact of these downturns is disproportionately borne by those who can least afford it.

Thank you for inviting me to deliver the Marburg Memorial Lecture today. I wish you continued health during these challenging times, and look forward to the next time I can visit the great state of Wisconsin.

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[1] For more about the Marburg Memorial Lecture, see: https://www.marquette.edu/business/center-for-applied-economics/marburg-lecture.php

[2] Workers in these sectors who have remained employed, or who have been recalled to previous jobs, also face a higher risk of job losses going forward, to the extent that the recovery in industries such as hospitality and entertainment proves sluggish as we head into the colder months.

[3] Another troubling factor this time is the dropout rate of women from the labor force being greater than the typical recession, likely because of the unequal burden sharing between husbands and wives of taking care of children who are schooling at home.

[4] Recessionary dynamics refers to when aggregate demand falls below production so that inventories rise. Firms start cutting back production, and laying off employees. In addition, since production exceeds aggregate demand, inventories keep building for a while and firms have no incentive to invest, so aggregate demand continues to fall as consumption (due to the increase in unemployment and the fall in incomes) and investment fall further.

[5] Firms can only increase their debt if there are investors that are willing to provide credit to such firms. Accordingly, another potential risk of the low interest rate environment is that it encourage investors, including institutional investors, to reach-for-yield. See, for example, LinaLu, Matthew Pritsker, Andrei Zlate, Kenechukwu Anadu, and Jim Bohn, "Reach for Yield by U.S. Public Pension Funds," Federal Reserve Bank of Boston, Supervisory Research and Analysis Working Papers 2019,Series 19-2.Other papers have found reach-for-yield behavior in other investor types, including insurance companies

[6] By regulatory mandates I am referring to the requirements for GSE-insured mortgages that lenders allow homeowners to defer mortgage payments.

[7] It is also the case that small businesses received significant short-term help from fiscal policy; aid that has not been extended or increased as of yet.

[8] It is worth noting, however, that smaller banks have less ability to diversify in some sectors.

[9] For context, larger properties tend to be debt/equity financed rather than bank financed – as is often the case for smaller hotels and retail strip malls.

[10] It is worth noting that the traditional retail sector writ large has been challenged for a period of time, due in part to the rise of online retail and the likes of Amazon.com.

[11] For more discussion, see: Sept. 23, 2020 talk by Eric Rosengren entitled, The Economy's Outlook, Challenges, and Way Forward and also August 12, 2020 talk by Eric Rosengren entitled, The COVID-19 Pandemic, the Economic Outlook, and the Main Street Lending Program.

[12] For more discussion, see: Jan. 13, 2020 talk by Eric Rosengren entitled, The Economic Outlook – and Two Risks to the Forecast that are Worth Watching. Also see Sept. 20, 2019 Statement of Eric S. Rosengren, Commenting on Dissenting Vote at the Meeting of the Federal Open Market Committee, and also Aug. 2, 2020 Statement of Eric S. Rosengren, Commenting on Dissenting Vote at the Meeting of the Federal Open Market Committee.

[13] For additional discussion, see June 21, 2019 remarks by Eric S. Rosengren entitled, The Macroprudential Implications of the 1990s Japanese Financial Crisis, and also March 23, 2018 remarks by Eric S. Rosengren entitled, Monetary, Fiscal, and Financial Stability Policy Tools: Are We Equipped for the Next Recession?