

Speech



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Between the Hither and the Farther Shore: Thoughts on Unfinished Business

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When I joined the Board of Governors as Vice Chair for Supervision in the fall of 2017, the Federal Reserve was in the latter stages of a decade-long effort to build a new financial regulatory framework, responding to the financial crisis of 2008. Yet, although the mortar was not yet dry on that construction project—based on the blueprint created by Congress, central banks, and supervisors around the world—there was already broad recognition across the political spectrum that the framework could be improved upon, based on the experience of how it had worked over the decade of its implementation. That was the judgement of the authors of the post-crisis blueprint, former Senator Chris Dodd and former Congressman Barney Frank.¹ It was also the recommendation of one of my predecessors at the Fed, Dan Tarullo—a principal architect of this framework—who, in his final speech as a Fed governor, proposed several significant changes.²

I came to the Fed in order to take on that task of making the system better: more simple, more efficient, more transparent. Congress also took up this effort in the broadly bipartisan Economic Growth, Regulatory Relief, and Consumer Protection Act, and we adjusted our regulatory framework to better align our requirements with the risk posed by firms to the financial system. We maintained and, in fact, raised regulatory standards for the most systemically important firms and simplified regulatory requirements for smaller firms without diminishing the resilience of the system as a whole.

In the midst of our work to improve our framework, we faced the unique experience of the COVID event, which tested that resilience. This real-life stress test demanded emergency action with respect to our regulatory framework and more broadly, including through the establishment of 13 emergency lending facilities under our role as the lender of last resort to help stabilize the financial system.

Now, as my tenure as a member of the Board comes to a close, I would like to use this final speech to discuss issues that my successor, and his or her colleagues, will confront—areas of unfinished business.³ In the near term, there will need to be further refinements to the bank supervisory and regulatory framework, based on the accumulating evidence and experience of how these ideas, rules, and procedures have worked in practice. In the longer term, the Fed will at some point need to grapple with the implications of some of the novel emergency lending facilities we established during the onset of the COVID event. I supported these facilities in light of the specific challenges the country faced that grueling spring, but I believe it is possible to draw some lessons from the experience and set out some principles for the Fed's emergency lending to prevent this precedent – or some vision of what it represents—from exceeding reasonable bounds in the future. Finally, in my capacity as the outgoing Chairman of the Financial Stability Board (FSB), I have some reflections on the upcoming agenda for the FSB.

Further Refinements to the Supervisory and Regulatory Framework

As I have noted previously, the post-crisis regulatory framework is strong, as evidenced by how well it fared against a severe real-life stress test—the COVID event.⁴ Banks entered the COVID event with high levels of capital and liquidity, and served as a source of strength to the economy in a time of need.⁵ Some

have argued that the time of COVID was not a true test of the system, because of the unprecedented level of fiscal and other support provided to the real economy during that time, from which the financial sector indirectly benefited. Such an argument ignores, however, that the Federal Reserve did not take such support for granted during the throes of the crisis itself, and as a result we ran multiple stress tests throughout the COVID event, with three separate and distinct scenarios, along with a "sensitivity analysis," which itself included three additional hypothetical recessions.⁶ Each of these stress tests assumed no additional fiscal or other measures to support the economy, and demonstrated that, even without such support, the banking industry would have fared very well. In my view the resilience of banks during the COVID event, coupled with the results of our stress tests, demonstrate that the overall level of capital in the banking system is more than ample.

In addition to the demonstrated hardiness of our *regulatory* framework, I believe our *supervisory* framework is also stronger now than it was four years ago. In January 2020, I spoke about the importance of transparency, accountability, and fairness in bank supervision.⁷ Every agency of the federal government has a legal, constitutional, and, I believe, moral responsibility to be accountable to the public we serve, and one of the principal ways we do this is through transparency. The banking agencies (including the Fed) have for decades not been transparent in the way that we have conducted supervision—yet, especially since 2008, we had been accomplishing more and more of our work through this opaque mechanism with limited accountability. In that light, I am quite proud of the improvements we have made in increasing the transparency and public accountability for our activities overseeing banks.

The Fed fostered the public conversation on transparency in supervision when we organized a conference on supervision and actively participated in the discussion with academics and other members of the public. An important part of monetary policy transparency is the semiannual process where the Fed reports on its activities to Congress and the Chair submits to questions from both houses of Congress. I am pleased to say that there is now a similar twice-yearly process in which the Fed produces a public, written report on supervision and regulation and then submits to questions from lawmakers. Our Supervision and Regulation Report—instituted early in my term—regularly provides the public with insights about our supervisory process, including aggregate supervisory ratings trends and supervisory priorities for our different portfolios—information that was previously hard to find, and sometimes not public at all.

I believe one concrete and successful change to supervision was to our stress testing process, where we have greatly increased transparency, and thus accountability.⁸ Transparency does not mean giving answers to tests in advance—an inapt analogy given the structure of these tests—but is more akin to ensuring that students have been given the textbook. It means balancing rigor and fairness, and ensuring that the Fed's intentions are understood well enough to advance our goal—and our goal is not to develop the most recondite test, but rather for banks to improve their resilience to extraordinary stress in the financial system. The evidence that we succeeded is how well banks weathered the extraordinary stress that arrived in the spring of 2020, consistent with the results of our stress tests.

Transparency, accountability, and the public legitimacy it confers have empowered the Fed to meet the great challenges that our economy and financial system have faced in recent years. If the Federal Reserve is to continue to play that vital role, then it must also continue to extend transparency to all of its important responsibilities. As I look ahead to the future of regulation and supervision at the Federal Reserve, I believe that the Fed will be more effective in overseeing banks, and more effective in promoting the stability of the financial system, if it maintains its commitment to be open and transparent in how it conducts its work.

In the same spirit, while our regulatory and supervisory framework is strong, there are further refinements that could be made to improve the framework. A number of them were on my agenda when the COVID event shifted the Fed's focus to deal with the emergency. I am proud of what we accomplished in my time here, but there is certainly more to be done.

Leverage Ratio Fundamentalism

One of the principal matters that the Fed will have to take up in the very near term is the calibration of our leverage capital standards. Our capital framework includes two types of requirements: risk-based and

leverage capital requirements. Risk-based requirements are risk-sensitive and change depending on the riskiness of an asset. Leverage capital requirements set a minimum floor for required capital by disregarding risk-sensitivity measures. Our capital framework includes two leverage requirements, with increasingly strict requirements for the largest institutions.⁹

While a leverage ratio is an important backstop, it can result in perverse incentives if it becomes the primary constraint on a bank's investment decisions. Because a leverage ratio is not sensitive to risk, a firm that is "bound" by such a ratio has an incentive to avoid adding safe assets to its portfolio. During times of stress in the financial system, when it is most important for banks to be able to continue serving businesses and households, or intermediating transactions, a binding leverage constraint—or even one that threatens to become binding—may discourage banks from engaging in safe activities, such as those involving U.S. Treasury securities.¹⁰

That is not to say that a leverage requirement should never be the constraining requirement for a firm. In times of stress, a leverage ratio can serve as a transparent measure of capital when our risk weights may be called into question. In addition, it guards against behavior by a supervised institution to game those risk weights. Finally, a leverage ratio leans against the inherent tendency of bank leverage to increase in an economic boom and fall during a recession.

What we are seeing today, however, is that supervised firms are increasingly being constrained by the supplementary leverage ratio not for any of these valid reasons, but simply because of a rise in the level of safe assets in the U.S. financial system. The supplementary leverage ratio was originally calibrated for a financial system with a far lower level of central bank reserves and a much smaller Treasury market.¹¹ The current environment is, of course, much different. Treasury issuance is at an all-time high and the banking system is awash with central bank reserves. To provide some context to the degree of this trend, for the largest banks, the amount of reserves they hold is \$1.35 trillion and the amount of Treasury securities is \$1.38 trillion, each roughly double the amount they held when our supplementary leverage ratio rule was finalized. Even at these lower levels of safe assets, some on the Board worried that the SLR might be too tightly calibrated—but they took comfort from the staff's projection that reserves in the system were likely to fall, creating more elbow room within the envelope created by the SLR. Indeed, when we finalized our leverage requirements for the largest banks, staff projected the amount of reserves in the system would decline to \$25 billion by year end 2021.¹² The current total of approximately \$4.16 trillion in reserves is about 165 times that amount.

During the onset of the COVID event, regulators took emergency action to exclude U.S. Treasury securities and deposits at Federal Reserve Banks from the supplementary leverage ratio to provide banks with additional flexibility to act as financial intermediaries in that period of financial stress.¹³ That exclusion expired as scheduled on March 31, 2021. I supported that expiration, with the commitment that the Fed develop a longer-term solution to the perverse implications of the current calibration of the SLR.

With respect to the enhanced supplementary leverage ratio (eSLR) that applies to U.S. globally systemically important banks (G-SIBs), the best way to address this problem is the approach endorsed by the Basel Committee: recalibrating the fixed 2-percent eSLR buffer requirement to equal 50 percent of the applicable G-SIB capital surcharge, with corresponding recalibration at the bank level.¹⁴ This is an approach previously proposed by the Board and the OCC.¹⁵ This is preferable to other options, such as excluding central bank reserves or U.S. Treasury securities, or both, from the ratio's denominator. Excluding only central bank reserves would exacerbate a structural preference for reserves over Treasuries in bank portfolios, which could have perverse consequences for the operation of the Treasury market (as we saw in September of 2019). Trying to reduce this preference by excluding *both* reserves and Treasuries could result in a significant lowering of capital levels and exacerbate the incentive for the banking system to prefer funding the government to funding private enterprise. If we were to attempt to offset the lowering of capital levels by increasing the leverage capital requirement on non-excluded assets, this disincentive to fund private enterprise would only grow stronger. But whatever the form of the adjustment, this issue needs to be addressed to ensure that our capital framework does not lead to increased risk taking and reduced safe-asset intermediation. As it stands, we are driving deposits out of the highly regulated banking system and requiring that cash be held in other, less stable parts of the

financial sector, such as money market funds. If we enter another crisis with this issue unaddressed, the leverage ratio fundamentalists will have much to answer for.

Basel III Reforms

International cooperation regarding our prudential requirements is critical to promote global resilience in the banking sector, and I have been strongly committed since my arrival at the Board to implementing the final phase of the Basel III capital reforms here in the United States. I had hoped that the US would have led the world in setting out a concrete proposal to implement the Basel III endgame by the end of last year, but the intervention of COVID set back that timetable, and although we are working hard with the other banking agencies to iron out the last issues, our proposal will have to come after my departure. A major issue that we are grappling with is how to implement these reforms, which reduce the role of bank internal models on bank capital requirements, while maintaining the overall level of aggregate capital requirements. As I noted earlier, the experience of the COVID event has made clear that capital requirements in the United States are ample—yet, other things being equal, implementing the remaining elements of Basel III could result in a material increase in capital levels, perhaps up to 20 percent for our largest holding companies. Endlessly increasing capital levels is not costless. In the real world, as opposed to the world from which certain pundits and kibitzers make their occasional visits to our planet, excessively high capital levels constrain the ability of the banking system to provide credit to the real economy, and we pay the cost in jobs and living standards. What policymakers will need to do as they implement the Basel III reforms is determine whether adjustments to other parts of the capital framework are necessary to ensure that we do not unduly increase the level of required capital in the system.

The most logical place to make such an adjustment would be the G-SIB surcharge. In the US, we have calibrated the G-SIB surcharge at twice the internationally agreed level, and we did so expressly noting that we would revisit the surcharge calibration periodically to reflect current conditions. We have not followed through on our commitment to revisit the surcharge calibration, and once these last elements of the Basel framework are implemented, there will be little justification for a super-calibrated G-SIB surcharge. But many people have an emotional attachment to the G-SIB surcharge, and if that emotion should overwhelm the logic of the case, there are other less talismanic candidates for re-calibration in the existing capital framework that could achieve the same purpose of keeping aggregate capital roughly constant while completing Basel III.

Volatility in our Stress Tests

Our stress testing framework is a cornerstone of our prudential framework, and I am proud of how well it performed during the COVID event, helping to ease stress in the financial system by demonstrating the capital adequacy of banks. The stress testing framework is used to set capital requirements for large firms, and the volatility of these requirements from year to year indicates that we still do not have those requirements quite right. As I have said previously, excessive volatility in a firm's capital requirements limits the firm's ability to manage its capital effectively.¹⁶ While some measure of volatility is expected and desirable in a dynamic stress test, we must guard against excess volatility when it has no particular relationship to changing risks at firms. It is difficult to justify large year-over-year swings in capital requirements for individual banking firms that are simply artifacts of the stress testing process rather than reflecting a genuine change in a firm's business.

I have wrestled for some time with the question of how best to address excessive volatility. In the end, I think the simplest and most effective approach would be to average the results of the current year's stress test with the corresponding stress test results from the previous two years. This would not affect the overall stringency of the tests but would mean that firms that hold the risk profile of their balance sheets relatively constant would not see a large spike or plummet in their required capital from year-to-year based on changes in the Fed's scenario choices.

Cross-Border Resolution and Market Fragmentation

In May 2018, I spoke about the vital importance of cross-border banking to global financial stability and prosperity.¹⁷ The Fed's work internationally on pre-positioning, ring-fencing, and market fragmentation is still vital, and we should continue efforts to find the right balance between flexibility for the parent bank and certainty for host country authorities. Striking that balance properly is essential in order to encourage the international cooperation that is so critical during times of global financial stress.

As I noted previously, while a home regulator will by nature prefer flexibility in resolution, the host regulator will prefer certainty that local resources will be available in stressful conditions. The host regulator, however, must recognize that flexibility in a single point of entry resolution may further the success of the resolution of the entire group, which will ultimately benefit the host regulator. Domestically, the United States needs to do its part in its role as a host regulator by making sure that our U.S. pre-positioning requirements for foreign banks with significant U.S. operations are appropriately calibrated. U.S. intermediate holding companies of foreign-owned G-SIBs are required to issue a minimum amount of loss-absorbing instruments to their foreign parents. These requirements with respect to what is known as internal total loss absorbing capacity include a separate minimum unsecured long-term debt requirement.

Our internal total loss-absorbing requirements for these firms are currently at the top end of the scale set forth by the FSB and willingness by the United States to consider adjusting that calibration to a lower level within the FSB-agreed range may prompt other jurisdictions to do the same. Such a global recalibration, which would do nothing to diminish the loss absorbency requirements that apply at a consolidated group level, could better the prospects of successful resolution both for foreign G-SIBs operating in the United States and for U.S. G-SIBs operating abroad in a future period of financial stress.

We also should consider further simplification of our regulatory framework by streamlining our currently separate and somewhat redundant total loss-absorbing capacity and long-term debt requirements. It is important that we do not create conditions that will make any resolution more difficult in the future.

Supervision

I have already noted that transparency and accountability—and the legitimacy they confer—have helped the Fed to meet the great challenges of recent years. As I look ahead to the future of supervision at the Federal Reserve, I believe that if the Fed maintains its commitment to openness and transparency in how it conducts supervision, it will be more effective in overseeing banks and promoting the stability of the financial system. Being open and transparent does not mean relaxing supervisory standards. Greater transparency makes supervision more effective by ensuring that our expectations are well understood. And by more clearly explaining and justifying those expectations, we enhance the legitimacy of our standards and build respect for the rules, which is critical to promoting and producing compliance in any legal regime.

We need to do more here, and while we have made many of the improvements to transparency I discussed in my January 2020 speech, there is still unfinished work.¹⁸ The greatest focus should be on improving our supervisory communications process. We can do so in a few ways. First, we should restore the "supervisory observation" category for less urgent items of concern, which could increase the quality of feedback provided to a firm as it would allow an examiner to give notice about a supervisory concern even if that concern has not risen to the level of a matter requiring attention, or MRA. We should be vigilant that future MRAs are limited to violations of law, violations of regulation, and material safety and soundness issues to improve the fairness of our supervisory process given the weight MRAs carry with respect to a bank's supervisory rating. We have committed to this practice, but in the absence of a supervisory observations category it remains too common that we issue MRAs for supervisory concerns that do not truly rise to that level. We need a framework that allows us to communicate all our concerns, while recognizing that "when everything's urgent, nothing is."

Finally, we should implement a routine practice of independent review of important supervisory communications and guidance documents. We want to make sure our supervisory communications focus on violations of law and material safety and soundness issues. Together, these approaches will greatly improve our supervisory communication and enhance our supervisory process.

Digital Assets

Finally, before turning to some longer-term issues, I would like to discuss digital assets, which the banking agencies have all said will be an area of significant focus in the coming year.¹⁹ The Federal Reserve, and our fellow regulators, should welcome responsible innovation, and we should create a regulatory environment that not only allows for such innovation, but encourages it.

Digital assets, such as stablecoins, are just such an area of welcome innovation. It is clear that there is a strong demand for these assets among bank customers, and well-regulated banks should be allowed to

engage in activities regarding these assets. We do have some legitimate concerns that must be addressed by any provider of these assets: the structure of the asset must be stable (no fractional reserve; no liquidity mismatch; limited currency volatility), the consumer must be protected (clear legal claims on asset pools), and criminal activity must be deterred (transparency to law enforcement). But once these concerns are addressed—and many of the companies active in this area are eager and able to address them—we should let the ingenious and inventive private sector move rapidly.

I am concerned, however, that regulators are contemplating steps that could hamper these innovations unnecessarily. For example, the President's Working Group on Financial Markets recently issued its report on stablecoins and, while the report sensibly discusses the risks associated with stablecoins, it contemplates approaches that I don't believe are warranted, such as limiting wallet providers' affiliation with commercial entities.²⁰ It is one thing to say that a stablecoin *issuer* itself must be a regulated bank—I think that is probably overkill, as there are perfectly effective ways for nonbanks to meet our legitimate regulatory concerns, but there is at least a clear relation between the existing framework of bank regulation and the specific measures that stablecoin issuers must address to operate safely. It is, however, quite another thing to contemplate that *wallet providers* may need to be completely separated from commercial firms. It is not at all clear what regulatory interest would be furthered by such a limitation, which is much more restrictive than we require for nondigital assets.

While digital asset-related activities may be novel, regulators need not treat these activities differently simply because of the nature of the technology. We must focus with care on the unique risks posed by these activities and avoid unnecessarily impeding their promise. For that reason, I am hopeful that regulators will show reasoned constraint in the regulation of digital assets.

Lessons Learned from the Emergency Lending Facilities

To this point, I have been addressing issues that the Fed will have to deal with in the near term. Let me now turn to a longer-term challenge: the implications of our emergency actions in the recent crisis. The COVID event caused an unprecedented—indeed, unimagined—shutdown of economic activity in the United States and much of the world. The Federal Reserve responded to the COVID event with the same vigor it showed when the Great Financial Crisis threatened a worldwide Depression, employing our ample emergency power under Section 13(3) of the Federal Reserve Act to stabilize the economy and financial system. In this case, we reactivated forms of the lending facilities employed during the Great Financial Crisis, and then went farther to create new lending facilities to support households, businesses, and state and local government entities that, it was feared, would be frozen out of credit markets. In all, the Federal Reserve created 13 lending facilities with the statutorily required approval of the Secretary of the Treasury. I supported these actions, and still do, as the right response when faced with the specific challenges we faced in the spring of 2020.

But I did at the time, and still do, have concerns about the possible precedents that have been created by the novel facilities that we created. It starts with a distinction between *liquidity facilities*²¹ designed to bolster market functioning by providing short-term loans to financial firms when such credit is suddenly not available, and what I would call *credit facilities*²², which support the extension of long-term credit to the real economy—households, businesses, and governments.

The two different types of facilities have materially different characteristics. The liquidity facilities are largely "wholesale"²³; the term of the funding they offer is generally quite short; operating them calls on expertise that Fed staff either have or that is quite similar to existing expertise; the risk of loss is minimal, given the nature of the facilities; and withdrawing from them is relatively straightforward, either selling the assets or letting them mature, which happens quickly given the short term and penalty rate of the funding.

The credit facilities, by contrast, are largely "retail"²⁴; the end-users of the credit support are households, businesses, and governments that attract significant political interest, meaning pressure for continued expansion of credit will be great; the credit facilities involve longer-term lending; operating the credit facilities requires expertise that the Fed does not have and that is not highly analogous to existing Fed expertise; the potential for troubled loans (and thus potential loss) is material, which will also require expertise and administrative attention that the Fed is ill suited to provide; the penalty rate needed for 13(3) lending can reduce the effectiveness of the facilities (and encounter significant political opposition), given

the purpose of the credit support and the nature of the beneficiaries; and withdrawing from the facilities will involve telling specific beneficiaries that their funding will not be extended (another politically fraught event).

Equally important, from outside the technocratic halls of the Fed there will emerge, from many directions, persistent political pressure to pursue, through the ostensibly monetary mechanism of central bank emergency lending, fiscal policy objectives that ought—as a matter of fundamental economics and fundamental governance—to be decided upon by elected representatives operating within the budgetary constraints of the appropriations process. As a prospective shortcut around those constraints, extended provision of credit to broad sections of the economy through the mechanism of 13(3) without either a required appropriation or effective limit could easily prove an impossible lure for future Congresses to resist, under the guise of one "emergency" or another: having established the precedent that the Fed can lend to businesses and municipalities for the COVID event, there will inevitably be those whose plans are grand and whose patience with democratic accountability low who will begin to ask why the Fed can't fund repairs of the country's aging infrastructure, or finance the building of a border wall, or purchase trillions of dollars of green energy bonds, or underwrite the colonization of Mars. An entity that can do that without any need for Congressional appropriations, would have the vastest political consequence and political control of it would be a great prize. It would encourage dangerous fiscal irresponsibility, and the attendant pressures would turn us from a technocratic, nonpolitical institution with a crucial but focused mandate and great autonomy in the pursuit of that mandate, into the most politically entangled organization in the country—and the damage to our core monetary policy and financial regulatory mission would be great.

Fortunately, there were no major problems with the COVID credit facilities. While political pressure related to the credit facilities waxed and waned, the economy recovered quickly enough that the facilities could be wound down within several months with relatively little opera. However, these good outcomes had more to do with good luck than good structure. While the economy and financial system were under intense stress for several months in spring of 2020, the reopening of the economy and rapid recovery that began in May of that year was a major reason that material losses, political pressures, and operational problems were avoided. To cite one example, the crisis in the municipal bond market, which seemed possible that spring, never materialized.²⁵

We cannot undo the precedent we have established (nor should we—if we face a similar challenge in the future, the Fed should respond forcefully), but in breaching the long unbreachable firewall of offering direct lending to non-financial businesses, both large and small—as well as a wide range of state and municipal governments—we face a fundamental problem: the extension of funds to these borrowers, and management of these loans, inherently involve the allocation of credit, which is both a fiscal and a political action that is being made primarily by an unelected body.

For all these reasons, I believe we should establish a clear understanding that, should the Fed ever again use its 13(3) authority to establish credit facilities similar to those of the COVID event, Congress will *without delay* create a structure to transfer the ongoing funding and governance of the credit facilities into a non-Fed vehicle that will fund, manage, and eventually wind down the extraordinary credit support.²⁶

Section 13(3) creates a standing power of the Fed to act rapidly and forcefully to address a crisis. 13(3) allows the nature of that response to be flexible depending on the nature of the crisis. Financial market dysfunction can be addressed through 13(3) liquidity facilities that fit comfortably within the Fed's operations and expertise, and in many cases might not require any use of Treasury equity or other Congressionally appropriated funds.

But if the shock is one—like the COVID event—that requires real economy credit support to address its root causes, the Fed can use 13(3) to provide the same rapid and forceful response (with appropriate Treasury equity for credit protection), but we should establish the expectation that this credit support will be moved into a separate, non-Fed structure as quickly as Congress can manage. In the same way that the 13(3) facilities developed in 2008 served as templates in 2020, greatly increasing the speed of our response, the template outlined here that we create for the future here should ideally become the default expectation of Congress, markets, and the public should the Fed ever again be called upon to provide credit facilities under section 13(3).

There are many precedents for such an approach. During the Great Depression, for example, Congress created the Reconstruction Finance Corporation (RFC) to provide emergency credit to the real economy, expressly steering clear of the problems that would naturally have been associated with using the Federal Reserve for such a purpose.²⁷ The RFC had a limited life, separately appropriated capitalization, and separate borrowing authority in order to fund direct lending to borrowers. More recently, during the 1990s financial and economic crisis in Sweden, Norway, and Finland, after initial stabilizing responses from their central banks, these countries established new governmental agencies outside their central banks to manage the broader, continuing support programs. Measures such as these have a number of advantages:

1. A separate entity can be expressly stated to be an emergency vehicle with a limited life. It can be legally required to extend credit for a short, specified period and then be wound down.
2. Providing credit support through a separate vehicle establishes a clear division between fiscal measures and monetary policy.
3. Lending through a separate organization allows more flexibility on the interest rate and other terms of government-sponsored credit support. While we were lucky in the COVID event, one could easily have imagined the economic crisis deepening to the point where achieving the purposes of widespread credit support would have called for lending at a market or even subsidized rate, rather than the penalty rate required for central bank lending. Doing so is a decision that should be made by Congress, rather than the Fed.
4. The separate incorporation and funding of a separate vehicle would give transparency and clear boundaries to the degree of government financial support being provided to the economy.
5. Placing the inherently political decisions around the allocation of credit in a separately governed entity will keep the Fed from being fundamentally transformed by efforts to politicize the credit-granting mechanism.
6. Finally, having a separate entity will facilitate hiring the necessary people with the necessary expertise, which will likely be quite different from the expertise usually found in either the Treasury or the Federal Reserve.
 - a. In particular, the types of personnel and expertise required to work out troubled loans made with government credit support are very different from the personnel and expertise widely available in either the Fed or the Treasury.

This would *not* be a U-turn from our decisive response to the COVID event, but rather simply the logical next step. In addition to providing clarity for the public as to what to expect in future crises, adopting this model going forward could reduce concerns a future Fed might have that a forceful response could entangle it in difficult political problems. This could help give a future Fed the freedom to determine what it believes is truly the right technocratic response to a particular future shock. Adoption of such a framework would also reduce the attraction of the Fed as a general purpose funder of credit-intensive political projects—we would have established that the piper will not only always have to be paid, but paid promptly. This framework also gives an appropriate role to 13(3), consistent with the clear authority granted to us, but also consistent with what we have learned about the entanglement of central banks with fiscal policy and politics in the years since 13(3)'s enactment. We would not be ignoring the credit support authority 13(3) gives us, rather we would be anchoring it in its appropriate emergency context.

The Future of the Financial Stability Board

As we continue to grapple with a future framework for emergency lending, the United States is not alone. Around the world, financial authorities are reflecting on the lessons from the COVID event while exchanging experiences and views at the FSB, which I have chaired for the past three years. My FSB term ended just yesterday, but there remains much to be done at the FSB.

One of the most important tasks is addressing vulnerabilities related to non-bank financial intermediation, or NBFIs.


This has been a critical focus of my chairmanship and is reflected in the FSB's ambitious multiyear workplan to enhance NBF1 resilience. One set of initiatives under the workplan focuses on specific risk factors that appear to have propagated stress, including liquidity strains during the COVID event. The FSB has made considerable progress in the NBF1 space in a short amount of time. As a first major deliverable under the NBF1 work program, the FSB recently published policy proposals to address structural vulnerabilities in money market mutual funds (MMFs).

Although we've made good progress, we cannot lose momentum. It is critical that jurisdictions make meaningful progress in MMF reforms, building on the FSB's policy proposals. FSB members have clearly noted the importance of this task by committing to reviewing the progress made by members in two- and five-years' time. The FSB and international standard-setting bodies must also advance policy work on specific risk areas, such as open-ended funds and margining practices, that appear to have contributed to stress during the COVID event. We also need to develop a shared understanding of how vulnerabilities in the NBF1 sector may cause spillover effects or impact broader market functioning in the future. To achieve this aim, the FSB will continue to examine the structure and drivers of liquidity in government and corporate bond markets during stress and develop a broad, systemic risk perspective on NBF1 as well as policies to address such risks.

As chair of the FSB, I have had the opportunity to work with brilliant and dedicated colleagues around the world. Under pressure from the severe tests of the COVID event, together we delivered—true to our mandate—through cooperation, analytical rigor, and broad engagement. I depart the Financial Stability Board knowing it is well-prepared to complete the tasks at hand and face the challenges of the future.

Conclusion

I am told that Dan Tarullo's final speech as a Fed Governor was 26 pages long, and this one is only 25—consistent with my relentless quest to improve the Fed's efficiency and simplicity. Yet even at this Mahabharatan length, I have only hit the highlights of what my successor will need to address. Fortunately, he (or she) will benefit from the same principal advantages I have had over the last four years: the intellectual horsepower, analytical rigor, and disciplined expertise of the Federal Reserve's staff. These are powerful advantages indeed, even with so complex and sustained an agenda. I wish her (or him) well.

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1. Chris Dodd and Barney Frank, [interview by David Brancaccio](#) , *Marketplace*, September 12, 2018. [Return to text](#)
 2. Daniel K. Tarullo, "[Departing Thoughts](#)" (speech at the Woodrow Wilson School, Princeton, NJ, April 4, 2017). [Return to text](#)
 3. The views expressed here are my own and not necessarily those of my colleagues on the Board of Governors or members of the Federal Reserve staff. [Return to text](#)
 4. Randal K. Quarles, "[Jet Flight, Mail Bags, and Banking Regulation](#)" (speech at the Prudential Regulation Conference, Salt Lake City, UT, June 3, 2021). [Return to text](#)
 5. While the passage of time blurs all memories, it is worth recalling that during the early days of the COVID event, we did not know how bad the inevitable recession would be, or how long it would last. As I have said before, the fact that the Treasury market—the lifeblood of our financial system—malfunctioned underscores the peril at the time. The banking system's ability to function as a source of strength during that period of tremendous uncertainty is certainly a testament to its resilience. [Return to text](#)
 6. Board of Governors of the Federal Reserve System, "[Federal Reserve Board releases results of annual bank stress tests](#)," news release, June 24, 2021. *See also* "[Federal Reserve Board releases second round of bank stress test results](#)," news release, December 18, 2020, and "[Federal Reserve Board releases results of stress tests for 2020 and additional sensitivity analyses conducted in light of the coronavirus event](#)," news release, June 25, 2020. [Return to text](#)
 7. Randal K. Quarles, "[Spontaneity and Order: Transparency, Accountability, and Fairness in Bank Supervision](#)" (speech at the American Bar Association Banking Law Committee Meeting 2020,

Washington, DC, January 17, 2020). [Return to text](#)

8. See Board of Governors of the Federal Reserve System, "[Federal Reserve Board finalizes set of changes that will increase the transparency of its stress testing program for nation's largest and most complex banks](#)," news release, February 5, 2019. [Return to text](#)

9. The first is a 4 percent ratio that applies to all banking organizations and is based on the ratio of tier 1 capital to average total consolidated assets. In addition, the largest banking organizations are subject to a 3 percent supplementary leverage ratio requirement, based on a ratio of tier 1 capital to on-balance-sheet assets and certain off-balance-sheet assets. This supplementary requirement is stricter for U.S. global systemically important banks (U.S. G-SIBs). U.S. G-SIBs must maintain a supplementary leverage ratio of 3 percent plus an additional buffer of 2 percent to avoid limitations on capital distributions. Their depository institution subsidiaries must maintain a 6 percent supplementary leverage ratio to be deemed "well capitalized" under the prompt corrective action framework of each federal banking agency. [Return to text](#)

10. As I mentioned previously, one of the primary strains in the financial markets during the onset of the COVID event was in the Treasury market, where a wide range of investors sought to sell Treasuries to raise cash. Those selling pressures appear to have overwhelmed dealers' capacity or willingness to absorb and intermediate Treasury securities. Randal K. Quarles, "[What Happened? What Have We Learned From It? Lessons from COVID-19 Stress on the Financial System](#)," (speech at the Institute of International Finance, Washington, DC, October 15, 2020). [Return to text](#)

11. See "[Agencies adopt enhanced supplementary leverage ratio final rule and issue supplementary leverage ratio notice of proposed rulemaking](#)," news release, April 8, 2014. [Return to text](#)

12. Federal Reserve Board, [Report to the FOMC on Economic Conditions and Monetary Policy \(PDF\)](#), Book B at 49, fn.5 (March 13, 2014). [Return to text](#)

13. See "[Regulators temporarily change the supplementary leverage ratio to increase banking organizations' ability to support credit to households and businesses in light of the coronavirus response](#)," news release, May 15, 2020. See also Board of Governors of the Federal Reserve System, "[Federal Reserve Board announces temporary change to its supplementary leverage ratio rule to ease strains in the Treasury market resulting from the coronavirus and increase banking organizations' ability to provide credit to households and businesses](#)," news release, April 1, 2020. [Return to text](#)

14. Basel Committee on Banking Supervision, [Leverage ratio requirements for global systemically important banks \(PDF\)](#)  (Basel: Basel Committee on Banking Supervision, January 2022). [Return to text](#)

15. Board of Governors of the Federal Reserve System, "[Rule proposed to tailor 'enhanced supplementary leverage ratio' requirements](#)," news release, April 11, 2018. [Return to text](#)

16. Randal K. Quarles, "[A New Chapter in Stress Testing](#)," (speech at the Brookings Institution, Washington, DC, November 9, 2018). See also Randal K. Quarles, "[Stress Testing: A Decade of Continuity and Change](#)," (speech at the Brookings Institution, Washington, DC, July 9, 2019). [Return to text](#)

17. Randal K. Quarles, "[Trust Everyone—But Brand Your Cattle: Finding the Right Balance in Cross-Border Resolution](#)" (speech at Harvard Law School, Cambridge, MA, May 16, 2018). [Return to text](#)

18. Since January 2020, the Federal Reserve has taken a number of measures to improve its supervisory framework. The Federal Reserve defined the financial institutions subject to the LISCC framework. See SR 20-30: Financial Institutions Subject to the LISCC Supervisory Program at <https://www.federalreserve.gov/supervisionreg/srletters/sr2030.htm>. The Federal Reserve also adopted a final rule, codifying an interagency statement, which affirmed the principle that supervisory guidance does not have the force and effect of law or regulation. See Board of Governors of the Federal Reserve System, "[Federal Reserve Board adopts final rule outlining and confirming the use of supervisory guidance for regulated institutions](#)," news release, March 31, 2021. In addition, we have released, in searchable form, scores of historical private legal interpretations of our significant rules. See

<https://www.federalreserve.gov/supervisionreg/legalinterpretations/legalinterpretations.htm>. The Federal Reserve also finalized a rule that clarified revisions to the definition of confidential supervisory information (CSI), which allows banks to share CSI with a broader range of parties and thereby better resolve supervisory concerns. See "[Federal Reserve Board finalizes a rule that implements technical clarifying updates to Freedom of Information Act \(FOIA\) procedures and changes to rules for the disclosure of CSI](#)," news release, July 24, 2020. Finally, we adjusted the scope of our capital planning guidance, SR Letters 15-18 and 15-19, to align with our tailoring framework. [Return to text](#)

19. See "[Interagency Joint Statement on Crypto-Asset Policy Sprint Initiative and Next Steps \(PDF\)](#)," news release, November 23, 2021. [Return to text](#)

20. President's Working Group on Financial Markets, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency, [Report on Stablecoins \(PDF\)](#) (Washington: U.S. Treasury, November 2021). [Return to text](#)

21. I view the liquidity facilities as the Commercial Paper Funding Facility (CPFF), the Primary Dealer Credit Facility (PDCF), the Money Market Mutual Fund Liquidity Facility (MMLF), the Term Asset-Backed Securities Loan Facility (TALF), and the Paycheck Protection Program Liquidity Facility (PPPLF). But there is room for adjustment of this typology: certain features of both the TALF and PPPLF programs might indicate that they should fall in the credit facility category. [Return to text](#)


22. I view the credit facilities as the Primary Market Corporate Credit Facility (PMCCF), the Secondary Market Corporate Credit Facility (SMCCF), the Main Street Lending Program (Main Street), and the Municipal Liquidity Facility (MLF). Again, some might argue that TALF and PPPLF also belong here. [Return to text](#)

23. By "wholesale," I mean that the liquidity facilities are aimed at improving the operation of wholesale financial markets, rather than providing longer term funds for households and businesses in the real economy. They are thus generally quite removed from politically appealing groups of beneficiaries. [Return to text](#)

24. By "retail," I mean that the credit facilities provide longer-term credit either directly to nonfinancial actors, or to financial firms for the sole purpose of on-lending to defined classes of nonfinancial actors, all in support of the real economy rather than the operation of financial markets. [Return to text](#)

25. While it was feared that plunging tax revenue would cause widespread fiscal problems for state and local governments that could freeze municipal bond markets, tax revenue did not fall significantly because employment losses were concentrated in low wage jobs, incomes were supported by generous unemployment compensation payments, the decline in consumption was concentrated in services which have lower sales tax burdens, and property taxes continued to rise in the booming housing market. While the creation of the MLF helped settle markets and obviate the need for the emergency facility, and aid to states and localities from Congress was significant, it is hard to know how much intervention would have been needed, and how this episode would have played out, if states and localities had faced big financial problems. [Return to text](#)

26. I should stress that these measures would be necessary only for *credit* facilities. The Fed's liquidity facilities can be created and managed by the Fed without the need for such measures. [Return to text](#)

27. Parinitha Sastry, "[The Political Origins of Section 13\(3\) of the Federal Reserve Act \(PDF\)](#) , "FRBNY Economic Policy Review (New York: Federal Reserve Board of New York, September 2018). [Return to text](#)