

Macroprudential Responses to the COVID-19 Pandemic and Outlook

Tobias Adrian, Financial Counsellor and Director,

Monetary and Capital Markets Department, IMF

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The macrofinancial response to the pandemic was very strong. Financial and regulatory authorities around the world responded by relaxing macroprudential requirements and by taking regulatory measures on banks’ capital, liquidity, and provisioning requirements.

The response involved relaxation of a broad range of tools, aimed at providing banks with room to continue lending to firms and households. This took place through a release of available buffers (e.g., the countercyclical capital buffer); the authorities encouraging banks to use available buffers (e.g., liquidity coverage ratio and capital conservation buffer); or a delay of the phasing-in of new constraints. In emerging market and developing economies in particular, many central banks relaxed reserve requirements to relieve funding stress and to support lending.¹

Priorities ahead

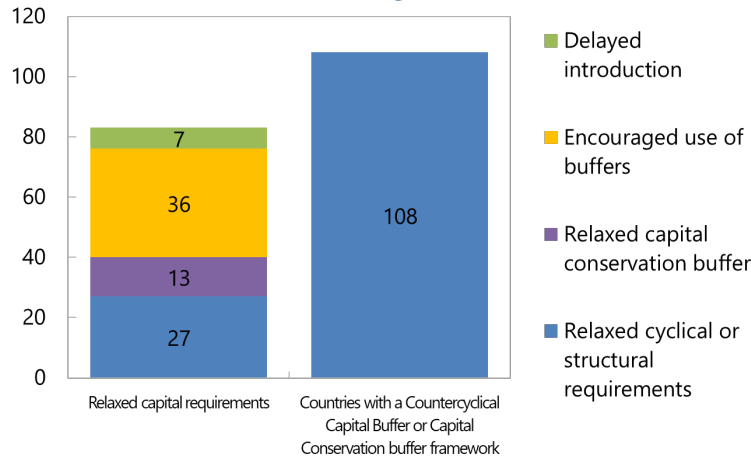
Going forward, and as we recover from the pandemic, broad-based buffers (such as the countercyclical capital buffer) should be rebuilt only gradually, so as not to generate procyclical effects on the provision of credit to the economy. Moreover, it is useful to monitor and limit the buildup of specific vulnerabilities through selective macroprudential measures. As we have set out in recent [Global Financial Stability Reports](#), such measures should aim to avoid a general tightening of financial conditions.

An important issue regarding the policy framework in this context is that only a few countries that had a countercyclical capital buffer framework in place entered the crisis with a positive capital buffer rate. And even in those cases where the rate was positive, the available buffer was often modest, resulting in relaxations of no more than 1 percentage point in most cases.

¹ I thank Antonio Garcia Pascual, Erlend Nier and Paavo Miettinen for their contributions in preparing this speech, and Glenn Gottselig and Zoe Strauss for editorial assistance.

Relaxation of Macroprudential Capital Requirements

(Number of countries, data to end-August 2020)



Sources: IMF Policy Tracker, IMF Financial Regulatory Measures database, IMF Macprudential Database, IMF MP survey, staff calculations.

Arguably, the regulatory community has been overconfident in the ability of the “credit gap” to provide an early warning of impending crises. Since the credit gap was not signaling alarm ahead of the COVID-19 shock, few countries had thought to build up buffers.

This means that many countries lacked the policy space to provide effective relief to their banks.

Moreover, a large share of emerging market and developing economies do not have any releasable capital at all. If banks are under stress, a forbearance on hard capital requirements (or other minimum prudential requirements, such as on accounting for nonperforming loans) may then appear to be the only viable option.

Consideration should be given in more countries to running a positive buffer most of the time, conditional on financial conditions being easy, which would then be relaxed in periods of solvency stress that threatens to become procyclical.²

Depending on country circumstances, this could be a positive counter-cyclical capital buffer rate or a systemic risk buffer, calibrated to prevailing macrofinancial vulnerabilities.

Constraints on the use of capital buffers

Recent empirical studies making use of credit registry data during the COVID-19 pandemic find evidence of banks’ reluctance to make use of capital buffers that are subject to regulatory requirements, such as the Capital Conservation Buffer, or the Stress Capital Buffer in the United

² Tobias Adrian, Jose Berrospide and Romain Lafarguette, “Macrofinancial Feedback, Bank Stress Testing, and Capital Charges”, IMF Working Paper, forthcoming.

States, even if banks were encouraged to do so by their supervisors.³ The banks' reluctance may be due to the lack of need to use them in light of extensive policy support, or market stigma, uncertainty about potential future credit losses, and supervisory expectations on the restoration of buffers used.

Recent IMF analysis argues that most banks are unlikely to voluntarily draw down buffers to support lending when such a draw-down will open up a capital shortfall that can weigh on a bank's share price.⁴ In the presence of these effects, a bank will only decide to voluntarily use its buffers if the value creation from a larger loan book offsets the costs from a drop in the share price associated with a capital shortfall.

Buffer usability mechanically opens up a capital shortfall at the bank from a valuation standpoint. This is due to the expectation that the bank will have to rebuild the buffers after their usage. Unless the bank's return on equity is significantly above par, the value associated with the earnings made from the incremental loan book (when a bank deploys buffers) will fail to fully offset the negative impact on valuation from a capital shortfall.

In our research, we built a standard organic Common Equity Tier 1 capital generation model and an equity valuation model, which provide a bank's forward-looking path for both Common Equity Tier 1 and equity fair value. We then compared the value created from a usage of buffers to the counterfactual scenario of no buffer usage. The research finds that, unless the bank's return on tangible equity is significantly above par, the value associated with the earnings made from the incremental loan book (when a bank deploys buffers) will fail to fully offset the negative impact on valuation from a capital shortfall. Indeed, cases in which banks would be willing to use their buffers ("success rate") are rare (less than 5 percent of the sample).

Among the main factors driving (voluntary) buffer usability, *bank profitability* emerges as the single most important one. A bank's return profile not only determines the bank's potential to build buffers organically in a timely manner, but it also determines a bank's potential to generate a sufficiently high return-on-investment from the buffers used within a reasonable timeframe.

In addition, for a bank to be able to draw down its buffer, the bank should have a sufficiently large management buffer, i.e., a buffer on top of the prevailing regulatory buffer requirements.

³ Jose M. Berrospide, Arun Gupta, and Matthew P. Seay, "Un-used Bank Capital Buffers and Credit Supply Shocks at SMEs during the Pandemic," FEDS Working Paper No. 2021-43 (2021) and European Central Bank, *Financial Stability Review, November 2021* (2021). See also C. Couaillier, M. Lo Duca, A. Reghezza, C. Rodriguez d'Acri and A. Scopelliti, "Bank capital buffers and lending in the euro area during the pandemic", ECB, *Financial Stability Review, November 2021*.

⁴ José Abad and Antonio Garcia Pascual, "Usability of Bank Capital Buffers: The Role of Market Expectations", (2022) IMF Working Paper No. 22/021.

This aligns with empirical research that finds that the “headroom” over and above combined regulatory buffer requirements is a key driver of banks’ willingness to use their capital buffers.⁵

Emerging vulnerabilities

Vulnerabilities from increases in house prices and household debt are on the rise in many countries.

The increases in prices since the start of the pandemic are driven by two factors. First, the COVID-19 shock has led to a strong shift in preferences toward the consumption of housing services as people spent more time in their homes. Second, newly accommodative monetary policy has led to exceptionally low mortgage rates in many countries. The risk going forward is not so much that house prices will collapse, but rather that increases in house prices will lead to further increases in household indebtedness, which will in turn strengthen macrofinancial feedback in the event of adverse shocks—such as a future increase in policy rates (and mortgage rates).

More countries should consider introducing stressed debt-service-to-income ratio caps or loan-to-income ratio caps, with the objective of increasing the resilience of households. Relatively few countries currently have either of these measures in place, with a large number of countries relying instead on loan-to-value restrictions, which are less effective in reducing a procyclical buildup of debt.

Of course, these tools need to be carefully implemented, and their introduction should aim to reduce overly strong impacts on first-time buyers. Some empirical research⁶ suggests that first-time buyers are less likely to default, potentially justifying a more generous treatment in the calibration of measures for this group. Consideration should also be given to possible leakage effects, especially if the tools are not applied evenly to all potential lenders.

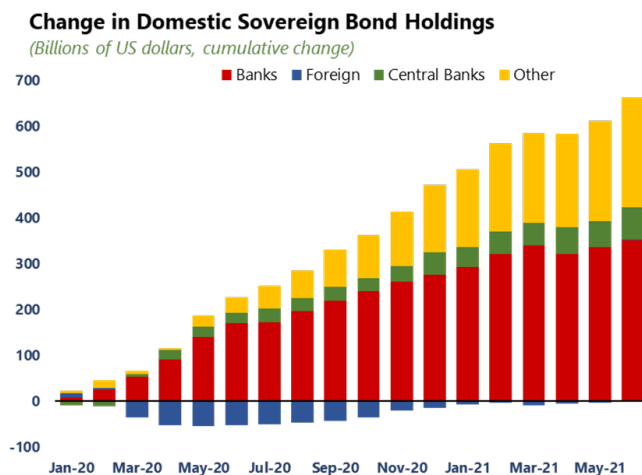
Banks need to be resilient against sovereign exposures

In a number of countries, the COVID shock has led to increases in indebtedness of the sovereign. In many of these instances, the increase in sovereign debt was accommodated with increases in banks’ exposures to the sovereign. As a result, the bank-sovereign nexus has strengthened.

⁵ See for instance [BCBS 2021](#).

⁶ Raffaele Guiliiana, “Have First-Time Buyers Continued to Default Less?” (2019) Central Bank of Ireland Financial Stability Notes Vol. 2019, No. 14; Robert Kelly, Terry O’Malley, and Conor O’Toole, “Designing Macro-prudential Policy in Mortgage Lending: Do First Time Buyers Default Less?” (2015) Central Bank of Ireland Research Technical Paper 02/RT/15; and Erlend Nier, Radu Popa, Maral Shamloo, and Liviu Voinea, “Debt Service and Default: Calibrating Macroprudential Policy Using Micro Data,” (2019) IMF Working Paper No. 19/182.

Increased Exposures to Sovereign Bonds



Sources: Haver Analytics; national sources; and IMF staff calculations

More thought needs to be given to the appropriate prudential policy response. The international prudential norms allow risk weights for sovereign bond holdings to be zero. By contrast, risk-sensitive and positive risk weights indeed have the distinct disadvantage of turning procyclical if financial conditions tighten, making it harder for the sovereign to place its debt with banks in times of market stress.

Macroprudential tools may provide a better balance of benefits and costs. For instance, a systemic risk buffer based on the excessive concentration of exposures to any given sovereign may provide incentives for diversification and can increase resilience in a manner that can avoid procyclicality, since the buffer can more easily be managed by the authorities in the event of stress.

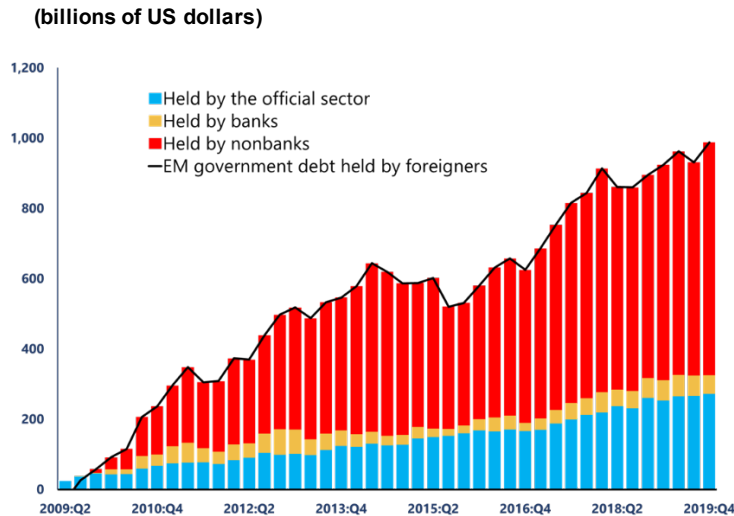
Through its Financial Sector Assessment Program, the IMF has provided advice on these matters even ahead of the pandemic (e.g., Romania, and Italy⁷). We expect to provide more of that advice in other contexts going forward.

Role of nonbanks in providing credit to emerging markets

Another theme going forward is the potential for increased provision of credit by nonbanks. This includes the provision of credit *across* national borders—which is increasingly provided by nonbanks, as opposed to banks, as well as the provision of credit domestically by new nonbank providers of financial services.

⁷ See, e.g., [Technical Note on Macroprudential Policy](#), 2018 Romania FSAP

Foreign Holdings of Government Debt in Emerging Markets



Source: Bloomberg Finance LP.

Cross-border financial flows are increasingly intermediated by non-banks, in particular open-ended investment funds, which hold an increasing share of the global stock of government debt (see Figure). While this can be very welcome, it can also pose stability risks when redemptions force a pull-back of the flows provided. The global nature of the investment fund industry and of financial flows means that consistent global policies are needed to secure financial stability. This underscores the importance of the Financial Stability Board-led process of identifying policy options, involving national authorities and the International Organization of Securities Commissions and other standard-setters.

Within national borders, credit may also increasingly be provided by nonbanks—on the back of developments in Fintech, for example. Therefore, alongside efforts at the international level, the domestic macroprudential strategy needs to take account of these developments by adjusting the perimeter of macroprudential intervention, where feasible. Indeed, a number of countries already require restrictions on the provision of mortgages and consumer loans to be met by both banks and nonbank providers of credit (e.g., Korea, Singapore, Romania).

Conclusion

A strong policy response to the pandemic was necessary and appears to have been successful in countering the potential for a sharp tightening of financial conditions through the pandemic. However, loose financial conditions can increase the build-up of vulnerabilities that can materialize in the medium term.

Indeed, this is what is found in many models with endogenous risk.⁸

For countries to be ready for future shocks, policymakers should prepare in advance and build defenses in areas where vulnerabilities have accumulated, potentially including housing markets, as well as the sovereign-bank nexus.

Increasingly, we also need to include the provision of credit by nonbanks as shaping the overall macroprudential strategy.

Of course, we need to take care that (re-)building buffers does not stall the incipient recovery. An excessively rapid rebuilding of buffers could stifle credit provision and generate negative procyclical effects to economic growth.

Beyond considering *how fast* buffers should be built up, an important agenda item for policymakers is to consider *to what level* they should be built, so as to create policy space for more effective relaxation of policy in stressed conditions. This should include a reflection on what determines the appropriate neutral countercyclical capital buffer rate, and also how otherwise releasable buffers could be created. These are important considerations not only in advanced economies, but also in many emerging markets, which will need stronger macroprudential buffers going forward.

⁸ Tobias Adrian, Fernando Duarte, Nellie Liang, and Pawel Zabczyk, “NKV: A New Keynesian Model with Vulnerability,” (2020) AEA Papers and Proceedings 110: 470–76.