The Bank of England's approach to stress testing the UK banking system

The Bank has published its updated approach to stress testing the UK banking system.

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Content

Executive summary

This publication sets out the Bank's approach to stress testing the UK banking system from 2025 onwards.

The Bank of England's (the Bank's) updated approach to stress testing the UK banking system is designed to support the statutory objectives of the Financial Policy Committee (FPC) and the Prudential Regulation Authority (PRA). It takes into account that the level of capital in the banking system has increased materially since the global financial crisis, the changing nature of risks the banking sector faces, and the need to be effective, proportionate and efficient in pursuit of the FPC's and PRA's objectives.

The updated approach combines the predictability of regular stress testing to risks from the financial cycle – which has played an important role in determining the capitalisation of both the banking system and individual banks – with the adaptability the Bank has been using over recent years to explore different risks. It sits within the Bank's broader framework for assessing financial stability and the safety and soundness of individual banks. The updated approach has benefitted from engagement with participating banks, academics and other stakeholders. It has three key components, as summarised in Figure 1.

First, the Bank expects to carry out a Bank Capital Stress Test every other year. This will be a test of risks related to the financial cycle in which the largest and most systemic UK banks participate, and will be used to inform the setting of capital buffers for the banking system and individual banks. This is a reduced frequency relative to that of the annual cyclical scenario exercises under the previous approach.

The scenario used in this test will be severe but plausible, vary with the state of the financial cycle and typically be countercyclical. The results of the test will be informed by the Bank of England's and participating banks' estimates of the impact of the stress scenario. The Bank expects to publish the results at an aggregate and bank-specific level and to use them to inform the setting of capital buffers for the banking system and individual participating banks, as well as to inform broader understanding of risks.

This biennial approach represents a reduced frequency for full cyclical stress tests compared to the annual cyclical scenario tests used for similar purposes under the previous approach set out in 2015. In updating its approach, and reflecting both the build-up of bank capital since the global financial crisis and the need to be proportionate in pursuit of the FPC's and

PRA's objectives, the Bank has judged that it can now better support those objectives by undertaking a capital-setting exercise informed by both banks' and the Bank's estimates every other year instead of annually.

This change in approach represents a material efficiency gain in the Bank's overall approach to stress testing the banking system, ensures the burden placed on participating banks is proportionate, and supports the UK banking sector's competitiveness and growth. It will create space to assess and address a wider set of risks to help respond to an evolving risk environment. The approach will also support participating banks in addressing risks identified through stress testing and enhancing their risk management capabilities. It maintains predictability for the purposes of setting individual banks' capital buffers.

Participation in this stress test will be based on an assessment of a bank's share of lending to the UK real economy, other measures of its systemic importance, and the test's overall coverage of the banking sector's lending to the UK real economy. The Bank will give at least 12 months' notice to any new bank it decides to include in this exercise to ensure that it has sufficient time to prepare for its participation.

Alongside the Bank Capital Stress Test, the Bank will deliver insights into the resilience of non-systemic banks to the FPC and Prudential Regulation Committee (PRC) by utilising existing stress testing and supervisory assessment tools for these banks. The Bank will also continue to gain reassurance on the resilience of UK-based branches and investment bank subsidiaries of foreign banks through engagement with the home supervisory authorities.

> **Second, in the intervening years the Bank expects to use stress testing when appropriate to supplement its assessment of the resilience of the banking system to risks related to the financial cycle. This will be done in a way that is less burdensome for banks than Bank Capital Stress Tests, for example through desk-based exercises.**

In forming their assessment of the resilience of the banking system and individual banks within it to cyclical risks, the FPC and PRC consider a broad range of inputs from financial stability and supervisory analysis and intelligence. In alternate years, these can be supplemented through stress testing in a number of ways that are less burdensome for banks than a Bank Capital Stress Test.

Such exercises could be carried out at different levels of granularity or with multiple scenarios, allowing more adaptability in the Bank's approach to assessing risks and vulnerabilities, and meeting the FPC's and PRC's needs in a proportionate way. For example, they could include desk-based exercises which rely primarily on the Bank's own estimates of the impact of stress scenarios. Or they could include targeted exercises capturing how specific vulnerabilities or aspects of banks' business models – rather than their whole balance sheets – could evolve under adverse scenarios. They could also include assessments of resilience to cyclical risks based on information in banks' own stress tests

carried out as part of their Internal Capital Adequacy Assessment Processes (ICAAPs). The results of these exercises of cyclical risks are not expected to be published beyond an aggregate level.

Third, the Bank will continue to use exploratory exercises as a means of assessing other risks, including structural and emerging risks that are not closely linked to the financial cycle. When deciding on the timing of these exercises the Bank will take into account the risk environment and the sequencing and timing of the stress tests described above.

Stress test exercises based on exploratory scenarios not closely linked to the financial cycle have proven a successful part of the Bank's approach to stress testing over the past decade (eg the 2021 climate biennial exploratory scenario). The Bank intends to continue to undertake such exploratory stress tests to explore a wide range of risks – including structural and emerging risks – that might threaten financial stability or the safety and soundness of individual banks.

While some of these exercises could be desk-based, stress tests of emerging or structural risks which have had limited previous assessment typically benefit from participation by banks (as well as other financial institutions where relevant). Banks have given positive feedback on their participation in past exercises and how they have helped them identify and address vulnerabilities.

The timing of such exploratory exercises will be informed by the FPC's and PRC's assessment of such risks, and, in line with the approach the Bank has taken to past tests, these exercises will be designed under their guidance. As it has done with such tests in the past, when deciding on timing of these exercises the Bank will take into account the sequencing and timing of other stress-test exercises. The Bank will engage with relevant firms to ensure appropriate notice is provided to allow time to prepare for participation, and will ensure the volume and complexity of submissions is proportionate.

Participation in these exercises will depend on the relevance of banks' business models to the scenario and whether it is proportionate for those banks. The exercises could be focused on the banking sector, or banks could be invited to participate in exercises involving the broader financial system, such as the 2024 system-wide exploratory scenario.

The results of these exercises are likely to be published at an aggregate level and will be used to inform financial stability and supervisory assessment, wider policy, and banks' risk management.

The Bank's approach to stress testing the UK banking system will be used to provide a range of insights within its broader framework for financial stability and safety and soundness.

It is important for stress testing to continue to deliver insights beyond point estimates of resilience. This could include the impact of alternative assumptions and risks, the propensity of the banking system to amplify shocks in the real economy or financial system, and the business models and risk management capabilities of banks. To broaden the range of insights, the Bank will embed further the use of sensitivity and supplementary analysis into banking system stress tests as appropriate. The Bank will ensure appropriate notice is provided to participants if such analysis requires their input.

There is scope for synergies between the different banking system stress tests the Bank undertakes. For example, a desk-based stress test might allow initial exploration of a risk or sensitivity which could subsequently be incorporated into the scenario for a Bank Capital Stress Test. Alternatively, a Bank Capital Stress Test may reveal a vulnerability that could become the focus of an exploratory or targeted exercise.

All stress tests have limitations, as they cannot capture and address resilience to every risk to the banking system, and there is uncertainty around results given the limitations of modelling and assumptions. In part reflecting that, the Bank will continue to ensure that banking system stress tests are used within its broader framework for financial stability and safety and soundness, including: regular macroprudential and supervisory analysis of the banking system; supervisory intelligence and analysis of banks' ICAAPs; and assessment of risks in other parts of the financial system including stress tests of other financial sectors.

A key strength of the Bank's approach to stress testing over the past decade has been how it has been adapted to assess vulnerabilities to changing risks, for example, during the Covid-19 (Covid) pandemic. As such the Bank considers it important to be able to adapt the approach set out in this publication as the risk environment and the costs and benefits of stress test design choices evolve. The Bank will continue to be mindful of the potential burden on banks before making changes to the approach.

The rest of this publication is arranged over four sections:

- Section 1 gives an overview of the updated approach, including its aims, advantages and how it will be used.
- Section 2 covers the approach to the Bank Capital Stress Test, including participation and how it will be used to inform capital setting.
- Section 3 outlines other stress tests of cyclical risks, including desk-based and targeted exercises.
- Section 4 explains the approach to exploratory exercises, including participation and principles for engagement with participating banks.

Figure 1: Summary of key components of the Bank of England's approach to stress testing the UK banking system

	Bank Capital Stress Test	Other stress tests of cyclical risks, eg desk-based stress tests	Exploratory exercises
Frequency	Biennial.	In intervening years when appropriate to supplement resilience assessment.	Informed by FPC's and PRC's risk assessment and timing of other stress tests.
Scenario design	Severe but plausible scenario linked to financial cycle. Typically countercyclical.	Scenario(s) linked to financial cycle. Could be targeted to probe specific vulnerabilities.	Structural or emerging risks and vulnerabilities not closely linked to financial cycle.
Process	Uses Bank of England's and banks' estimates of the impact of stress scenario.	Desk-based exercises, or with targeted input from banks.	Likely to use Bank of England's and banks' estimates of the impact of scenario(s).
Coverage	Largest and most systemic UK banks.	May vary by risks being assessed.	Varies by risks being assessed and assessment of proportionality.
Disclosure	Approach, scenario, and aggregate and bank-level results.	May vary depending on test and approach. Results not likely to be disclosed beyond an aggregate level.	
Use of results	Informs system-wide and bank-specific capital buffers and broader resilience assessment.	Supplements resilience assessment, including of banking system-wide capital levels.	Informs financial stability and supervisory assessment and wider policy.

Across all components:

- The Bank will engage with banks to give appropriate notice ahead of exercises in which they participate, and will ensure the volume and complexity of submissions is proportionate.
- Sensitivity and supplementary analysis may be used to gain broader insights.
- Design of and insights from banking system stress tests will be combined with broader financial stability and supervisory analysis and consideration of risks in other parts of the financial system.

1: Overview of updated approach

Introduction

> **This publication is primarily focused on concurrent stress tests of the financial resilience of the UK banking system.**

This publication sets out the Bank of England's approach to stress testing the UK banking system from 2025 onwards. It is primarily focused on concurrent stress tests of the financial resilience of the UK banking system, for which the largest and systemically important banks have a particular significance.[1] Where appropriate, reference is made in this publication to stress tests:

- by banks themselves as part of their ICAAPs;[2]
- of non-systemic banks or international banks operating in the UK (including stress tests by the Bank or international regulators);
- that banks participate in as part of the broader financial system (such as the system-wide exploratory scenario);[3] and
- that include an assessment of the operational resilience of the banking system (such as the Bank's regular cyber stress test).[4]

Since 2014 the Bank has undertaken regular concurrent stress testing of the UK banking system to support the FPC and PRA in meeting their objectives. A concurrent bank stress test is an exercise where multiple banks' balance sheets are subjected simultaneously to a common adverse scenario, often by a central bank or banking system regulator. Such tests allow policymakers to assess individual banks' and the banking system's resilience to a range of adverse shocks and their ability to continue to support households and businesses if a stress does materialise.

The Bank first set out its approach to stress testing the UK banking system in 2015.[5] The previous framework had two key cornerstones: the annual cyclical scenario, designed to assess risks to the banking system emanating from the financial cycle, and the biennial exploratory scenario, aimed at probing the resilience of the system to risks that may not be closely linked to the financial cycle.[6] The Bank adapted that framework during adverse macroeconomic conditions such as the Covid pandemic.[7] For instance, the Bank carried out desktop exercises that provided policymakers with rapid and critical analytical insights, and allowed banks to divert resources to where they were most needed. In doing so, the Bank tailored its scenario design to the prevailing conditions. For instance, it carried out a reverse stress test in one desktop exercise to identify what macroeconomic assumptions could result in a particular capital drawdown for the banking system in aggregate. It also ran a Solvency

Stress Test with bank participation which tested resilience to a very severe intensification of the macroeconomic shock arising from the pandemic. The Bank has also run a desk-based stress test in 2024.[8]

The approach in this publication reflects the experience of the past decade of concurrent stress testing, and supersedes the approach set out in 2015. In updating its approach to stress testing the banking system, the Bank has taken stock of the framework to date, drawing on lessons learned and feedback from external stakeholders (as set out in Box A). The Bank has also compared its approach with and reflected on bank stress testing in other major jurisdictions and the Bank's own stress testing of other financial sectors, including insurance companies and central counterparties.[9] The updated approach also incorporates previous insights and feedback from the International Monetary Fund, the Basel Committee on Banking Supervision and the Bank's Independent Evaluation Office.[10]

Aims, benefits and principles

> **The updated approach has several key principles to enable stress testing to best support the FPC's and PRA's objectives.**

The overarching aim of the Bank's approach to stress testing the UK banking system is to support both the FPC and the PRA in meeting their statutory objectives for macroprudential and microprudential policy. As such, the Bank has developed the approach set out in this publication under the guidance of the FPC and the PRC.

The FPC's primary objective is to contribute to the Bank's financial stability objective to protect and enhance the stability of the UK financial system. Subject to that, the FPC's secondary objective is to support the economic policy of the Government. The PRA's objectives include a primary general objective to promote the safety and soundness of the firms it regulates. It also has two secondary objectives to act, so far as reasonably possible, in a way that facilitates effective competition in the markets for services provided by the banks it regulates; and that facilitates, subject to aligning with relevant international standards, the international competitiveness of the UK economy and its growth in the medium to long-term.[11]

In supporting the FPC and PRA to meet those objectives, the Bank's approach to stress testing the banking system has two central aims:

- **To explore banking system vulnerabilities to different shocks, to help ensure resilience.** This will support the FPC and PRA in achieving their primary objectives by allowing them to identify and assess the impact of different scenarios on the banking system and individual banks.

- **To provide a quantitative, forward-looking assessment of the capital adequacy of the UK banking system and individual banks within it, and thus the extent to which they can support the real economy in stress.** The results of stress tests are an important component in informing judgements of the FPC and PRC when setting banking system-wide and bank-specific capital buffers.

In achieving those aims, the Bank's stress-testing approach also seeks to deliver a wider range of benefits. These include:

- Providing a wide body of evidence to support supervisory judgements, by generating an in-depth insight into banks' balance sheets and potential responses to stress in a way which is easily comparable across peers.
- Expanding and enhancing the risk management capabilities of banks by ensuring they develop their understanding of new and existing risks.
- Understanding interlinkages within the banking system and with the rest of the financial system. This includes assessing the collective impact on the economy of individual banks' actions through the concurrent nature of the stress tests. It also includes identifying vulnerabilities, behaviours and interconnections that could mean that the banking system amplifies rather than absorbs shocks to the detriment of financial stability.
- Supporting public confidence in the banking system.
- Providing a device through which the Bank can be held accountable to Parliament and the wider public against its financial stability and safety and soundness objectives.

To deliver these aims and benefits, the Bank has identified a number of general principles for its approach to stress testing the banking system. These include:

- **Robustness:** Taking an informed and robust approach to assessing resilience to adverse scenarios, using insights from a range of approaches by the Bank and participating banks, including models, expert judgements and supporting analysis. Nevertheless, as explained below, all stress tests have limitations.
- **Efficiency and proportionality:** Ensuring the Bank's overall approach and each stress test takes account of the planning and resourcing needs of banks, and the opportunity costs for banks and the Bank of England itself.
- **Openness:** Being open both publicly in communicating the approach to and findings from stress tests, and privately with banks on their expected engagement in the Bank's exercises. Such transparency improves policymakers' decision-making, public accountability and public understanding of the banking system, while also improving the risk management of banks.
- **Predictability:** Providing sufficient advance notice and an appropriately predictable sequencing and timetabling of planned exercises so both the Bank and participating banks

can plan and allocate their resources accordingly.

- **Adaptability:** Being adaptable and responsive to the changing risk environment. This includes using sensitivity and supplementary analysis of different assumptions to gain insights beyond the core results and enrich financial stability and supervisory insights.
- **Exploratory:** Assessing emerging or structural risks as well as risks linked to the state of the financial cycle.

In designing any stress test, to support best the overarching objectives of the FPC and PRA, the Bank will balance these principles appropriately, for instance where there are trade-offs between them.

Stress tests can be tailored to assess different shocks and vulnerabilities by making a series of key design choices. Those key design choices are generally taken under the guidance of the FPC and PRC, and include: the scope of the test, eg the nature of the risks and scenarios being assessed and the coverage of banks included; the process for carrying out the exercise, including whether and how banks participate, the depth and breadth of analysis and type of models used, and the timeline; and how the findings are used and disclosed. The updated approach in this publication sets out how the FPC and PRC expect to use banking system stress tests in practice.

Summary of the updated approach and its advantages

> **The Bank's updated approach contains three key components that will deliver an appropriate balance between predictability and adaptability.**

There is a balance to be struck between adaptability and predictability. It is important to have an adaptable approach to stress testing that is responsive to the changing risk environment and can be used to gain insights into structural and emerging risks. It is also important to have a stable and predictable approach to assessing the resilience of the banking system and individual banks, in particular to inform the setting of capital buffers in response to cyclical risks. To that end, the Bank's approach to stress testing the banking system will have three key components:

- **First, the Bank expects to carry out a Bank Capital Stress Test of the largest and most systemic UK banks every other year.** The aims and expected use of the test will be similar in nature to that of the annual cyclical scenario in the previous approach. The scenario used in the Bank Capital Stress Test will be severe but plausible, vary with the state of the financial cycle and typically be countercyclical. The results of the test will be informed by the Bank's and participating banks' estimates of the impact of the scenario. The Bank expects to publish the results at an aggregate and bank-specific level and use them to inform the setting of capital buffers for the banking system and individual banks. Section 2 describes this test in more detail.

- **Second, in the intervening years the Bank expects to use stress testing when appropriate to supplement its assessment of the resilience of the banking system to cyclical risks. This will be done in a way that is less burdensome for banks than a Bank Capital Stress Test.** Such stress testing could be carried out in a number of ways, at different levels of granularity or with multiple scenarios. For example, it could include desk-based exercises which rely primarily on the Bank's own estimates of the impact of stress scenarios. Alternatively, it could include targeted exercises capturing how specific vulnerabilities or aspects of banks' business models – rather than their whole balance sheets – could evolve under adverse scenarios. Or it could include exercises based on banks' own ICAAP stress tests. Section 3 describes these exercises in more detail.
- **Third, the Bank will continue to use exploratory exercises as a means of assessing other risks, including structural and emerging risks that are not closely linked to the financial cycle.** Such exercises (for example the 2021 climate biennial exploratory scenario) have proven a successful part of the approach to stress testing over the past decade. When deciding on the timing of these exercises the Bank will take into account the risk environment and the sequencing and timing of the stress tests described above. While some such exercises could in principle be desk-based, assessments of emerging or structural risks which have not previously been assessed typically benefit from bank participation. Section 4 describes these exercises in more detail.

> **The updated approach will be more efficient, create space to assess and address a range of risks, and enable synergies between different types of test.**

There are a number of advantages of the Bank's updated approach compared to that set out in 2015. First, the move to a biennial frequency for cyclical stress tests with bank participation will yield material efficiency gains, ensure the burden placed on participating banks is proportionate, and support the UK banking sector's competitiveness and growth. This change in frequency in part reflects the fact that the level of capital in the banking system has increased significantly since concurrent stress testing began. While stress testing has provided a range of insights and reassurance on the resilience of the banking system, including in times of stress, as of 2024, no participating bank has been asked to submit a capital plan to increase its level of capital as a result of a stress test since 2016.

Second, this change creates space to assess and address a wider set of risks that will provide better insights in an evolving risk environment facing the banking sector. It will also support participating banks to enhance capabilities including data, modelling, processes and risk management. In turn that will further enhance the ability of stress testing to deliver insights over the medium to long-term.

Third, given the breadth of different potential tools, there is scope for synergies between the various banking system stress tests, as well as between those and other stress tests the Bank undertakes. For example, a desk-based stress test, sensitivity or supplementary

analysis might allow initial exploration of a risk which could subsequently be incorporated into the scenario for a Bank Capital Stress Test. Alternatively, a Bank Capital Stress Test may reveal a vulnerability that could become the focus of an exploratory stress test or targeted exercise.

As such the Bank can better support the FPC's and PRA's objectives by undertaking a capital-setting exercise that is informed by banks' estimates of the impact of stress every other year instead of annually.

The Bank will ensure that the design of banking system stress tests is appropriate to the prevailing risk environment and factors in the costs, including opportunity costs, and benefits to both banks and the Bank. As has been the case to date, banking system stress tests will generally be designed under the guidance of the FPC and PRC. Where they involve the participation of banks, the Bank will take the burden of participation on banks into account when deciding the sequencing and timing of different stress-test exercises. The Bank will engage with relevant banks to ensure appropriate notice is provided to allow time to prepare, and will ensure the volume and complexity of submissions is proportionate.

Ensuring that stress tests are designed in an adaptable way will mean the approach endures by continuing to provide valuable insights for both financial stability and prudential regulation, as well as for participating banks. Indeed, a key strength of the Bank's approach over the past decade has been how it has adapted to assess vulnerabilities to changing risks, for example, during the Covid pandemic.

Looking ahead, shifts in the risk environment, structural changes in the banking sector or advances in technology and data over time may influence how stress tests are designed. As such the Bank considers it important to be able to adapt the approach set out in this publication as the costs and benefits of stress-test design choices evolve. The Bank recognises that in making changes to the approach outlined in this publication it will need to be mindful of the potential additional burden on banks, and the need to provide appropriate notice in doing so.

Sensitivity and supplementary analysis

> **Testing the impact of different assumptions and a crystallisation of different risks will be an important feature of the Bank's updated approach.**

In addition to the core assessment and results of the stress tests outlined in this publication, the Bank will embed further the use of sensitivity or supplementary analysis of additional risks as appropriate.

Sensitivity analysis considers the impact on bank resilience of changing the macroeconomic scenario variables or the key assumptions within an exercise. This can be an important tool in enhancing insights given the inherent degree of uncertainty around the results of stress tests. In the 2024 desk-based stress test, for instance, the Bank included sensitivity analysis which assessed the impact of more severe declines in UK house prices and different assumptions about net interest income.

Supplementary analysis can complement stress tests by capturing the impact of a crystallisation of risks that may be missing in the core approach. This allows the Bank to gain further insights in a proportionate manner without an additional stand-alone exercise. Such analysis could include an assessment of the impact of: frictions relating to buffer usability on banks' ability to lend; additional feedback and amplification channels; a materialisation of risks from climate change; or of a stress on a wider range of bank resilience metrics beyond capital.

Depending on the nature of the sensitivity and supplementary analysis, they could be carried out internally by the Bank or in combination with participating banks to enhance the richness of the analysis. The Bank will ensure appropriate notice is provided to participants if such analysis requires their input, and that any additional burden on banks is proportionate to the likely insight gained.

How the findings of stress tests are used

> **All stress tests will be used to enhance understanding, and the Bank Capital Stress Test is likely to be of particular use in informing capital-buffer setting.**

The Bank envisages that all stress tests are likely to be used to enhance understanding and management of risks and vulnerabilities. Stress tests can help policymakers and market participants better understand the vulnerabilities of banks' current business models to the risks being tested, and enhance the risk management of banks.

By providing estimates of the amount of capital banks might deplete in a hypothetical stress scenario, stress tests can play a particular role in informing the amount of capital that might be needed to ensure that the banking system can continue to support the real economy in a stress.

Any stress test can be used as an input to setting capital buffers, alongside a broader set of supervisory and regulatory information and risk assessments. In practice, however, the relevance of a particular test will depend upon the nature of the risks it is assessing, scenario severity, and other design features such as the depth of analysis. The Bank envisages that stress tests assessing risks from the financial cycle will be used by the FPC to inform their setting of the countercyclical capital buffer (CCyB).[12] Additionally, the Bank Capital Stress Test – in which banks participate – is likely to be of particular use in informing the regular

setting of bank-specific capital buffers, ie PRA buffers, by the PRA.[13] The FPC and the PRA will consider a range of factors in calibrating capital buffers so the stress-test results inform, rather than determine mechanically, the setting of buffers.

Limitations and how stress testing fits into broader analysis

> **All stress tests have limitations, and so stress testing will be used within the Bank's broader framework for financial stability and safety and soundness.**

All stress tests have limitations. It is not possible for the Bank's approach to capture and address resilience to every risk or scenario facing the banking system. Furthermore there is a significant degree of uncertainty around how any given scenario would affect the banking system. This reflects the limited number of periods of real stress which hypothetical stressed projections can be informed by, and that any stress-test exercise necessarily involves several modelling assumptions and judgements.

Given these limitations, stress testing is not the only way the Bank assesses the resilience of the banking system. In particular, the Bank will continue to ensure that the design and results of banking system stress tests are integrated within its broader framework for financial stability and safety and soundness. This includes broader analysis, modelling and judgements made by Bank staff, the FPC and PRC of risks to the banking sector, and insights from the PRA's judgement-based individual bank supervision, including analysis of banks' ICAAPs. The Bank will also combine insights from its banking system stress tests with those from other sectors of the financial system, including from stress tests of the insurance and central counterparty sectors, and financial system-wide stress testing.

Box A: Insights that have informed the Bank's updated approach

This box includes a summary of the insights that have informed the Bank's updated approach to stress testing the UK banking system, including lessons learned from the first decade of concurrent stress testing and feedback from external stakeholders.

How the first decade of concurrent stress testing has supported the FPC and PRA

> **Concurrent stress testing has supported the FPC and PRA in meeting their objectives in a variety of ways, although it is important for the approach to continue to develop.**

Concurrent stress testing has been a key tool for the Bank in assessing and informing the resilience of the UK banking system and individual banks within it to cyclical risks. This includes the annual cyclical scenario exercises set out in the 2015 approach, and the adapted approach to assessing financial cycle risks during adverse macroeconomic conditions such as the Covid pandemic, as explained in Section 1.

The Bank has also carried out three biennial exploratory scenario exercises designed to explore risks not closely linked to the financial cycle. These provided a vehicle to test risks from and banks' responses to: low interest rates with increasing competitive pressures in retail banking; a severe and broad-based liquidity stress; and the financial risks from climate change.[14] They also helped to identify data and modelling gaps in banks' toolkits, informing the supervisory approach and driving forward improvements in participants' risk management.

The bank stress-testing framework overall has supported the FPC and PRA in meeting their respective core objectives in the following ways:

- Supporting the building of capital ratios since the global financial crisis, and an assessment of capital adequacy during the Covid pandemic.
- Contributing to the supervisory approach and supporting the identification of vulnerabilities. It has provided a rich evidence base to inform supervisory judgement by enabling peer comparison across various scenarios.
- Supporting a continued improvement in banks' own risk management and capital planning capabilities.
- Demonstrating publicly the resilience of the UK banking system and individual banks within it.

- Revealing broader thematic issues related to banks' balance sheets in stress, supporting policy outcomes. For instance, the Bank identified in the 2014 test, and has since put in place measures to address, procyclicality in mortgage risk weights.

Stress testing has continued to provide vital insights into resilience to the financial cycle. Nevertheless, reflecting the building of capital ratios since the global financial crisis, the marginal benefit of carrying out each year a comparable full-scope capital-based exercise with bank submissions to a single scenario has diminished. Consistent with that, the Bank decided to run a desk-based stress test rather than an annual cyclical scenario in 2024, to assess the resilience of the banking system to two scenarios as an input to the setting of the CCyB and to support the PRA's ongoing supervisory work.

Feedback from external stakeholders on the Bank's approach

> **External stakeholders recognised the value that the Bank's stress-testing approach has provided, but made some suggestions for how it could evolve.**

As part of taking stock of the approach to banking system stress testing, the Bank has gathered external perspectives on its first decade, including from participating banks, market analysts, consultancy firms, credit rating agencies and academics.

Participating banks recognised that the Bank's stress-testing approach had provided value in various ways. It had contributed to the strengthening of the banking system, including its capital adequacy, and had increased public confidence in the resilience of the system. Banks generally understood the Bank's approach to scenario design. The framework had also contributed to an improvement in their risk management, including their own internal stress-testing capabilities and data infrastructure which in turn has allowed them to run internal stress tests more efficiently, such as in times of stress. Banks also noted that the Bank's stress tests – including exploratory scenarios – had allowed them to identify and address vulnerabilities pre-emptively, including through senior level strategic engagement.

Some participants questioned the need for an annual test of cyclical risks, due to improved capital levels, and suggested it may crowd out other forms of risk management. Some banks suggested reducing the burden of stress-testing data requirements. Many participating banks pointed out that the 11-month timeline for the annual cyclical scenario was long, but noted that shortening it could compromise the quality of the test. Participating banks also highlighted the importance of receiving sufficient notice before changes were made to stress-test timetables. Most banks were satisfied with the Bank's published disclosures but would prefer additional private information on the results and drivers of those for their bank.

The move to a biennial frequency for the Bank's cyclical stress test with bank participation will address some of the feedback received regarding the frequency and burden of stress testing. The Bank will continue to consider the rest of the feedback in seeking to ensure the overall approach is efficient and as beneficial as possible for participants.

Academics argued that as well as assessing whether banks have enough capital, stress testing should now be used more to identify and understand risks, vulnerabilities and tipping points. This includes through assessing a broader range of scenarios and risks, including those relating to feedback and amplification channels such as fire sales of assets, solvency-liquidity interactions, and contagion – and including with other parts of the financial system. Academics also noted that the Bank could do more to emphasise the limitations of stress testing, such as around the effectiveness of models in capturing stresses outside historical experience, the reliance on regulatory measures of capital, and the degree of confidence embodied in stress-testing results.

As explained in this publication, the Bank will utilise a broad range of banking system stress tests and supplementary analysis. Recognising the limitations of stress testing, the Bank will continue to ensure that banking system stress tests are used within its broader financial stability and supervisory frameworks.

Other stakeholders – including market analysts, consultancy firms and credit rating agencies – explained that they valued concurrent stress testing and found the results and scenario disclosures useful. Some argued that more detail on disclosures would allow them to understand better the key drivers underpinning the results and enable greater comparability.

2: Bank Capital Stress Tests

In the first component of the updated approach, the Bank expects to carry out every other year a Bank Capital Stress Test in which the largest and most systemic banks participate.

The Bank Capital Stress Test will be a test of risks related to the financial cycle in which the largest and most systemic UK banks participate, and used to inform the setting of capital buffers for the banking system and individual participating banks as well as broader understanding of risks (see Figure 1). As such, the aims and use of the test will be similar in nature to that of the annual cyclical scenario exercises under the previous approach.

The frequency of these tests is expected to be biennial, starting from 2025. This represents a reduced frequency for cyclical stress tests with bank participation compared to the annual cyclical scenario exercises. As explained in Section 1, this signifies a material efficiency gain that supports the UK banking sector's competitiveness and growth. The approach will create space to assess and address a wider set of risks to help respond to an evolving risk environment, and will support participating banks in addressing risks identified through stress testing and enhancing their risk management.

The Bank Capital Stress Test will assess the resilience of the UK banking system to a severe but plausible scenario that will vary with the state of the financial cycle, typically in a countercyclical way.

The design of the Bank Capital Stress Test will reflect the FPC's and PRC's tolerance for how severe a cyclical scenario the banking system should be capitalised to withstand. That tolerance has not changed with the publication of this updated approach. It is reflected in the combination of the severity of the scenario and the level of capital that banks are expected to maintain throughout the stress scenario – the test's 'hurdle rate'.

The scenario used in this exercise is expected to reflect policymakers' assessment of the state of the financial cycle and a severe but plausible crystallisation of the risks facing the banking system. Importantly given its use to inform regular capital setting, the calibration of the scenario is expected to vary based on that risk assessment, and not because of a change in risk tolerance in sizing capital buffers.

That risk assessment will be based on a wide range of indicators, both domestic and global, across a range of markets and sectors, consistent with the regular risk assessment provided to the FPC and published in the FPC Record and Financial Stability Report. The assessment will be combined with historical experience of UK and international stresses to inform the calibration of the scenario.

To provide a broad assessment of resilience to a number of shocks crystallising at once, as well as a core macroeconomic scenario the test is expected to include other elements of stress such as a traded risk scenario and a separate misconduct stress.

The severity of the scenario will tend to increase as risks build and decrease after those risks crystallise or abate. The scenario might therefore be most severe during a period of exuberance – for example, when markets often consider risks to be lowest, credit and asset prices are growing rapidly, and risk premia are compressed – and lower when exuberance has corrected – often the time at which markets assess risks to be largest. Some elements of the stress scenario may be more severe than others, depending on the risk assessment in particular markets or activity.

Varying the scenario in this way over time would be intentionally countercyclical. All else being equal, such an approach would tend to result in banks holding more capital as risks are building up, and allows them to draw on capital buffers as the stress unfolds – thereby continuing to support the wider economy.

It is important to take account of the specifics of the context when calibrating countercyclicality. Experience of previous stresses has highlighted the need to judge based on the circumstances at the time whether it is indeed appropriate to reduce the scale of the shocks in the scenario. This will depend on the extent to which a stress is a crystallisation of risks identified previously, or instead if the distribution of possible outcomes has worsened in such a way that it may be appropriate to deepen the troughs in the scenario.

When a real-life stress is crystallising the FPC and PRC may judge it appropriate to use stress tests to assess the resilience of the banking system to how the actual stress could unfold in light of the risk environment at the time, and so calibrate a stress-test scenario accordingly. This could include testing resilience to a severe materialisation of the risks related to the current stress, or using a stress test to understand which scenarios could generate a specific drawdown in capital (ie a reverse stress test).[15] In such circumstances the appropriateness of using the results to set capital buffers would need to be assessed by the FPC and the PRA in order to ensure it is consistent with their risk tolerance and with due consideration to avoiding procyclicality.

As explained in Section 1, the Bank could include sensitivity or supplementary analysis to gain additional insights beyond the core assessment and results.

The Bank Capital Stress Test will use the Bank's and participating banks' estimates of the impact of the scenario.

Combining the Bank's own and participating banks' projections allows the Bank to establish informed judgements by incorporating a plurality of analytical perspectives. Modelling and analysis performed within the Bank allows banking system-wide comparisons and

benchmarking across peers, helping ensure consistency in the overall results of the stress test. Modelling and analysis by participating banks provides an in-depth view of each bank's resilience to stress, while supporting a continued improvement in banks' own risk management and capital planning capabilities. In addition, cross-checking the submitted estimates against the Bank's modelling allows the Bank to update and enhance its modelling as appropriate.

As of 2025, the timeline for these tests is expected to span an 11-month cycle. Details of the timelines for data submissions will be communicated ahead of exercises as appropriate, recognising the practical need for banks to plan ahead.

The Bank is committed to disclosing the information necessary to explain the results of a Bank Capital Stress Test, to support public confidence in line with the principle of openness. This includes public disclosure of the approach and scenario, and the Bank expects to publish the results at an aggregate and bank-specific level.

Using Bank Capital Stress Tests to inform capital

> **The results of the Bank Capital Stress Test will be used to inform banking system-wide and individual bank capital-setting.**

Box B summarises the parts of the regulatory capital framework that are most relevant to Bank Capital Stress Tests. In practice, the level to which each bank's risk-weighted Common Equity Tier 1 capital and Tier 1 leverage ratios fall in the Bank Capital Stress Test will be assessed against hurdle rates – the level of capital that banks are expected to maintain throughout the stress scenario. The Bank will continue to provide guidance on the hurdle rate at the outset of each Bank Capital Stress Test.

The results of a Bank Capital Stress Test allow an assessment of whether the banking system and individual banks are sufficiently capitalised and have adequate regulatory capital buffers to be able to absorb losses in the stress scenario and still meet the level of capital consistent with the hurdle rate.

If the results of a Bank Capital Stress Test indicate that capital buffers or requirements are insufficient to be able to withstand the stress, the FPC and the PRA have a number of policy levers they can use in response. These include system-wide tools set by the FPC – such as the CCyB – and bank-level tools such as the PRA buffer. Conversely, if the assessment shows the current setting of regulatory capital buffers to be more than sufficient, the FPC and the PRA may act to reduce them. The Bank Capital Stress Test will be one input amongst a range of tools that the FPC and PRA will use in determining the size of capital buffers.

Banking system-wide resilience

If the results of a Bank Capital Stress Test suggest that the regulatory capital buffer for the banking system as a whole is insufficient, the FPC may act to adjust the UK CCyB rate.[16] The results of a stress test are one input to setting the CCyB rate and are considered alongside a range of other factors, as set out in the FPC's policy statement regarding its use of the CCyB. As such, they inform rather than mechanically determine the setting of the UK CCyB rate. The FPC may also use the results of a Bank Capital Stress Test to inform the setting of sectoral capital requirements.[17]

The resilience of individual banks

The PRA buffer is an amount of capital that an individual bank should maintain, in addition to their Pillar 1 and 2A minimum capital requirements and capital conservation buffer (CCoB), CCyB and systemic buffers, to cover losses that may arise under a severe but plausible stress scenario in line with the PRA's risk appetite. This buffer is intended to provide resilience against material bank-specific risks, such as particular sensitivity to the financial cycle relative to that of the banking sector as a whole.

The PRA carries out a PRA buffer assessment for all PRA-regulated banks.[18] For those banks participating in the Bank Capital Stress Test, the PRA buffer can be informed by considering the impact of that stress scenario on a bank's capital position compared to the hurdle rate in the test. The PRA takes account of the extent to which other regulatory buffers already capture the risks identified in the PRA buffer assessment to avoid double-counting.

The Bank Capital Stress Test results for a particular bank might imply that the capital buffers set for all banks (ie the CCoB and CCyB) do not adequately absorb the impact of the stress on that individual bank. In that case, the PRA may adjust the PRA buffer specific to that individual bank, using the approach set out in the statement of policy.[19]

However, the link will not be mechanical. In setting the PRA buffer, the PRA may also consider other relevant information from its supervision of individual banks, including from banks' ICAAPs. The PRA buffer may also include an additional amount to cover risks posed where a bank's risk management and governance is assessed by the PRA to be significantly weak.

Additionally, following a Bank Capital Stress Test, if a bank's stressed losses in the test are such that its capital ratio would fall below the hurdle rate and it does not have sufficient capital to be able to absorb an increase in its regulatory buffers, it may be required to take action to improve its capital position.

Participation

A high level of coverage in a stress test allows the Bank to support the FPC and PRA in achieving their objectives. It provides insight into (and comparison of) how a number of banks would be affected, and makes the test more representative of the resilience of the banking system as a whole and better able to support public confidence in the banking system. However, the benefit of additional insights from greater coverage has to be balanced with the additional costs and complexity to participating banks and the Bank.

> **Participation in the Bank Capital Stress Test will be based on an assessment of a bank's share of lending to the UK real economy, other measures of its systemic importance, and the test's overall coverage of the banking sector's lending to the UK real economy.**

In particular, the Bank would consider including a UK bank or building society in its Bank Capital Stress Test if:

- **it accounts for more than 5% of aggregate lending by the banking sector to UK households and businesses** (equating to £105 billion as of 2024 Q3).[20] This criterion is designed to capture the importance for financial stability of including banks that play a large part in lending to the real economy, so the banking system can support households and businesses in a stress to avoid amplification of the initial shock. The Bank Capital Stress Test is well suited to assess this.

Or:

- **it is designated as a UK headquartered 'global systemically important institution' (G-SII) or a UK headquartered 'other systemically important institution' (O-SII) by the PRA.**[21] [22] G-SII and O-SII designations reflect the PRA's assessment of a bank's potential to affect adversely the stability of the financial system, across a broader range of measures as well as lending. G-SII designations capture a bank's significance based on indicators across categories including size, interconnectedness, substitutability, complexity and cross-jurisdictional activity. Similarly, O-SII designations reflect a bank's significance based on its market share across different categories including lending, deposits, investment banking, custody services, and payments, settlement and clearing services.[23]

And in addition to those bank-specific criteria:

- **participation would be revisited if coverage of the Bank Capital Stress Test falls materially below 75% of the banking sector's lending to UK households and businesses.** It is important to ensure the total coverage of the test allows the results to be representative of the UK banking system's resilience. Since concurrent stress testing

began in 2014, banks participating in cyclical tests have made up around 75%–80% of the sector's lending to the UK real economy.

Decisions on whether a new bank should participate in the Bank Capital Stress Test will be undertaken on a case-by-case assessment of the merits of its inclusion taking into account the criteria set out above. This assessment would also seek to determine whether the overall benefits of including that bank would be proportionate to the costs, both to the bank concerned and to the Bank. The Bank will give notice of at least 12 months to any new bank it decides to include in the Bank Capital Stress Test to ensure that it has sufficient time to prepare for its participation.

In general, it is expected that banks would participate at the highest UK consolidation level. The Bank also expects to invite the ring-fenced subgroups of participating banks to participate in Bank Capital Stress Tests on a standalone basis where this is considered relevant and proportionate.

The approach to participation set out above will apply to Bank Capital Stress Tests after the 2025 exercise.[24] If it had applied to the 2025 exercise, it would not have extended the set of participants relative to the previous annual cyclical scenario exercises. Over time, applying the approach described above may result in changes to participation in future Bank Capital Stress Tests.

> **The Bank will also deliver insights to the FPC and PRC on the resilience to cyclical risks of non-systemic banks. To do so, it will utilise existing stress testing, supervisory intelligence and assessment for these banks.**

The Bank has considered the merits of including a cohort of medium-sized non-systemic UK banks in its Bank Capital Stress Tests. Doing so would increase the test's coverage and could help support improvements in those banks' risk management, capital planning and data collection. Set against that, the costs of participating in Bank Capital Stress Tests would likely place a burden on medium-sized banks that is proportionately higher than for larger banks and may not be warranted by the additional benefits. These include financial and resource costs of building and maintaining the infrastructure and processes to participate in the test. There are also costs to the Bank that – all else equal – would necessitate a reduction in other forms of supervisory and macroprudential assessment.

The Bank, through the PRA, already conducts extensive supervisory assessments to monitor and improve the resilience of PRA-regulated banks, including supervisory review of banks' ICAAP stress testing. The Bank will deliver insights to the FPC and PRC on the resilience to cyclical risks of non-systemic banks by utilising existing stress testing, supervisory

intelligence and assessment for these banks. The Bank judges this – rather than participation in the Bank Capital Stress Test – to be the most proportionate way of providing regular insights to FPC and PRC into the resilience of that group of banks.

> **The Bank will continue to work with home supervisory authorities to assess the resilience of UK-based branches and investment banking subsidiaries of foreign-owned banks.**

The Bank has considered the inclusion of UK-based branches and investment banking subsidiaries of foreign-owned banks in its Bank Capital Stress Tests. Some of these entities are systemically important for UK financial stability. While their share of lending to the UK real economy is small, they account for a substantial amount of total UK banking sector assets and they are highly interconnected with UK banks. However, only assessing UK investment banking operations of these global banks would likely be significantly less informative – and potentially provide false comfort – relative to a group-level test carried out by authorities in the jurisdictions in which these entities are headquartered.

The Bank will instead continue to focus on working with the home supervisory authorities to understand the resilience of the wider groups and to assess the ability of the parents to support their UK operations in a stress. The Bank will also continue to conduct exercises that test how branches and investment banking subsidiaries would wind down UK assets if parent groups could not support them.

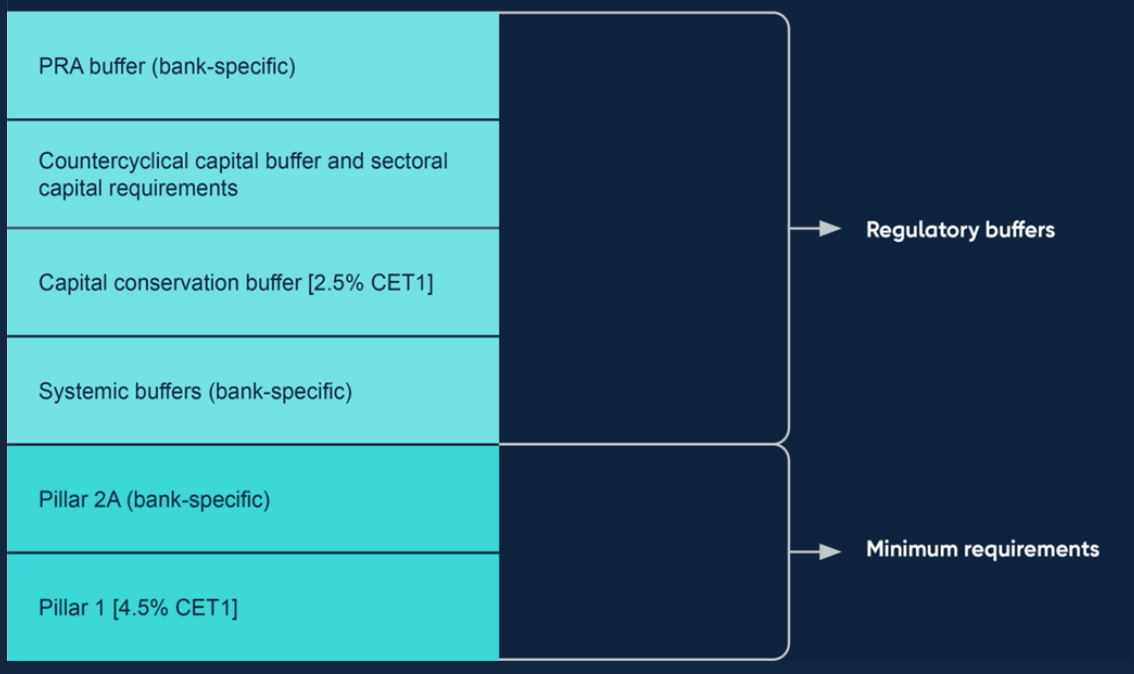
Box B: The regulatory capital framework for the UK banking system

This box summarises the parts of the regulatory capital framework that are most relevant to Bank Capital Stress Tests.

A regulatory capital buffer is the amount of capital that a bank is expected to hold over its 'minimum requirements' (Figure 2).[25] Whereas minimum requirements must be maintained by banks at all times, a regulatory buffer can be run down during periods of stress. Usable buffers allow banks to absorb losses and continue to provide support to the real economy in the face of diverse shocks.

The regulatory capital buffer is comprised of systemic buffers, the CCoB, the CCyB, any sectoral capital requirements and the PRA buffer (Figure 2).

Figure 2: Components of the regulatory capital framework (a) (b)



(a) Banks are subject to four capital buffers: a buffer for systemically important banks (which can be set up to a maximum of 3.5% of risk-weighted assets (RWAs) for a global systemically important bank (G-SIB) and 3% for domestically systemically important banks; a CCoB equivalent to 2.5% of RWAs to build capital during stable financial conditions that can be used to absorb losses in a stress; a CCyB set by the FPC which applies to UK exposures; and the PRA buffer, or Pillar 2B buffer, set by the PRA, which is an amount of capital that banks should

have in addition to their minimum requirements, to allow banks to continue to meet the overall financial adequacy rule even in adverse circumstances. The FPC's sectoral capital requirements tool – which has not been used to date – is more targeted than the CCyB and allows the FPC to change capital requirements on exposures to specific sectors judged to pose a risk to the system as a whole.
(b) For more information on these tools see: Countercyclical Capital Buffer (CCyB) (**The Financial Policy Committee's approach to setting the countercyclical capital buffer - Policy Statement (bankofengland.co.uk)**); the PRA Buffer, or Pillar 2B buffer (**The PRA's methodologies for setting Pillar 2 capital | Bank of England**); and Sectoral Capital Requirements (The **Financial Policy Committee's powers to supplement capital requirements. A Policy Statement (bankofengland.co.uk)**).

3: Other stress tests of cyclical risks

In the years between Bank Capital Stress Tests the Bank expects to use stress testing when appropriate to supplement its assessment of the resilience of the banking system to risks related to the financial cycle. This will be done in a way that is less burdensome for banks, for example through desk-based exercises.

In forming their assessment of the resilience of the banking system and individual banks within it to cyclical risks, the FPC and PRC consider a broad range of insights. These include regular financial stability and supervisory analysis of the banking system, supervisory intelligence, and consideration of risks in other parts of the financial system, as explained in Section 1. In the intervening years between Bank Capital Stress Tests, stress testing could supplement these insights in a number of ways that are less burdensome for banks than a Bank Capital Stress Test (as shown in Figure 1).

Such exercises can allow for more adaptability in the Bank's approach to assessing risks and vulnerabilities, meeting the FPC's and PRC's needs in a proportionate way. They can vary in granularity, and the number or nature of scenarios considered. Additionally, compared to the Bank Capital Stress Test, they could provide insights in a less resource-intensive, more timely or more targeted way.

By way of example, such exercises could include desk-based exercises which rely primarily on the Bank's own estimates of the impact of stress scenarios. Or they could include targeted exercises capturing how specific vulnerabilities or aspects of banks' business models could evolve under adverse scenarios. They could also include assessments of resilience to cyclical risks based on information in banks' own stress tests undertaken as part of their ICAAPs.

Under the Bank's updated approach, the design of these exercises will be tailored to the FPC's and PRC's assessment of risks. The coverage of banks in these exercises would hence depend on the types of risks being assessed and the mix of different business models within the banking system. The results of these exercises are not likely to be published beyond an aggregate level.

Desk-based stress tests

The Bank intends to continue to use desk-based stress tests when appropriate to undertake an assessment of the resilience of the banking system in a way that is more agile than Bank Capital Stress Tests.

The Bank intends to continue to use desk-based stress tests – exercises that rely primarily on the Bank's own estimates of the impact of stress scenarios – to assess cyclical risks when appropriate. This will be to supplement the FPC's and PRC's assessment of resilience, including of banking system-wide capital levels. It will build on the experience of desk-based exercises undertaken both in 2020 and 2024. The desk-based exercise in 2020 was used to provide reassurance on the ability of the banking system to withstand the Covid pandemic. The 2024 test assessed the resilience of the banking system to two scenarios as an input to the setting of the CCyB and to support the PRA's ongoing supervisory work.

Desk-based exercises complement the other tools in the Bank's toolkit and offer several potential advantages. First, they can embody more flexibility in their design such as in the breadth of risks covered, the number and severity of scenarios, as well as the depth of analysis such as the granularity and precision of assumptions. These exercises can range from an in-depth analysis of a small number of scenarios utilising a number of models and expert judgement (as in the 2024 desk-based exercise), to a less granular analysis, potentially of a larger number of scenarios. As was the case during the pandemic, desk-based exercises can incorporate a reverse stress test to identify which assumptions could cause a particular impact on the banking system.

Second, desk-based exercises are typically more agile, and could be carried out over a relatively short timeline, as they do not tend to involve analysis of bank submissions. The greater agility of desk-based exercises means that they may be particularly appropriate in fast-moving or stressed environments. They may also be useful where the Bank judges it appropriate to update its assessment of banking sector resilience since the last Bank Capital Stress Test in a timely or less resource-intensive way, or alternatively where the Bank aims to inform the development of a range of scenarios as part of broader risk assessment by the FPC. Another benefit of carrying out more desk-based exercises over time is that further investment in and utilisation of its modelling toolkit will increase the Bank's capabilities, which will further reinforce the insights from future exercises.

The Bank can draw on a range of modelling approaches and judgements to inform its estimates of the impact of stress on banks' balance sheets. Nevertheless, a key limitation of desk-based exercises is that they do not benefit from the depth of analysis that would come with participating banks providing their own estimates. As such, the results of such exercises are not likely to be published beyond an aggregate level.

Relatedly, desk-based stress tests relying primarily on the Bank's own estimates tend to provide less insight for individual banks for their own risk management. The biennial approach to the Bank Capital Stress Test will, however, allow banks more time to improve risk management, including to respond to the Bank's previous feedback on their submissions.

To address some of the limitations of desk-based stress testing, in some circumstances the Bank could request some input from banks to enhance risk insights. This would be on a scale significantly lower than that of a Bank Capital Stress Test, and the Bank will be mindful that any burden on banks would need to be proportionate and that appropriate notice would need to be provided.

As in the other types of stress test in this publication, the Bank may use sensitivity and supplementary analysis to gain additional insights beyond the core results and assessment.

Other exercises

Targeted exercises or an assessment of banks' own stress tests could also be used to assess the resilience of the banking system to cyclical risks.

There are a number of other ways in which the Bank could support the FPC's and PRC's assessment of the resilience of the banking system and individual banks within it to cyclical risks in a way that is less burdensome than Bank Capital Stress Tests.

As an alternative to a stress-test exercise covering banks' balance sheets as a whole, the Bank could run targeted exercises capturing how specific vulnerabilities or aspects of banks' business models could evolve under adverse scenarios. These could involve granular analysis and modelling of particular asset classes or portfolios.

Mindful of the potential burden on banks, the Bank would rely on existing data where appropriate, and seek input from banks only where it would likely provide a proportionate benefit in delivering the aims of the exercise. That input would likely be substantially more limited than for a whole balance-sheet stress test, and the Bank would provide appropriate notice for any submissions that are required.

The Bank could also carry out assessments of resilience to cyclical risks based on information in banks' own stress tests carried out as part of their ICAAPs, which they produce and submit to the Bank.

4: Exploratory exercises

The Bank will continue to use exploratory exercises as a means of assessing other risks, including structural and emerging risks that are not closely linked to the financial cycle.

Stress tests based on exploratory scenarios that are not closely linked to the financial cycle have proven a successful part of the Bank's approach to stress testing over the past decade (eg the 2021 climate biennial exploratory scenario). The banking system and the risks facing it have changed since the global financial crisis and it is important that the Bank continues to evolve its approach to capture these risks. The Bank intends to continue to undertake such exploratory exercises to explore a wide range of risks that might threaten financial stability or the safety and soundness of individual banks (as shown in Figure 1).

The risks captured in these exercises might include structural changes in the economy or financial system, such as the increasing interlinkages with, or prominence of, non-bank financial institutions. They could also include emerging systemic risks that have little precedent from a historical perspective or from being stress tested before, for instance demographic change, climate change or the adoption of artificial intelligence. The timing of such exploratory exercises will in part be informed by the FPC's and PRC's assessment of such risks.

While exploratory stress tests of structural and emerging risks could be carried out on a desk-based basis, helping to limit the length of time required to complete them, stress tests of emerging or structural risks which have had limited previous assessment typically benefit from participation by banks.

Exploratory exercises may be focused exclusively on the banking sector (as per the 2019 Liquidity biennial exploratory scenario),or involve other sectors (as per the 2021 Climate biennial exploratory scenario, which included insurance companies). Banks may also be invited to take part in future financial system-wide exercises, as was the case in the 2024 system-wide exploratory scenario.

These exercises could potentially utilise multiple scenarios. In addition, multiple rounds could be used to assess either how participants would respond to additional information revealed as the scenario unfolds, feedback and amplification between participants, or to probe their initial submissions in more detail. Reverse stress test exercises could also be used to explore what combination of assumptions would affect the banking system to a given pre-defined impact, for instance the point at which financial stability may be threatened. Such a reverse

stress test could be related to either structural or cyclical risks. It could assess the banking system in aggregate or be carried out with bank participation as part of a concurrent exercise.

The granularity of disclosure of the results of these exercises may vary, dependent on a range of factors including how novel the risk or vulnerability is, and the uncertainty around the projections. As has been the case to date in such exercises, the results of these exercises are likely to be published at an aggregate level. The results will be used to inform financial stability and supervisory assessment, wider policy, and banks' risk management.

Participation and principles of bank engagement

> **Exploratory exercises involving bank participation will be designed under the guidance of the FPC and PRC. The Bank will carefully consider the sequencing and timing of the other stress tests described in this publication and the burden on banks.**

As indicated above, bank participation in exploratory exercises of novel risks can facilitate a more robust set of results. It can also deliver a richer understanding of the financial stability and supervisory consequences of structural risks or banks' behaviours, and inform the identification and management of risks by participants. Banks have given positive feedback on their participation in past exercises and how they have helped them identify and address vulnerabilities.

Given the varying focus and scope of the tests, the choice of which banks participate in exploratory exercises will vary, depending on the objectives of the exercise, the relevance of banks' business models to the scenario and risks that are in focus, and whether participation is proportionate for those banks. In informing that assessment of proportionality, the Bank will take into account the costs and benefits of participation relative to the insight from other supervisory activity and analysis.

In line with the approach the Bank has taken to past tests, exploratory exercises involving bank participation will be designed under the guidance of the FPC and PRC. The timing of such exercises will take into account the risk environment, as described above, as well as – as has been the case with such tests in the past – the sequencing and timing of other stress-test exercises including those described in this publication. The Bank will engage with relevant firms to ensure appropriate notice is provided to allow time to prepare for participation. The Bank will carefully consider the burden on banks to balance the analysis required to assess novel scenarios with the additional insight that can be gained from bank participation, and will ensure the volume and complexity of submissions is proportionate.

Glossary

CCoB – capital conservation buffer.

CCyB – countercyclical capital buffer.

CET1 – Common Equity Tier 1 capital.

FPC – Financial Policy Committee.

G-SIB – global systemically important bank.

G-SII – global systemically important institution.

ICAAP – Internal Capital Adequacy Assessment Process.

O-SII – other systemically important institution.

PRA – Prudential Regulation Authority.

PRC – Prudential Regulation Committee.

RWAs – risk-weighted assets.

SREP – Supervisory Review and Evaluation Process.

1. In this publication, reference to 'banks' or the 'banking system' refers to banks and building societies.
2. PRA Supervisory Statement **SS31/15 - The Internal Capital Adequacy Assessment Process (ICAAP) and the Supervisory Review and Evaluation Process (SREP) | Bank of England**, May 2023.
3. **System-wide exploratory scenario | Bank of England**.
4. **Thematic findings from the 2022 cyber stress test | Bank of England**.
5. **The Bank of England's approach to stress testing the UK banking system**, October 2015.
6. **Stress testing the UK banking system: 2022/23 Annual Cyclical Scenario results | Bank of England**, July 2023; **Results of the 2021 Climate Biennial Exploratory Scenario (CBES) | Bank of England**, May 2022.
7. **Monetary Policy Report and Financial Stability Report - August 2020 | Bank of England**; **Stress testing the UK banking system: 2021 Solvency Stress Test results | Bank of England**, December 2021.
8. See the results of the 2024 desk-based stress test in the **November 2024 Financial Stability Report**.
9. **Stress testing | Bank of England**.

10. **Evaluation of the Bank of England's approach to concurrent stress testing**, April 2019; **The Bank of England's response to the Independent Evaluation Office's evaluation of its approach to concurrent stress testing**, April 2019; Basel Committee on Banking Supervision **Stress testing principles**, October 2018; **United Kingdom: Financial Sector Assessment Program-Financial System Stability Assessment**, February 2022; **United Kingdom: Financial Sector Assessment Program-Basel Core Principles for Effective Banking Supervision-Detailed Assessment Report**, June 2016.

11. **Remit and recommendations for the Financial Policy Committee – November 2024 | Bank of England**; **Financial stability at the Bank of England | Bank of England**, September 2024; **The contribution of the Financial Policy Committee to UK financial stability | Bank of England**, September 2024; **Prudential Regulation Authority Business Plan 2024/25 | Bank of England**, April 2024.

12. Policy Statement - **The Financial Policy Committee's approach to setting the countercyclical capital buffer | Bank of England**, July 2023.

13. Statement of Policy - **The PRA's methodologies for setting Pillar 2 capital**, July 2022.

14. **Stress testing the UK banking system: 2017 results**, November 2017; 2019 Liquidity BES findings set out in the **Financial Policy Summary and Record - March 2021 | Bank of England**.

15. The term 'reverse stress test' in this publication differs from the meaning of reverse stress testing in the PRA Rulebook. There it is used to refer to an exercise that involves exploring the size and nature of shocks that would render for each bank in isolation its business model unviable or its financial position fragile.

16. The prevailing CCyB rate for each bank is a weighted average of the CCyB rates set in each country to which it is exposed. This is applied as a single CCyB rate for that bank, and applies to all its assets calculated as a weighted average of the UK and overseas rates, reflecting the geographical distribution of assets.

17. The sectoral capital requirement tool provides a means for the FPC temporarily to increase banks' capital requirements on exposures to specific sectors eg commercial property lending. See Policy Statement, **The Financial Policy Committee's powers to supplement capital requirements, January 2014**.

18. **The PRA buffer | Prudential Regulation Authority Handbook & Rulebook**.

19. **Statement of Policy 'The PRA's methodologies for setting Pillar 2 capital' - July 2021**.

20. Data on aggregate lending by the banking sector to UK households and businesses are published regularly as part of the money and lending Bankstats tables: **Bankstats tables | Bank of England**.

21. As of 2024, G-SII designation is set out in Part 4 G-SII buffer (**The Capital Requirements (Capital Buffers and Macro-prudential Measures) Regulations 2014**). The PRA is consulting on an approach to identifying G-SIIs in a Statement of Policy (**CP10/24 – Updates to the UK policy framework for capital buffers | Bank of England**).

22. Statement of Policy **PS9/22 - Amendments to the PRA's approach to identifying other systemically important institutions (O-SIIs) | Bank of England** November 2022.

23. The full list of categories used to determine O-SII designation is: retail banking; corporate banking; intra-financial banking; payment, settlement and clearing services; custody services; and investment banking.

24. The approach to participation in the 2025 test was set out in the **Financial Policy Summary and Record - October 2023 | Bank of England**.

25. Minimum requirements are comprised of Pillar 1 and Pillar 2A requirements. Pillar 1 requirements constitute a minimum of Common Equity Tier 1 capital (CET1) capital equivalent to 4.5% of risk-weighted assets (RWAs), along with other Tier 1 and combined Tier 1 and Tier 2 requirements. Pillar 2A constitutes an amount of capital set by the PRA to be held by banks at all times and reflects risks that have not been addressed or have only partially been addressed by Pillar 1, such as the risk from banks' own pension schemes.