

COVID-19: a stress test of bank regulatory reforms

A proposal for the 2021 review of bank capital and liquidity buffers

Summary

- The bank regulatory framework was completely overhauled at both the international and local level following the 2008–09 global financial crisis. Key changes included the introduction of new principles for liquidity management, increased capital requirements and the widespread introduction of stress-testing.
- The reforms strengthened the global banking system, but they also had a number of unintended consequences. Among other things, they allowed a degree of Balkanization of bank capital and liquidity rules, creating a patchwork of local-level regulation that has led to uncertainty and inefficiencies.
- Despite drawbacks, the new system has generally performed well to date during the COVID-19 pandemic, with banks being part of the solution (in terms of mitigating the financial impact of the crisis) rather than the problem. However, to a substantial extent this has been due to unprecedented fiscal and monetary measures undertaken by the authorities.
- The Financial Stability Board’s 2021 review of the regulatory system’s performance during the pandemic will be critical to future international coherence. To be successful, it must fully explore key questions concerning the system of capital and liquidity buffers, including whether an optimal balance was struck between the use of regulatory protections and the deployment of exceptional economic and financial measures. The review must also address problems that were emerging before the pandemic.

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Introduction

In the wake of the financial crisis of 2008–09, the banking regulatory framework was overhauled both at the global and local¹ level. At the global level, the Basel Committee on Banking Supervision (BCBS)² developed new principles for liquidity management and increased capital requirements.³ At the local level, regulators in a number of jurisdictions significantly changed their calculations of the necessary levels of liquidity and capital: in the US, for example, the Federal Reserve put in place the Comprehensive Capital Analysis and Review (CCAR) mechanism, an annual stress-testing and capital planning exercise; in the EU, the European Central Bank (ECB) put in place the Supervisory Review and Evaluation Process (SREP), a bi-annual process to assess banks' risk profiles and make supervisory decisions on capital and liquidity, supported by insights from the European Banking Authority's bi-annual stress test; and in the UK, the Prudential Regulation Authority (PRA) set out a new approach based around stress-testing to inform capital requirements.⁴ These and other measures have resulted in banks building up substantial capital and liquidity buffers in the past few years.

The initial financial market shock from COVID-19, from mid-March to mid-April 2020, provided the first major test of these changes. On the whole, the banks came through this period of volatility relatively well, albeit supported by central bank intervention and fiscal programmes of unprecedented scale.⁵ Additional market turbulence occurred in October 2020 and January 2021 during the subsequent second and third waves of infections, but this volatility was less pronounced than during the first wave. The arrival of apparently effective vaccines in late November and December 2020, following successful trials, has reduced uncertainty about the duration of the pandemic, at least in parts of the developed world. That said, the macroeconomic effects of the pandemic, and its impact on bank balance sheets, will continue to feed through into financial markets and banking systems, which could lead to further turbulence.

Although the overall effect on banks and economies is unknown, it is not too early to investigate and draw some lessons from the experience of the past year. The recently announced review by the Financial Stability Board (FSB) for the G20 of the lessons to be learned from the crisis is therefore to be strongly welcomed.⁶

¹ This paper uses the term 'local' when referring to any single geographic area covered by a single regulatory framework. This usually means a nation, but in the case of the EU it refers to the EU-wide Single Supervisory Mechanism (SSM).

² The Basel Committee on Banking Supervision (BCBS) is the convening body of the Bank for International Settlements (BIS), and proposes bank supervisory practices and regulatory rules.

³ Basel Committee on Banking Supervision (2008), *Principles for Sound Liquidity Risk Management and Supervision*, <https://www.bis.org/publ/bcbs144.pdf>; and Basel Committee on Banking Supervision (2011), *Basel III: A global regulatory framework for more resilient banks and banking systems*, <https://www.bis.org/publ/bcbs189.pdf>.

⁴ Bank of England Prudential Regulation Authority (2020), *Statement of Policy: The PRA's methodologies for setting Pillar 2 capital*, <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/statement-of-policy/2020/the-pras-methodologies-for-setting-pillar-2a-capital-update-dec-2020.pdf?la=en&hash=140C86597A4C4ACF6631A46842F7EBC82A740672>.

⁵ European Banking Authority (2020), *The EU Banking Sector: First Insights into the COVID-19 Impacts*, Thematic Note EBA/REP/2020/17, https://www.eba.europa.eu/sites/default/documents/files/document_library/Risk%20Analysis%20and%20Data/Risk%20Assessment%20Reports/2020/Thematic%20notes/883986/Thematic%20note%20-%20Preliminary%20analysis%20of%20impact%20of%20COVID-19%20on%20EU%20banks%20%E2%80%93%20May%202020.pdf.

⁶ Speech by Dietrich Domanski, secretary-general of the FSB, at launch of International Regulatory Strategy Group (IRSG) report, *Global Solutions to Global Problems: Promoting Regulatory Coherence in Financial Services for Pandemic Recovery*, 18 March 2021, <https://www.fsb.org/wp-content/uploads/S180321.pdf>.

Market reactions during the first wave of infections were long and deep enough to pose credible tests of the robustness of established risk management frameworks. Threats to credit, still the biggest source of risk exposure in banks, have been staved off thanks to massive public sector support for economies. Meanwhile, the effects on individual banks of the short- and medium-term volatility in financial markets can be seen in their public filings: banks with significant capital market activities have done quite well, as volatility can be good for (some) business, e.g. trading.

But positive developments on the vaccine front – really the only true exit strategy – continue to be tempered by bad news on the virus front, as more contagious and possibly more virulent mutations are emerging in many parts of the world. An unexpected prolongation of the economic crisis could occur if current vaccines fail against emerging variants, if the unwinding of government support for lending is premature or poorly coordinated, or if a completely new and unforeseen event causes a shock to economies.

This briefing paper addresses four broad questions in the context of the above issues:

- It reviews the performance of the BCBS regulatory framework in the period up to the pandemic.
- The analysis also considers which aspects of the framework worked well during the initial phase of the COVID-19-related economic shock and identifies where unintended consequences occurred.
- It sets out a number of the issues that need to be examined in the FSB’s review of the regulatory framework’s performance in the crisis.
- It explains the benefits that a thorough review could deliver at this stage.

The performance of bank regulation from the global financial crisis to early 2020

The shape of today’s banking regulatory framework largely reflects the responses to the 2008–09 global financial crisis, in which bank fragility played a major role. With hindsight, banks at that time were inadequately capitalized, held insufficient liquidity reserves, and had deficient risk management and control programmes in place. Moreover, banks did not help themselves by exhibiting rather ill-judged behaviour. This included: lending to borrowers who could not reasonably repay their loans (e.g. through mortgages at over 100 per cent loan-to-value ratios to borrowers on low incomes); creating and selling structured securities whose risks were not really understood; and taking for granted easy access to wholesale funding markets. During the crisis, multiple banks became insolvent, and Western Europe and the US were pushed into the worst recession since the Second World War, despite massive public sector intervention.

The updated international regulatory framework that was subsequently put in place both widened the scope of the risks against which banks had to hold financial resources and required banks to introduce systems more sensitive to such risks.

The result was that bank capital and liquidity reserves substantially increased in the years after the global crisis. For example, the core equity of the largest European banks⁷ went from an average of 9.1 per cent of risk-weighted assets (RWA) at the end of 2008 to 16.5 per cent at the end of the third quarter of 2020, while the core equity of ‘global systemically important banks’ (G-SIBs) in North America rose from 12.5 per cent of RWA to 14.3 per cent over the same period.

The series of reforms responsible for this was nicknamed ‘Basel 3’ (with subsequent reforms commonly referred to as Basel 3.5 and Basel 4).⁸ Basel 3 was the result of international collaboration, and the speed of its drafting was made possible by the pre-existing multilateral structure of the BCBS. This is important, since it demonstrates what can be accomplished via a well-functioning multilateral organization.

Changes to local regulatory frameworks since 2008 have often been uncoordinated, with differences emerging between jurisdictions both in the detail of the reforms enacted and the timing of their implementation.

In contrast, the changes to local regulatory frameworks since 2008 have often been uncoordinated, with differences emerging between jurisdictions both in the detail of the reforms enacted and the timing of their implementation.⁹ Some regulators have added their own bank capital and liquidity requirements, such as the so-called ‘Swiss finish’,¹⁰ the CCAR stress-testing programme in the US, and bi-annual stress tests in the EU. Some of this tailoring within regulatory jurisdictions has been necessary to reflect variations in the development and sophistication of national financial systems, though it is also motivated by differences in risk appetite on the part of the relevant authorities.

Unfortunately, this has led to what can be described as a ‘Balkanization’ of bank capital and liquidity rules, creating a patchwork of local-level regulation and implementation at odds with the more uniform overall design. From a local

⁷ Core equity is defined as a subset of Tier 1 capital and is made up mostly of common equity. The measure was formalized under Basel 3 as ‘Common Equity Tier 1’. The calculation was based on all European G-SIBs except Groupe BPCE, which was formed in 2009 through a merger of the banking networks of Banque Populaire and Caisse d’Épargne.

⁸ Since consensus on recommendations for international regulatory reforms was driven by the BCBS, the reforms often simply get nicknamed as ‘Basel’, followed by a number indicating their iteration. For example, ‘Basel 3’ refers to post-global financial crisis reforms.

⁹ For example, the UK’s Prudential Regulation Authority (PRA) and the European Central Bank (ECB) both use a regulatory mandatory ‘pillar’ (i.e. Pillar 1) and a top-up ‘pillar’ for capital and liquidity (Pillar 2A and 2B for the PRA; Pillar 2R and 2G for the ECB). The UK uses Pillar 2B to punish weak governance and risk management. The ECB asks the banks to determine Pillar 2G through stress-testing; unlike Pillar 2R, Pillar 2G is not legally binding. The US, in contrast, uses the annual CCAR exercise to determine the total capital a bank needs in the form of a bank-specific stress capital buffer.

¹⁰ In which the Swiss Financial Market Supervisory Authority (FINMA) raised capital requirements both for non-systemic and systemically important banks. For a good discussion, see McNamara, C. M., Tente, N. and Metrick, A. (2019), ‘Basel III D: Swiss Finish to Basel III’, *Journal of Financial Crises* 1:4, 81–90. <https://elischolar.library.yale.edu/journal-of-financial-crises/vol1/iss4/6>.

regulator's perspective, a tailored approach seems understandable. Given that one of the features of the 2008–09 financial crisis was that global banks failed in local jurisdictions (Lehman Brothers, for instance, failed first through its UK subsidiary), with domestic taxpayers footing the bill, each local regulator was motivated to ensure that banks (including local subsidiaries of global banks) would have enough capital and liquidity in that jurisdiction.

But this fragmentation of rule-making, combined with the lack of an international bank solvency regime (which means that no set of rules governs the order of precedence of creditors if an international bank goes bankrupt), has made cross-border banking more expensive. It has resulted in capital and liquidity being trapped in foreign bank subsidiaries and has led to higher capital charges against some foreign government assets than the charges local banks would face against holding the same assets.¹¹

The performance of bank regulation during the pandemic

The COVID-19 economic shock provided an opportunity to assess the effectiveness of the overhauled bank regulatory framework. In mid- to late March 2020, as the scope and scale of the potential disruption became apparent, a series of events led to the near-complete freezing of some of the core global financial markets. As asset prices suddenly dropped, financial institutions (including banks) pulled back significantly from the market, since the newer regulations had effectively raised the cost of market-making and repo activities.¹² In response, banks maintained their liquidity levels both by deploying their 'liquidity buffers' – the holding of which was a key requirement of the updated regulations – and by going to central bank discount windows to exchange assets for cash. Central banks such as the US Federal Reserve and the ECB became buyers of last resort to avert a market meltdown.¹³

If the objective was to avoid a repeat of the bank failures of 2008, then the BCBS regulatory framework can be considered to have worked well – at least, so far. Of course, no two crises are the same. From a high-level perspective, the global financial crisis is considered to have been a product of banks' poor behaviour, in terms of both their risky activities and the excessive liabilities they held against their assets at the time. Moreover, the crisis mainly affected the US and Europe. This time the situation is very different. The economic shock originated in a global health crisis, rather than in poor practice on the part of banks. Furthermore, where banking systems entered the crisis in good shape, banks have managed to provide financial support to the real economy quickly, thereby also helping to transmit government policy. In other words, banks have been part of the solution, not the problem.

¹¹ The requirements to observe local rules and meet local requirements in terms of financial resources (capital and liquidity) are the price for reducing both the likelihood of a crisis and, should it occur, its impact. The authors do not take a position on whether the capital requirement calibrations – i.e. in each jurisdiction – are correct or not, but merely point out that the insurance is not free.

¹² Indeed, one of the aims of the post-2008 reforms was to reduce balance sheet risk-taking by banks.

¹³ IMF (2021), 'Policy Responses to COVID-19', <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19#C>.

Since the start of the pandemic, there have been almost no bank failures. Even taking recent loan loss provisions into account, banks' capital and liquidity levels remain well above the required minimums. Countercyclical capital buffers, designed to be built up in good times and drawn down in bad, have been loosened quickly in some countries (e.g. Sweden and the UK), exactly as intended. However, not all countries required local banks to hold positive countercyclical capital buffers going into this crisis. The US, for one, was a market where banks had not built up such buffers. This made it harder to free up capital to allow banks either to take losses without triggering regulatory thresholds or to increase lending to support the economy. Nonetheless, given the scale and scope of fiscal and monetary policy support in most countries, large credit losses have not (yet) materialized, and there is little evidence of unmet credit demand from firms or households, suggesting that banks are themselves not capital-constrained.

Of course, a financial health warning is necessary here: there could yet be substantial hits to banks' balance sheets as government subsidies are withdrawn from various sectors and from labour markets, and as credit defaults impact the economy. In this scenario, bank profitability would likely be affected for years to come, exacerbated by now-ubiquitous low-interest-rate policies.

Unintended consequences of post-2008 reforms

In addition, not everything in the current regulatory framework has worked as desired. Indeed, there have been some perhaps unintended consequences, particularly in terms of banks' market-making ability during periods of turbulence. This situation developed in the run-up to the COVID-19 crisis, but its full consequences only became apparent during the crisis itself. Specifically:

- For larger borrowers, there has been a shift in the type of financing preferred, from loans to bonds. On an average annual basis from 2008 to 2020, global corporate bond issuance grew at a rate of 8.3 per cent, whereas traded corporate loan issuance grew at a rate of just 1.9 per cent.¹⁴ Bond issues have shrunk in average size, with the result that smaller borrowers are now also more able to fund themselves via financial markets instead of solely with bank loans. But market-based financing is risky, particularly for borrowers in smaller, less liquid markets such as the European high-yield market. Such markets are prone to drying up when there is a shock, as they did in the spring of 2020. Fortunately, in that instance banks were able to act as liquidity providers of first resort to borrowers.¹⁵
- Banks are less likely to provide market-making liquidity in the key financial markets such as those for bonds. Liquidity is now often provided by non-bank financial institutions (NBFIs), including asset managers, insurers, hedge funds and specialist liquidity providers. However, NBFIs have struggled to be reliable providers of liquidity in turbulent markets.

¹⁴ Source: Dealogic.

¹⁵ For evidence, see Li, L., Strahan, P. E. and Zhang, S. (2020), 'Banks as Lenders of First Resort: Evidence from the COVID-19 Crisis', *Review of Corporate Finance Studies* 9, 472–500, <https://dx.doi.org/10.1093%2Frcfs%2Fcfaa009>.

- At the worst point in the financial reaction to the pandemic, the US Federal Reserve and other central banks had to provide a backstop to their local markets across a range of assets. These included, in the US case, the markets for Treasuries and agency debt, but also those for corporate bonds (and commercial paper), municipal bonds and so on. Between March and June 2020, the Fed’s balance sheet increased by nearly 70 per cent in size.

Do these unintended consequences matter? And, if so, what should be done?

Capital and liquidity buffers and their use in the pandemic

The increases in capital and liquidity buffers, to protect banks from downside ‘tail risks’ (i.e. extremely low-probability events), were determined by applying hypothetical stresses to banks’ financial projections and calculating how large the buffers would need to be for each bank to survive the stresses. Banks had to consider scenarios based on stresses to the general financial markets and economic conditions. In these scenarios, banks had to be able to survive certain minimum stresses prescribed by regulatory requirements. They also had to determine if the results demonstrated adequate protection for their needs, or if they wanted the capacity to survive a worse stress (i.e. one that was deeper, longer or both).¹⁶

The total set of buffers in the banking system had been built up through a series of discrete reforms, each of which had added to the buffers and protected against particular risks.¹⁷ These risks included: intra-day liquidity stresses; short-term (i.e. 30-day) and medium-term (i.e. one-year) liquidity stresses; financial market counterparty stresses; and the general recovery and resolution of each bank. Local banking regulators also added their own stress tests – including, as mentioned, the CCAR mechanism in the US – against which the banks had to hold yet more buffers. Today, as a result of some of these changes, G-SIBs must hold additional layers of protection or so-called ‘G-SIB buffers’; the bigger and more complex the bank, the bigger the buffer must be.¹⁸

The reforms have made banks more resilient, not only through the addition to mandatory financial reserves but also through improved risk management and public disclosures. Banks’ understanding and capturing of the risks in their balance sheets have markedly improved since the 2008–09 financial crisis. Modelling of the impact of stresses is clearly better (interestingly, this has led to banks being more selective about the risks they run, with some institutions either reducing risky activities or hedging those risks). Banks have to publicly report key metrics, such as their liquidity coverage ratio (LCR). Regulators report other measures of bank health, including the size of G-SIB buffers and stress test results.

¹⁶ Schuermann, T. (2020), ‘Capital Adequacy Pre- and Postcrisis and the Role of Stress Testing’, *Journal of Money, Credit and Banking*, 52:S1, 87–105. <https://doi.org/10.1111/jmcb.12735>.

¹⁷ Elliott, D. J., Balta, E., Abhinand, V., Korostelina, O. and Siddique, M. (2016), *Interaction, Coherence, and Overall Calibration of Post Crisis Basel Reforms*, New York: Oliver Wyman, Inc., <http://www.oliverwyman.com/insights/publications/2016/aug/post-crisis-basel-reforms.html>.

¹⁸ As of November 2020, there are 30 designated G-SIBs required to hold an additional 1 per cent to 2 per cent of capital relative to RWA. See Financial Stability Board (2020), ‘2020 list of global systemically important banks (G-SIBs)’, 11 November 2020, <https://www.fsb.org/2020/11/2020-list-of-global-systemically-important-banks-g-sibs>. Note that countries have the option of increasing the G-SIB requirements yet further.

The core rationale for this system was that, in times of stress, the buffers would be drawn down, giving banks time to take mitigating actions to avoid running out of liquidity or becoming insolvent, and without having to rely on central bank or government support. Intermittent economic shutdowns and other mechanisms to restrict the spread of COVID-19 will continue to test the effectiveness of capital buffers, as the creditworthiness of borrowers is likely to deteriorate. However, a full reckoning of the effects on banks, as noted, will be delayed by the fact that governments have continued to provide fiscal support to households and firms.¹⁹

Were banks adequately prepared for a financial market shock of such magnitude? As part of the updated regulations, banks are encouraged to ‘war-game’ liquidity and capital stresses, putting their plans to the test at least once a year. They are also required to provide resolution plans to their lead regulator to ensure an ‘orderly’ wind-up in the event of their failure. In this context, the financial market shock of March–April 2020 was not completely outside the scenarios envisioned in policy ‘playbooks’ – that said, the rapid and intense reaction of the real economy still took many banks, regulators and governments by surprise.

Since central banks around the world stepped in to provide a backstop to financial markets by providing as much market liquidity as needed, we will never know how well prepared banks really were. In some cases, banks did not use their buffers before turning to central bank lending facilities. Many explanations for this have been provided, including: (a) the fact that the duration of the financial market shock was (and remains) unknown, so banks wanted to hold buffers in reserve for the next phase of the unfolding crisis; (b) the fact that regulators instructed banks not to dip into certain parts of their buffers;²⁰ and (c) banks’ own worries that, were they to draw down their capital buffers, it might become public knowledge that such buffers had run low, with corresponding implications for confidence in their soundness.²¹

Did the system get the balance right between individual banks having sufficient buffers and central banks offering to turn almost any assets into cash?²² In effect, central banks provided a public service (averting the collapse or shutdown of financial markets) at a public cost (taxpayers’ money), which also resulted in private benefits (financial market players not experiencing extraordinary losses) at the risk of increasing moral hazard. The central banks provided coverage of the tail risk beyond what the individual banks were ready for. Getting this balance right – motivation for self-insurance to mitigate moral hazard, versus provision

¹⁹ Interestingly, the timing of the withdrawal of fiscal support remains an unknown and could set off further market volatility.

²⁰ For the neatness of our argument, we will ignore the potential moral hazard which could be considered to have arisen from April 2020 onwards, when banks became transmission mechanisms for the rapid delivery of fiscal policy – such as through cheap loans. During this period, central banks continued to extend liquidity provision, even though financial markets had mainly resumed normal functioning. We will also ignore the second potential moral hazard which might be considered to have arisen, namely that central banks which are also regulators of their local banks may have signed off implicitly or explicitly on the size of buffers by giving ‘pass’ marks in stress tests, e.g. the US Fed’s CCAR, the ECB’s 2019 liquidity stress test.

²¹ Interestingly, public disclosures by banks as part of their results for the first and second quarters of 2020 showed that they were in compliance with the regulatory measure of LCR, albeit sometimes on average over the period not at a point in time (i.e. end of period).

²² The central banks acted not unlike ‘payday lenders’: lending in the short term against longer-term prospects.

of insurance against extreme tail risks to prevent a systemic spiral – is a central problem for those tasked with maintaining financial stability. Was the boundary between public and private protection set appropriately?

Key questions for the FSB review

The FSB recently announced that it will carry out a review, in conjunction with the standard-setting bodies, of the regulatory system's performance during the pandemic. The review will examine, among other things, the use of capital and liquidity buffers by financial institutions, and how well crisis management and operational resilience arrangements have functioned. An interim report will be provided to the G20 in July 2021 and a final report in October.

The FSB review is very welcome, as achieving as much consensus as possible will help improve preparedness ahead of the next crisis (or indeed another wave of COVID-19).

This review is very welcome, as achieving as much consensus as possible will help improve preparedness ahead of the next crisis (or indeed another wave of COVID-19). In addition, consensus at the G20 level on the lessons to be learnt will be crucial in maintaining the maximum possible degree of regulatory coherence. However, four questions in particular will need to be addressed if the review is to be effective:

1. **Burden-sharing.** *Where should private sector self-insurance end and public sector insurance begin?*

Regulators and supervisors face a crucial dilemma in deciding how far banks should be asked to rely on their own buffers. In early 2020, central banks offered lending facilities which in effect provided as much market liquidity as needed. The judgment at the time was that bank buffers might not be able to cope with the tail risks stemming from the pandemic. But in reviewing the regime governing banks' buffers, it is important that the FSB provide greater clarity about the degree to which banks should aim to self-insure against future events, and when public authorities should be expected to provide additional backstops (and on what terms).

2. **Size.** *How big should the buffers be? What level of stress should be covered, and for how long should the protection last?*

The size of buffers should be determined by the results of stress tests demonstrating the ability of each bank to survive events of a certain magnitude for a minimum amount of time. The current buffers were calibrated based on the experience of the 2008–09 global financial crisis (plus other, earlier banking crises). The ongoing COVID-19 crisis provides additional experience for calibration. However, in developing new stress tests to reflect this, account will

need to be taken of the decision on the appropriate split between mobilizing banks' own buffers and providing additional support from the public sector, should similar crises occur in the future.

At present stress-testing practices vary widely across jurisdictions, with differences in criteria including the severity of the crisis, its length (nine quarters in the US, five years in the UK), and the translation of stress scenarios into losses. While some variation in scenarios is desirable, since different banking systems face different risks, more coordination across jurisdictions is required – especially if new systemic risks, such as pandemics, are to be accounted for. Indeed, the US Federal Reserve has already incorporated pandemic risk into its CCAR programme.²³

3. Disclosure. *What should be publicly disclosed about the buffers? When? How?*

Richer information about the size of banks' buffers should be disclosed in all jurisdictions at regular intervals to the public and regulatory authorities, since this increases trust in the banking system. Disclosure to the public could be made at the same time as the publication of quarterly financial results. All banks already disclose how much capital they hold in excess of prescribed regulatory minimums, and most disclose the extent to which their compliance with the liquidity coverage ratio exceeds the regulatory proscribed minimum.

Additional questions the FSB review should address include the potential role of the authorities in disclosing information about individual banks on a standardized basis, or in requiring banks to disclose detailed information in a standardized filing. In effect, this would indicate the desired level of comparability of data for public scrutiny. The buffers do contain a component that is discretionary to the regulator, reflecting results from stress tests and risk management capabilities. Regulators should consider making public that discretionary component, accompanied by an explanatory narrative, which would be not unlike the US Federal Reserve's practice of providing explanations when a bank has failed (or conditionally passed) the CCAR exercise.²⁴

4. Use. *When should the buffers be used? Who determines when they are used? Who agrees to do so? How quickly do buffers need to be rebuilt after being drawn upon?*

Current regulations provide the least amount of guidance on the use of buffers and the speed of their replenishment. During the period of market volatility in March–April 2020, some regulators encouraged the use of the buffers whereas others cautioned against it. Usage of any amount of buffer in excess of the regulatory minimum should be determined by the affected bank itself.

²³ See the results of CCAR-2020 and the resubmission scenario and its results: Board of Governors of the Federal Reserve System (2020), 'Federal Reserve Board releases results of stress tests for 2020 and additional sensitivity analyses conducted in light of the coronavirus event', press release, 25 June 2020, <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200625c.htm>; Board of Governors of the Federal Reserve System (2020), 'Federal Reserve Board releases hypothetical scenarios for second round of bank stress tests', 17 September 2020, <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200917a.htm>; and Board of Governors of the Federal Reserve System (2020), *December 2020 Stress Test Results*, <https://www.federalreserve.gov/publications/files/2020-dec-stress-test-results-20201218.pdf>.

²⁴ More disclosure is not always better. See the following analysis, which points out the benefits but also the costs of stress test disclosures. Goldstein, I. and Sapra, H. (2014), 'Should Banks' Stress Test Results Be Disclosed? An Analysis of the Costs and Benefits', *Foundations and Trends in Finance*, 8, pp. 1–54, <http://dx.doi.org/10.1561/05000000038>.

Regulators seem frustrated that banks are reluctant to ‘use’ the buffers when they are needed, namely to facilitate the extension of credit in a downturn. But banks’ use of a buffer for additional lending sends a very different signal to that conveyed by removal of the buffer requirement by the authorities. This suggests that countries should make more liberal use of countercyclical capital buffers that can be readily removed by authorities. By contrast, if a given bank dips into one of its buffers when other banks are not doing so, this risks sending an adverse signal about that bank – hence the reluctance of participants to draw down those buffers.

The FSB’s review for the G20 will need to draw on inputs from local banking regulators, government finance ministries and the banking sector. It may make sense in the first instance to focus on the advanced economies. These typically saw the largest fiscal and monetary interventions in response to the initial COVID-19 economic shock, which means that the interaction between policy interventions and capital and liquidity buffers is particularly complex. The analysis will need to draw on data from the first half of 2020, to understand the situations of individual banks before the crisis, what actions were taken at the height of the first wave of COVID-19, and what banks’ situations were at the end of the first half of 2020. This would produce a solid fact base and enable ‘what if’ analyses to be run. Completing the report in the autumn of 2021 could enable any regulatory changes to be implemented when local capital and liquidity buffers for 2022 are set. Given the risk that the COVID-19-related economic shock will continue through subsequent phases, it is important that local regulators do not delay implementation or dilute the proposals.

Conclusion

A thorough review of the calibration of bank capital and liquidity buffers, fully taking into account the experience up to the pandemic and the exceptional circumstances of the pandemic itself, would improve confidence in the banking system. So far during the pandemic, there has not been an issue with systemic confidence. Such a review would help to keep things that way.

Continued confidence in the international banking system, supported by the above-mentioned measures in local regimes, would also benefit the industry by lowering society’s overall costs. The holding of buffers carries substantial private costs for banks, while central bank interventions carry a cost for taxpayers. By undertaking a comprehensive review and updating the system of bank capital and liquidity buffers, G20 governments will ensure an international level playing field, support the maintenance of adequate buffers, and keep industry costs under control.

This crisis is far from over, and its effects on banking systems have yet to fully play out. One unknown, for example, is how the eventual unwinding of government support for bank loans will affect banks. Indeed, we don’t know if the uncertainty due to the current pandemic will end in 2021, or whether it will take several years for relatively normal operating conditions to be restored.

There are already potentially important lessons to be learned from the early months of 2020. For example, many banks *did* have a pandemic scenario on their risk watchlists. However, many banks rated such an event as low-probability, and their financial models did not anticipate such a large hit to GDP as the world is now experiencing (this is in spite of research showing that a pandemic of similar magnitude to the 1918 Spanish flu would reduce US and/or global GDP by 5–15 per cent).²⁵ This points to a need to re-evaluate both the probability of already-identified risks and the magnitude of their likely impact.

What we do know about the course of the crisis so far is that any piece of news about the virus – e.g. concerning vaccines or new strains – affects beliefs about the length, depth and impact of the economic shock. Thus, financial markets could see additional volatility if bad news emerges, such as vaccines proving ineffective against new strains. At the moment, a rough consensus is emerging that vaccination programmes will render the virus somewhat controllable by the end of 2021. However, the rapid rise and proliferation of new strains of the virus, against which current vaccines may be less effective, could put the return to normalcy further into the future. Uncertainty on the pandemic health front translates into many unknowns for the macroeconomy: for example, how quickly GDP will return to pre-crisis levels, or how long effects on employment will persist.

When banks review their internal stress tests and buffers annually, and regulators individually consider how to include recent events in their risk models, it will be increasingly difficult to claim that supposedly low-probability/high-impact events are in fact as unlikely as previously thought, or to question why resources should be held against such risks.

But to support confidence in the international banking system, regulators will need to achieve the maximum possible degree of consistency in interpreting the implications of recent events for stress-testing and for required levels of capital and liquidity buffers. Regulators will also need to communicate their resulting expectations clearly to the wider financial community.

²⁵ See, for instance, Fan, V. Y., Jamison, D. T. and Summers, L. H. (2018), ‘Pandemic risk: how large are the expected losses?’, *Bulletin of the World Health Organization* 2018; 96:129–34, <https://www.who.int/bulletin/volumes/96/2/17-199588/en>.

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About this series

This briefing paper is part of a series being published by Chatham House's Global Economy and Finance Programme under the project 'Rebuilding International Economic Cooperation'. The recent election of Joe Biden as US president raises the prospect of a renewed push to find multilateral solutions to global economic problems, coordinated by the G7 and G20 in 2021 and beyond. But the mechanisms of the past won't simply snap back into place. The extent of common ground needs to be established; trust needs to be rebuilt; and technical solutions to problems found.

This project seeks to support that process by putting forward practical, collaborative, politically viable solutions to some of the economic challenges the world currently faces. The papers are authored by independent economic policy experts from the private sector, academia and think-tanks, often with a public policy background. Each paper addresses a specific problem, made more acute by the COVID-19 pandemic, where international economic cooperation can make a significant difference.

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