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Workshop 1
Financial risks and macroprudential supervision

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The post-Global Financial Crisis (GFC) period has seen banks continue to build their resilience to financial risks, underpinned by stronger regulatory and supervisory frameworks, including the Basel III standards. The *Core principles for effective banking supervision* (BCP) have been strengthened to reflect key elements of many of the post-GFC reforms introduced by the Committee. In particular, the importance of a non-risk-based measure to complement risk-based approaches in constraining leverage in banks and the banking system (eg a leverage ratio); enhancements to credit risk management practices; the introduction of expected credit loss approaches to provisioning; and more stringent requirements for managing large exposures and related party transactions. More recent crises, such as the Covid-19 pandemic and episodes of bank distress, have reinforced the importance of bank and banking system resilience to a range of different shocks, as well as the need for effective supervision.

Moreover, the last 10 years have reaffirmed the importance of applying a system-wide macro perspective to the supervision of banks to assist in identifying and analysing systemic risks and taking pre-emptive action to address them. Adopting a broad financial system perspective is integral to many of the Core Principles, and so the Committee has not included a specific standalone principle on macroprudential issues but has sought to strengthen the existing requirements based on lessons learnt. This includes the importance of the value of capital buffers that can be increased or released as risks build and crystallise or dissipate (eg a countercyclical capital buffer), and the importance of a clear framework for macroprudential surveillance and financial stability policy formulation.

This workshop will focus on considerations around the experience with macroprudential regulation, supervision and tools across jurisdictions.

What is macroprudential supervision?

Macroprudential regulation and supervision seek to use (primarily) prudential measures to limit systemic risk and safeguard financial stability. Systemic risk is generally understood as having two main dimensions:

- **Structural dimension**: vulnerabilities stemming from interconnections, common exposures and collective behavioural responses by financial institutions at any given point in time; and
- **Time dimension**: the evolution and amplification of risks at an aggregate level over time resulting from the inherent procyclical dynamics of financial institutions and markets through the financial cycle.[1]

[1] Borio (2003).

While many jurisdictions had applied macroprudential measures before the GFC[2], the crisis highlighted the limited systematic use of macroprudential regulation and supervision, which prompted a much wider adoption and use of the macroprudential perspective across jurisdictions.[3] Jurisdictions around the world adopted financial stability mandates and deployed an increasing number of macroprudential measures over time.[4]

Along the two dimensions of systemic risk described above, we can group macroprudential policies into structural tools and cyclical tools. Structural tools are meant to build lender or borrower resilience to adverse events at any point in the business cycle. These tools include capital surcharges for Global or Domestic Systemically Important Banks (G-SIB and D-SIB), and borrower-based measures such as debt-service-to-income ratio (DSTI) limits, or loan-to-value ratio (LTV) limits for mortgage borrowers. Cyclical tools such as the Countercyclical Capital Buffer (CCyB) seek to increase resilience in anticipation of a downturn to mitigate any resulting reduction in the supply of credit, and to constrain financial booms.

Q1. What dimension has been the most significant driver of system risk in your jurisdiction? What macroprudential tools have you found most useful in addressing these risks?

The role and design of the countercyclical capital buffer

The CCyB is designed to counter procyclicality in the financial system. It is aimed at building up a capital buffer during periods of excessive credit growth that is released when systemic risks materialise or abate. By increasing resilience during the upturn, the CCyB supports the sustainable provision of credit to the economy in the downturn. The CCyB can also help dampen the credit cycle during the upturn.[5]

CCyB has been deployed in several jurisdictions.[6] Prior to the Covid-19 pandemic, eight out of 27 Committee member jurisdictions had activated (or announced their intention to activate) the buffer. Seven of these jurisdictions subsequently released the buffer in response to the pandemic – consistent with a broader loosening in macroprudential policy more generally[7] – and several of them have since reactivated the buffer in response to an increase in cyclical systemic risks.[8]

To date, CCyB releases by Committee members appear to have been due either to the pandemic or to political economy events, rather than in response to downturns emanating from credit booms. While the releases were arguably in line with the ultimate goal of maintaining system-wide macro-financial resilience, they also underline the CCyB's potentially broader scope and remit than originally envisaged.[9]

Moreover, jurisdictions have adopted a range of practices to calibrate the appropriate CCyB buffer, drawing from a wide range of quantitative and qualitative indicators; and an increasing number

[2] Borio and Shim (2007). For example, Hong Kong applied bank exposure limits to the property market as far back as 1994, Malaysia increased risk weights for certain housing loans in 2005, and India increase provisioning requirements in the same year.

[3] Knot (2022).

[4] BIS (2018).

[5] BCBS (2010).

[6] BCBS (2022b).

[7] Boissay et al (2023).

[8] BCBS CCyB dashboard, https://www.bis.org/bcbs/ccyb/.

[9] De Cos (2023).

have chosen to implement "positive cycle-neutral" buffer rates, where the CCyB is set at a positive rate when risks are judged to be neither subdued nor elevated.[10]

Q2. Have you implemented a countercyclical buffer tool in your jurisdiction? What considerations have informed your calibration and implementation of the buffer? What have been the biggest challenges when communicating changes to the CCyB to stakeholders and the public?

A wider global macroprudential toolbox?

In a 2023 keynote speech on the path of macroprudential policy, the Basel Committee Chair outlined some considerations on whether additional *global* macroprudential measures may be needed. He highlighted more targeted sectoral macroprudential measures, which tend to be more bespoke across jurisdictions, and measures to tackle risks stemming from banks' interconnections to non-bank financial intermediation (NBFI) as areas for consideration, which are discussed in more detail below.[11]

The Committee issued in 2019 guiding principles for the operationalisation of a sectoral countercyclical capital buffer (SCCyB), which would allow for a more targeted macroprudential tool in response to the build-up of risk in a specific sector. Historical episodes of financial crises show that imbalances in credit and asset markets are often confined to a specific market segment that can give rise to systemic risk. In addition, non-financial corporate and mortgage credit cycles are often not well synchronised, indicating that there may be benefits to using separate tools to address these segments.[12]

Borrower-based measures, such as LTV and DSTI limits, are another set of targeted tools that have been widely used in the past decades across jurisdictions, and they have generally been effective, particularly at dampening overheating in the housing market.[13] There are both similarities and differences in how these tools are designed, with a wide range of applications to deal with common risks across jurisdictions. For this reason, evaluating and comparing the effectiveness of these tools across jurisdictions can be challenging.

Another subject for discussion in international fora is whether the existing tools are sufficient to mitigate the system-wide risks of non-bank financial intermediation (NBFI) to the banking system. The significant growth of the NBFI sector and its increased interconnectedness with the banking sector has sparked a number of initiatives aimed at mitigating NBFI risks to banks,[14] but additional macroprudential measures may be needed to address those risks from a systemic perspective.[15] Those measures may also

[10] BCBS (2022a).

[11] De Cos (2023).

[12] While a bank's additional capital requirements following an activation of the CCyB depend on its total RWA, the SCCyB allows national authorities to temporarily impose additional capital requirements which directly address the build-up of risks in a specific sector. As such, the impact of SCCyB depends on sectoral credit RWA and hence on how exposed a bank is to the targeted credit segment (eg residential real estate loans). See BCBS (2019).

[13] BIS (2018).

[14] For example, the G-SIB framework accounts for banks' intra-financial system assets and liabilities. More generally, the Committee's post-GFC reforms include a range of regulatory measures related to banks' exposures to NBFI, including with regard to banks' exposures to central counterparties, securitisations, equity investments in funds and margin requirements for non-centrally cleared derivatives. The Committee has also issued supervisory guidelines on the identification and management of step-in risk resulting from potential financial distress in shadow banking entities spilling over to banks (BCBS (2017a)) and published a supervisory newsletter which underlined the importance of reviewing and enforcing existing guidelines and standards with regard to banks' NBFI risk management practices, due diligence and disclosures (BCBS (2022b)).

[15] De Guindos (2021), De Cos (2023).

need to account for second order effects on NBFIs, as macroprudential policies directed towards banks may increase the share of financial intermediation via NBFIs, which can offer a way to circumvent regulation in the banking sector.[16]

> Q3. What lessons have you learned in implementing borrower-based measures (eg LTV, DSTI limits) in your jurisdiction?
>
> Q4. What macroprudential measures or actions have supervisors and authorities implemented to mitigate systemic risk from NBFI?

Macroprudential use of stress tests

An important development since the global financial crisis is the increasing use of stress tests in macroprudential analysis. Practices are still being developed, and significant differences exist across countries.[17] Macroprudential stress tests are designed to assess the system-wide resilience to shocks in the financial sector, which may include understanding how banks are exposed to similar risks, as well as second round effects emerging from interlinkages with the broader financial system or the economy. Macroprudential stress tests can also take into account interactions between institutions (eg via interbank exposures).

Macroprudential stress tests can be used to calibrate macroprudential measures as well as supervisory policy. The use of stress tests for calibration of macroprudential instruments raises a number of challenges. These include, for example, identifying the state of the financial cycle and choosing an appropriate level of severity for the stress test scenario; mapping stress test results to the desired instrument (capital buffer, lending restrictions, etc.), and dealing with the possibility that the timing of the stress tests may not align with the timing of the decision on the macroprudential instrument. In the EU, supervisory stress tests and sensitivity analyses have been used to support the calibration of various macroprudential instruments.[18] Other macroprudential uses include early warning exercises to identify potential weaknesses of the system and to enhance crisis management plans.

> Q5. Do you perform macroprudential stress tests in your jurisdiction and how has this added value over other macroprudential/microprudential requirements that are applied to banks? Are there promising macroprudential elements that should be added to stress tests to enhance their value?

[16] Claessens et al (2021).

[17] BCBS (2017b), Bassett and Rappoport (2022).

[18] These include: The risk-weight add-on for real estate exposures in Belgium; the calibration of the countercyclical capital buffer in the UK; The introduction of a risk-weight floor in Sweden; the capital surcharges for other systemically important institutions (O-SIIs) in Belgium; the design of a loan-to-valuation (LTV) cap in the Netherlands.

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