Basel Committee
on Banking Supervision

Overview of Pillar 2 supervisory review practices and approaches

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Executive summary

The Pillar 2 supervisory review process is an integral part of the Basel Framework. It is intended to ensure that banks not only have adequate capital to support all the risks in their business but also develop and use better risk management techniques in monitoring and managing these risks. Under the Basel Framework, a bank's management bears responsibility for ensuring that the bank has adequate capital to support its risks beyond the minimum requirements. In addition, under Pillar 2, supervisors evaluate how well banks assess their capital needs relative to their risks and take measures, where appropriate. The supervisory evaluation is therefore intended to generate an active dialogue between banks and supervisors so that when excessive risks, insufficient capital or deficiencies are identified, prompt and decisive action can be taken to reduce risk, address deficiencies or restore capital.

Pillar 2 of the Basel Framework does not include prescriptive guidance or direction on supervisory approaches. Rather, it is principles-based and intended to be tailored to the risks, needs and circumstances of the respective jurisdictions. Supervisors thus use a range of approaches, methodologies and strategies to execute their supervisory review process to meet the overall objectives of a sound supervisory approach to Pillar 2. Notwithstanding some differences in jurisdictional approaches, the Pillar 2 outcomes across jurisdictions are directionally similar. Furthermore, Basel Committee jurisdictions try to minimise any potential effect on banks from jurisdictional differences through cooperation in supervisory colleges and other forms of collaboration and coordination.

This report does not attempt to indicate whether one jurisdiction's approach is preferable to another's, especially since each jurisdiction has adopted the approach that is the most suitable to its particular situation and circumstances. Nevertheless, Basel Committee supervisors have a consistent approach with respect to the prominence they give to assessing banks' risk management. All supervisors use assessment programmes that reinforce and review banks' risk management frameworks. Furthermore, most supervisors rely on banks' internal capital adequacy assessment process (ICAAP) and other risk reporting. Differences in supervisory review processes can reflect different supervisory norms and practices, and many of these differences can be attributed to heterogeneity in banks' portfolios, risk profiles and differences in the jurisdictional banking environment. Some of the differences in supervisory practices reflect a practical need to tailor or apply proportionality.

This report provides a broad overview of the key concepts of Pillar 2 and presents a description of different practices in use across Basel Committee member jurisdictions. While the report covers a range of topics, it is not a comprehensive stocktake of all Pillar 2-related topics for all Basel Committee member jurisdictions. Rather, the report highlights key areas of the Pillar 2 framework and provides examples and case studies of the ranges of practices. Supervisors will continue to develop Pillar 2 practices over time and adjust to new risks and methodologies. Content from the report should be helpful to Basel Committee members and non-members alike, as well as to the industry at large.

1. Introduction

When the Committee introduced the Basel II framework in 2004, a fundamental objective of the Committee's work was to reinforce the minimum capital requirements of the first pillar with a robust implementation of the second pillar. This included efforts by banks to assess their capital adequacy and by supervisors to review such assessments.[1] In addition, the disclosures provided under the third pillar of the framework would further ensure that market discipline is an effective complement to the other two pillars. Since the introduction of Basel II, the Pillar 2 supervisory review process has been explicitly recognised as an integral part of the Basel Framework and is intended not only to ensure that banks have adequate capital to support all the risks in their business but also to encourage banks to develop and use better risk management techniques in monitoring and managing these risks. Furthermore, as the finalisation of Basel III included significant changes to Pillars 1 and 3, attention has also turned to how Pillar 2 complements these reforms.

Given Pillar 2's importance within the Basel Framework, this report provides a broad overview of the key concepts of that pillar and presents a description of different practices in use across Committee member jurisdictions.[2] The report is intended to help internationally active banks with cross-border activities, financial market participants and other interested parties to further understand various jurisdictional Pillar 2 approaches. The report does not attempt to indicate whether one jurisdiction's approach is preferable to another's, especially since each jurisdiction has adopted the approach that is the most suitable to its particular situation and circumstances.

This report focuses on capital-related issues. However, it is important to stress that both capital and liquidity are critical areas of focus for supervisory activities and the Committee affirms that both areas require appropriate supervisory review. With respect to liquidity, the Committee has extensive publications that provide standards, guidance and sound practices in this area.[3] While the report attempts to provide a description of various Pillar 2 practices related to capital, it does not capture all of the elements used by each Committee member jurisdiction. For details regarding a certain jurisdiction's approach to Pillar 2, readers should consult that jurisdiction's public disclosures regarding Pillar 2 practices.[4]

The main body of the report is organised in three sections, with case studies used to illustrate supervisory practices. The first section sets out the key areas of the Pillar 2 supervisory review process, including the risk assessment process, risk appetites, board and senior management roles and supervisory practices adopted to enhance transparency, and bank disclosure practices. The second section describes a number of selected Pillar 2 risks, including business risk and interest rate risk in the banking book. The final section presents a range of actions that are taken under Pillar 2, which are corrective actions that do not necessarily include capital as well as explicit capital expectations.

2. Pillar 2 supervisory review process

The second pillar of the Basel Framework is intended not only to ensure that banks have adequate capital to support all the risks in their business but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks. For that reason, Pillar 2 is also described as the supervisory review process. This process recognises the responsibility of a bank's management in

1 BCBS, *International convergence of capital measurement and capital standards: a revised framework*, June 2004, https://www.bis.org/publ/bcbs107.pdf.

2 Basel Committee membership, https://www.bis.org/bcbs/membership.htm.

3 BCBS publications, topic: liquidity risk (https://www.bis.org/bcbs/publications.htm).

4 As part of the Committee's jurisdictional assessments through the Regulatory Consistency Assessment Programme (RCAP), the Committee hosts a list of domestic implementation links; see https://www.bis.org/publ/bcbs/b3prog_dom_impl.htm.

developing an internal capital assessment process and setting capital targets that are commensurate with the bank's risk profile and control environment. Under the framework, a bank's management bears responsibility for ensuring that the bank has adequate capital to support its risks beyond the minimum requirements. In addition, under Pillar 2, supervisors evaluate how well banks assess their capital needs relative to their risks and take measures, where appropriate. The supervisory evaluation process is intended to generate an active dialogue between banks and supervisors such that when excessive risks, insufficient capital or deficiencies are identified, prompt and decisive action can be taken to reduce risk, address deficiencies or restore capital.

By construction, Pillar 2 is intended to be flexible and to accommodate each jurisdiction's specific supervisory approach. In this section, some of the commonalities of the supervisory review process and approaches are discussed. The areas discussed include risk assessment, risk appetite, governance and responsibilities as well as international supervisory coordination, disclosure and work plans.

2.1 Overview of the supervisory review processes

The Committee recognises the relationship that exists between the amount of capital held by the bank against its risks and the strength and effectiveness of the bank's risk management and internal control processes. However, increased capital should not be viewed as the only option for addressing increased risks confronting the bank. Other means for addressing risk, such as strengthening risk management, applying internal limits, strengthening the level of provisions and reserves, and improving internal controls, must also be considered. Furthermore, capital should not be regarded as a substitute for addressing fundamentally inadequate control or risk management processes.

There are many commonalities in the factors considered by supervisors as part of the supervisory review process. All supervisors consider risk management practices and rely on supervisory review and judgment. All supervisors also use information from a bank's ICAAP and stress testing projections. Other common areas are macroprudential considerations, adequacy of provisioning, and the use of thresholds to identify outliers. Some supervisors also allow for simplified approaches for non-systemic banks.

Importantly, the Committee has identified four key principles of supervisory review. These principles form the basis on which jurisdictions have applied their approaches to the supervisory review process.

1. Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels.
2. Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the results of this process.
3. Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.
4. Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

While the principles are common across all Basel Committee member jurisdictions, there are some differences in how jurisdictions implement these. The following case studies highlight some of these approaches.

Case study 1: Supervisory review process

One approach to the supervisory review process is an ongoing process that brings together findings from all supervisory activities performed on a bank or banking group into a comprehensive supervisory review. This process is built around the following components:

– Analysis of the viability of the business model of the bank or banking group and analysis of the sustainability of its strategy.

– Assessment of the internal governance and control framework of the bank or banking group to assess whether they are adequate for its risk profile, business model, size and complexity; and to assess the degree to which the bank or banking group adheres to the requirements and standards of good internal governance, risk management and internal control arrangements.

– Assessment of each material risk to which the bank or banking group is exposed by assessing the inherent risk and the quality and effectiveness of risk management and controls implemented to mitigate the risk.

– Assessment of the adequacy of the bank's or banking group's own funds to cover the risks to capital by determining whether the quantity and quality of own funds held by the bank or banking group ensure an appropriate coverage of those risks.

The assessment of the above components is based on a monitoring of key indicators in order to identify material changes in the financial conditions and risk profile of the bank or banking group.

Under the supervisory review process, supervisors review the bank's or banking group's internal capital processes. In particular, they assess the ability of the bank or banking group to implement risk strategies consistent with its risk appetite. They also determine its ability to establish sound capital plans. Supervisors examine the adequacy and allocation of internal capital, its stress testing capabilities, programmes and outcomes.

The above components are given scores ranging from 1 (low-risk) to 4 (high-risk). These scores reflect the views of supervisors on the risks and viability of the bank or banking group by exercising its supervisory judgment. The assessments are the basis for taking any necessary supervisory measures to address the deficiencies identified during the supervisory review process. In particular, supervisors may impose capital add-ons or other requirements on the bank or banking group where they consider that its own funds or other resources are not sufficient to cover the risks.

Case study 2: Principles-based supervisory approach

In this jurisdiction, supervisors take a holistic approach, ie one which is more principles-based and forward-looking. The supervision and the evaluation process are conducted on an ongoing basis, especially for large internationally active banks, with focus on the supervisory priorities.

The steps taken for the supervisory process are as follow:

– Collecting information from, but not limited to, results of on-site activities, data submitted by the banks, interviews with the banks' employees with different levels of responsibility or functions, and public information; and evaluating the risk profile of the bank.

– Analysis and assessment of the information on the banks' business and financial conditions.

– Identification of challenges, through analysis of findings from on-site and off-site activities, if deemed necessary.

– Proposal of measures to address the issues identified, and holding dialogues with management.

– Following up on the actions taken by the banks to correct the identified challenges.

Through such a process, the scope of off-site monitoring activities includes, assessing the banks' management strategy, the supervisory function of the board of directors, the activities of internal audit, governance over overseas entities and branches, IT governance, compliance (conduct risk control), the IT system as well as the banks' risk management and financial conditions. In particular, supervisors' focus is on the banks' implementation of sustainable medium- to long-term business plans and strategies.

Proportionality also plays role in the supervisory process. For example, frequent on-site activities are conducted for major banks, especially focusing on specific risks or business lines, while on-site activities for regional banks are usually less frequent, reflecting a simpler business model and less complex risk profile, compared with major banks.

Recently, this jurisdiction revised its method of identifying banks for examination, with a main focus on regional banks whose future sustainability, profitability and capital levels could be a concern. By estimating future profitability and capital adequacy ratio in worsening scenarios, this updated approach will enable a more pre-emptive supervisory response, which could include requiring banks to develop profitability improvement plans and to increase capital.

2.2 Risk assessments

Under the Basel Framework, a bank's management bears primary responsibility for ensuring that the bank has adequate capital to support its risks.[5] There is universal consensus among supervisors that a bank must determine how best to set up risk management systems and processes to assess their risks. Based on the identification and understanding of their material risks, a bank quantifies and addresses those risks by adding capital sufficient to cover risks or by applying other mitigating factors. The risk identification, monitoring, quantification and measurement processes are of the utmost importance, as they are the foundations for risk management processes. As such, the range of practices adopted by supervisors is focused primarily on the review of banks' internal processes rather than on the establishment of prescriptive requirements to be met by a bank.

All supervisors review the strategies, processes and mechanisms implemented by a bank in relation to its risk profile and associated internal capital resources. These reviews are usually based on the assessment of banks' business models, its internal governance and risk management framework, and an assessment of the risks to capital. For most supervisors, the assessment of the risks to capital is often conducted on an ongoing basis, complemented with a periodic comprehensive review of the bank's capital positions through a review of its ICAAP and stress test results. From these reviews, supervisors generally obtain a holistic, forward-looking assessment of the overall viability of the bank. Many supervisors then use this information to formulate additional supervisory measures (eg additional capital expectations). The ongoing risk assessment is usually supported by regular off-site or on-site analysis, financial reporting, qualitative information, other data requested by the supervisor out of the reporting line, audit reports and meetings with bank management.

Banks' ICAAPs are often the starting point for developing supervisory Pillar 2 expectations. Supervisors typically have a standardised yet flexible ICAAP reporting process for a bank to submit its regular ICAAP risk metrics. Given the important role of these reports, some supervisors require external

[5] BCBS Supervisory Review Process 20.5, Principle 1, "Banks' process for assessing capital adequacy", https://www.bis.org/basel_framework/chapter/SRP/20.htm.

auditors to evaluate the quality of a bank's processes. Supervisors often supplement these reports with on-site examinations.

In order to better understand and verify metrics reported by a bank, most supervisors compare bank results with external benchmarks (eg industry assessments). This comparison can help reveal potential weaknesses or inconsistencies in a bank's ICAAP, which can then inform additional supervisory dialogues with the bank. When reviewing a bank's capital adequacy assessments and strategies, all supervisors verify that the underlying methodologies and assumptions are consistent with the risks to which they are exposed. Supervisors also confirm that the methodologies and assumptions are based on reliable input data and robust parameter estimates. All supervisors also assess the models and methodologies used for risk management and capital adequacy systems. In addition, supervisors use outlier tests, peer analysis and benchmarks and require specific reporting from banks.

The majority of supervisors review banks' risk assessments in a proportional or tailored approach. For example, supervisors may reduce the frequency, scope and depth of the reviews depending on a bank's risk profile, as well as the nature and complexity of its business. Similarly, the majority of supervisors also expect banks to adopt a proportional approach in their internal measurement and assessment methodologies of their relevant risks. Another common approach is supervisors requiring banks to identify scenarios that may give rise to material risks. When reviewing stress test results, supervisors may seek to verify whether existing risk areas continue to be relevant to banks under existing macro-environment and adverse scenarios, and the identification of emerging risks that may arise from business strategies.

All supervisors also require banks to have risk management frameworks and systems not only to identify risks, but also to measure, monitor and mitigate material risks on an ongoing basis. Supervisors require regular monitoring of risk exposure and capital positions, with significant concerns being reported to senior management and the board whenever necessary. The majority of supervisors also require established procedures for prompt reporting and escalation of breaches to senior management, as well as for ensuring that appropriate follow-up actions are taken.

For other risks that are challenging to quantify, many supervisors require these to be assessed in some other way (ie expert judgment) and to be managed through limits, controls and management oversight. For risks that are not deemed material individually, some supervisors may require they be specifically addressed through the setting of prudent capital buffers.

2.3 Risk appetite

Most supervisors do not provide banks with detailed requirements to follow in developing their risk appetite.[6] This is in part to ensure that banks understand the risks they face, and also that they fully accept responsibility for managing and mitigating these risks. However, many supervisors do have expectations with respect to some facets of the risk appetite development process. For example, the risk appetite should be linked to the risk strategy of the bank. Most supervisors require a linkage between a bank's risk appetite and some set of targets, limits, tolerances, triggers or thresholds for consistency purposes. Furthermore, supervisors generally expect the risk appetite framework to be fully integrated in its decision-making processes and risk management, and aligned with the bank´s business plan, strategy, capital planning and employee remuneration practices. All supervisors require that a bank's risk appetite cover all the material risks to which it is exposed.

Many supervisors also require that risk appetite be allocated to different business lines, divisions or subsidiaries with quantitative metrics or risk limits.[7] Most supervisors require limits to be monitored by

[6] This report does not discuss in detail the roles of regulators and supervisors. In short, in some jurisdictions these roles are headed by different organisations, and this can affect the supervisory review process and associated expectations.

[7] Senior Supervisors Group, *Observations on developments in risk appetite frameworks and IT developments*, December 2013, https://www.newyorkfed.org/medialibrary/media/newsevents/news/banking/2010/an101223.pdf.

the risk management function, and breaches to be reported to the respective risk committees and taken into account in the performance measurement of the respective business lines. With regard to the risk limit setting process, most supervisors consider not only limits on individual risks but also the correlation among them. Supervisors then verify if limits are (i) closely related to the bank's capital plans, based on forward-looking assumptions; (ii) comprehensive; and (iii) easily monitored. Some supervisors require banks to define action points or activate warning lights in terms of capital adequacy (based on indicators such as economic capital, value-at-risk and expected shortfall). Other supervisors require that these limits reflect the importance of the bank for the financial system and be defined in terms of its equity, total assets, profits or level of total risk.

There is some heterogeneity in supervisors' thinking on how often the risk appetite frameworks should be reviewed. Some supervisors require an annual review of the risk appetite framework, with an ex ante review and recalibration of the risk and return targets and any associated operational constraints. Others explicitly require banks to review the risk appetite framework more frequently. Most supervisors require annual independent review of the risk appetite framework.

2.4 Board and senior management roles

A bank's board has the ultimate responsibility for the sound operation and financial condition of the bank. While the operationalisation of a risk management framework can be delegated to senior management, the board should review and approve the main objectives of the ICAAP and agree on the main assumptions of risk identification and risk measurement.

The majority of supervisors explicitly review the composition of bank boards, as well as how they function and their effectiveness. Many supervisors also review the interaction among board members, with particular attention to the board's composition, roles and skills of its members, succession planning, organisation and functioning. This is often done by reviewing board minutes, the quality of reports and other information provided to the board. Supervisors also evaluate whether there is sufficient independence among board members and if there is sufficient training. Many supervisors verify whether there are conflicts of interest and, if so, their materiality and how they are managed.

All supervisors consider that boards and senior management must understand the nature and level of risk assumed by the bank and how that level of risk is consistent with its capital levels, though to differing degrees of detail. Senior management should ensure that risk management policies, practices and procedures are consistent with the bank's risk profile and its business plan, and are effectively implemented. Board members should also possess sufficient knowledge of all the major activities and material risks of a bank to provide appropriate challenge to senior management and ensure that policies, controls and risk monitoring systems are effective. Most supervisors require senior management actions to be monitored through some indicators, such as balanced scorecards or risk-related key performance indicators to enforce accountability and ownership of risks, and to ensure that risk management is a key focus in making strategic and day-to-day decisions.

Connected to board and senior management roles is the role of effective corporate governance. The Committee's revised principles published in 2015 provides a framework within which banks and supervisors should operate to achieve robust and transparent risk management and decision-making and, in doing so, promote public confidence and uphold the safety and soundness of the banking system.[8] The revised principles, which supersede the guidance published by the Committee in 2010, emphasise the critical importance of effective corporate governance for the safe and sound functioning of banks. The

8 BCBS, *Corporate governance principles for banks*, July 2015, https://www.bis.org/bcbs/publ/d328.pdf.

revised principles stress the importance of risk governance and promote the value of strong boards and board committees together with effective control functions.

2.5 Home and host supervisory coordination

In accordance with the principles issued by the Committee,[9] supervisory authorities involved in the supervision of international banking groups should establish supervisory colleges for all large banks. These colleges play an important role in the effective supervision of international banking groups. They enhance information-sharing among supervisors, help the development of a shared agenda for addressing risks and vulnerabilities, and provide a platform for communicating key supervisory messages among college members. Supervisors recognise the importance of collaboration and information-sharing outside the formal college meetings. They may also establish crisis management groups and pay greater attention to macroprudential considerations.

Supervisors emphasise the importance of consolidated supervision as an essential element of banking supervision, while recognising the principle that responsibility for the supervision of safety and soundness resides with the licensing jurisdiction.[10] Supervisory colleges are instrumental in allowing supervisors to learn about each other's practices. They also may contribute to reducing the regulatory burden on banks across jurisdictional borders.

In order to improve supervisory coordination and minimise bank regulatory burden, supervisors have extensive bilateral and multilateral conversations. These discussions include coordination on specific supervisory concerns. Supervisors also discuss capital requirements and capital frameworks in other forums.[11]

Case study 3: Supervisory colleges

One local authority is a host supervisor of a substantial number of cross-border banking groups, including all global systemically important banks. In this context, this authority participates in over 20 supervisory colleges organised by the relevant home supervisors. A broad range of issues are discussed in these meetings, covering areas such as financial soundness, corporate governance, recovery planning and risk management controls.

From a host supervisor's perspective, supervisory colleges serve as a channel for direct engagement with group management, home and fellow host supervisors of banking groups, so as to keep abreast of group-level developments and enterprise-wide information. Host supervisors have the opportunity to gain a better and more consistent understanding of the banking group's strategies and operations directly.

Apart from participating in supervisory colleges organised by home supervisors of banking groups with significant operations in this jurisdiction, the local authority acts as an "intermediate host supervisor" of an international banking group with extensive operations in the Asia Pacific region, and coorganises with the home supervisor a regional supervisory college consisting of over 10 fellow host supervisors in the region. The regional supervisory college meets annually, and the discussions focus on matters that are pertinent to the banking group's operations in Asia-Pacific.

Participation in supervisory colleges over time can contribute to bonding and build-up of supervisory relationships. With ongoing contacts outside the supervisory college setting, the local authority explores collaborative opportunities with home and fellow host supervisors on supervisory activities (eg joint

[9] BCBS, *Principles for effective supervisory colleges*, June 2014, https://www.bis.org/publ/bcbs287.pdf.

[10] BCBS, *Core Principles for Effective Banking Supervision*, September 2012, https://www.bis.org/publ/bcbs230.pdf.

[11] This report is an example of the ongoing discussions among supervisors on global Pillar 2 practices.

examinations) and bilateral secondment of staff from time to time. The ongoing engagement outside the college meetings may facilitate better use of resources through enhanced supervisory coordination and potential reduction of duplicative supervisory activities.

2.6 Transparency and disclosure

Supervisory practice of communication with banks differs across jurisdictions. Supervisors use a variety of tools such as guidelines, manuals, checklists, periodic supervisor monitoring reports (which inform banks about how laws and regulations should be applied in particular circumstances or what the supervisors' focus is), dialogues with banks, speeches by senior officials, and discussion papers. The majority of supervisors publish guidelines to explain their supervisory process. Some supervisors also publish methodologies on how they assess Pillar 2 capital adequacy, which risks are in the scope of assessment, or how they assess banks' risk management.

Some supervisors share their areas of focus of the supervisory review in a periodically published supervisory and monitoring report, which often states the areas of vulnerability identified during the year and their intended focus areas in the following year. In some jurisdictions, results of supervisory and internal stress tests are included in periodic public reports. Often, common areas of focus in the supervision or common identified vulnerabilities are expressed in speeches by senior officials and discussion papers. Supervisors also hold regular meetings with banking associations, which are another important communication vehicle for discussing supervisory issues.

In terms of communication with individual banks on individual supervisory findings, supervisors use formal examinations or inspection reports, or dialogues with banks. For all supervisors, dialogue with banks often takes place at different levels, ranging from the boards of directors to bank staff. In some jurisdictions, supervisors conduct periodic discussions with board of directors. For many supervisors, the Pillar 2 supervisory decisions (ie in terms of Pillar 2 capital expectations or other related supervisory actions required of banks) are communicated to banks through a supervisory letter. These letters detail the requirements to be met, the reasoning behind these, and the expected timetable for the implementation of the requirements.

Most supervisors do not generally publicly disclose the supervisory Pillar 2 capital expectations (Box 1), improvement plans or orders for corrective actions for specific banks. However, some supervisors do disclose specific components of Pillar 2 capital expectations (eg systemic buffer, add-on related to real estate, and additional requirements from stress testing exercises).

Box 1: Terminology – binding and non-binding Pillar 2 expectations

Some jurisdictions have a concept of binding and non-binding Pillar 2 expectations.

– Binding Pillar 2 expectations are similar to those of Pillar 1 in that they are expected to be met at all times. They could be disclosed publicly.

– Non-binding Pillar 2 expectations can be used in times of stress or other exigent circumstances. Non-binding Pillar 2 expectations are generally not disclosed publicly.

The types of risks covered by these two components are also typically different. Binding Pillar 2 expectations typically include well defined and more easily measured risks. Non-binding Pillar 2 expectations may include ad hoc risks or concerns raised by supervisors.

This bifurcation of Pillar 2 capital expectations is not defined in the Basel Framework; however, it is common in a number of jurisdictions under different names: binding Pillar 2 expectations are called "Pillar 2A" or "Pillar 2R (requirements)" and non-binding Pillar 2 expectations are called "Pillar 2B" or

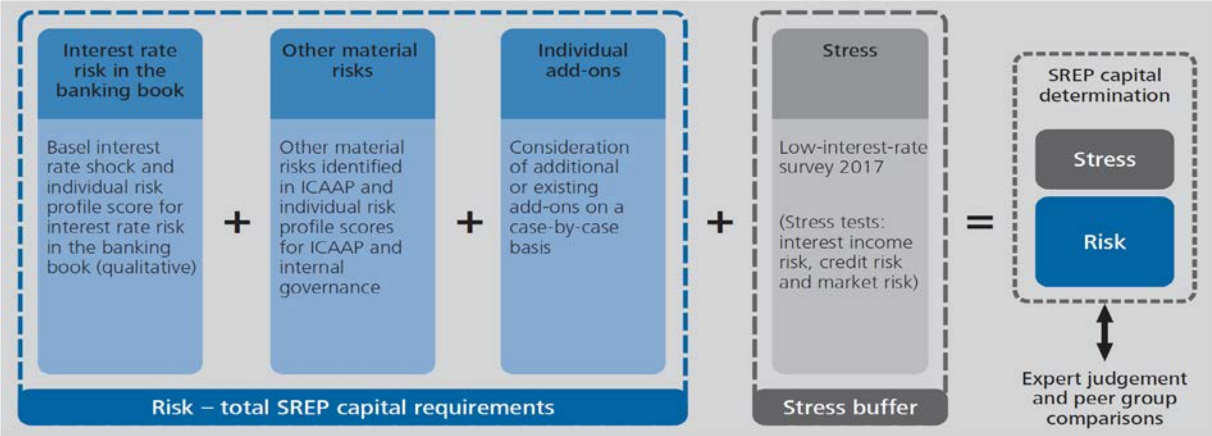
“Pillar 2G (guidance)” in some jurisdictions. For further definitions related to Pillar 2 used by Committee members, see Annex A.

Case study 4: Methodology for setting capital requirements

The capital determination methodology in one jurisdiction consists of two components (see the chart below): the risk portion (Pillar 2 capital requirement) and the stress portion (Pillar 2 capital guidance). All information about the process and the determining factors are publicly available.

The Pillar 2 capital requirement comprises three add-ons: an add-on for interest rate risk in the banking book (IRRBB); an add-on for other material risks; and an individual add-on if applicable.

Overview of the SREP capital determination methodology*



* SREP: Supervisory review and evaluation process.

Add-on matrix “Interest rate risk in the banking book (IRRBB)”

Percentage points

Risk profile[1]	Negative change in present value (±200 bps)/total risk (pursuant to CRR) 0% to 2.75%	>2.75% to 3.75%	>3.75% to 4.75%	>4.75%
1	0.00	1.00	1.50	2.00
2	0.50	1.25	1.75	2.50
3	1.00	1.50	2.00	3.00
4	1.50	2.00	2.50	3.50

1 Individual risk profile score for interest rate risk in the banking book (qualitative).

Add-on matrix “Other material risks”

Percentage points

Risk profile[1]	Non-Pillar 1 risks (excl IRRBB)/total risk 0% to 5%	>5% to 15%	>15% to 45%	>45% to 100%
1	0.00	0.50	1.50	3.00
2	0.25	1.00	2.00	4.00
3	0.50	1.50	2.50	5.00
4	1.00	2.00	3.00	6.00

1 Worse of the two individual risk profile scores for ICAAP and internal governance.

Similarly, most supervisors do not allow banks to disclose their Pillar 2 capital expectations, while some jurisdictions provide banks with an option whether or not to disclose. In these cases, if one bank discloses, then other banks tend to follow under market pressure. Jurisdictions with binding and non-binding Pillar 2 capital expectations treat the related disclosures differently. One reason for this is that binding Pillar 2 capital expectations are more likely to affect capital distribution constraints (CDC) triggers and are thus more likely to be disclosed than non-binding Pillar 2 capital expectations. In one jurisdiction, new amendments to the prudential rules will result in requiring banks to disclose their binding Pillar 2 capital expectations (Pillar 2 requirements) without requiring the disclosure of the level of non-binding Pillar 2 expectations (Pillar 2 guidance) set by supervisors.

2.7 Supervisory workplans

Throughout the year, most supervisors conduct multiple reviews and discussions with banks that shape the supervisory strategy for the next inspection cycle and conclusions for the current cycle. The supervisory strategy takes into account discussions with senior management; current and emerging risks to which the banks are exposed; areas with information decay; and governance issues. In some cases, systemic issues identified by supervisors may influence the supervisory strategy. For each bank, supervisors generally establish a separate workplan based on the specific risks and vulnerabilities identified in the bank. Supervisory workplans specify the supervisory activities and actions for the forthcoming supervisory cycle, the areas deserving increased supervisory efforts, and the off-site and on-site work.

Common types of supervisory activities include, but are not limited to:

- Desk or off-site review (analysis of prudential data collected from banks, analysis of internal and external audit reports, financial statements, monitoring of key metrics, regulatory reporting).
- Stress tests and analysis of results.
- Assessment of recovery plan and ICAAP report.
- Assessment of a bank's risks.
- Periodic meetings with external auditors, senior managers, management board, audit committee, risk committee or key functions of a bank.
- On-site examinations of key functions within a bank, lines of business, processes or governance framework.
- Issuance of a supervisory letter that includes conclusions and findings.
- Assessment and follow-up of a bank's remediation plan to address findings and monitoring.

The use of stress testing results for assessing capital adequacy is common in all member jurisdictions. However, there are conceptual differences across jurisdictions in how stress testing results are integrated – for example, as part of binding or non-binding capital expectations or as a qualitative input.

Stress test results are used to develop overall Pillar 2 capital expectations, risk-specific capital expectations and macroprudential expectations, as well for other purposes. The majority of supervisors use stress testing to develop an overall Pillar 2 capital expectation at the bank level. About half of the jurisdictions use stress testing to set risk-specific capital expectations.[12] A number of supervisors also use stress testing to set system-wide macroprudential capital expectations. Supervisors note differences in the degree to which stress testing results are used or in the formality of their use. Some countries use stress testing in a structured and formal framework. Other supervisors use stress testing results as a starting point for further discussions with banks. Lastly, there are also some differences in the inputs to stress tests. The majority of jurisdictions use bank-run bank-specific stress tests, as well as bank-run supervisory stress tests and supervisory-run supervisory stress tests.[13]

[12] All of the jurisdictions in this subset also use stress testing to set overall Pillar 2 capital expectations.

[13] BCBS's stress testing range of practices (https://www.bis.org/bcbs/publ/d427.pdf) and the updated BCBS stress testing principles (https://www.bis.org/bcbs/publ/d450.pdf).

Supervisors have a number of common sources of information for assessing banks' capital adequacy. Off-site reviews of banks' documents, reports and data, for example, are always part of the supervisory review process, irrespective of the jurisdiction. On-site inspections are another source of information for nearly all jurisdictions. The work conducted by internal or external auditors is an additional source of information within the supervisory review process for the large majority of jurisdictions.

As part of these supervisory activities, the assessments (including scores or ratings) assigned to the various elements considered under the supervisory review process may be updated. All reviews conducted throughout the year are aggregated in a supervisory rating, which will contribute to the supervisory strategy for the following year. Most supervisors also have thematic priorities for a specific review cycle. These priority areas often dictate additional resources and additional on-site inspections or examinations.

Nearly all supervisors have an explicitly stated approach for proportional or tailored supervisory activities. Most supervisors have a yearly planning cycle; however, some have an 18-month or longer planning cycle for smaller banks. Similarly, banks with higher risks receive greater supervisory attention than those with low risks. For each risk element, assessments are tailored to the circumstances of each bank. Many supervisors have a minimum level of supervisory work that is required for each bank. For example, supervisors may be required to have annual meetings with bank staff and bank examiners to discuss business and risk developments as well as supervisory issues based on any supervisory priorities.

3. Selected risks addressed in Pillar 2

The Basel Framework highlights three main areas of focus under Pillar 2: (i) risks considered under Pillar 1 that are not fully captured by the Pillar 1 process; (ii) factors not taken into account by the Pillar 1 process; and (iii) factors external to a bank (eg business cycle effects). For these reasons, some areas particularly suited to treatment under Pillar 2 are discussed below: business model risk; IRRBB; concentration risk; and other emerging risk areas.

3.1 Business model risk

Given evolving market and business environments, supervisors do not look solely at capital adequacy at a single point in time, but rather they assess banks' business models and whether or not their profitability is stable enough to support safety and soundness. To understand and analyse banks' conditions, most supervisors conduct business model analysis as part of their supervisory review process.

When conducting business model analysis, supervisors rely on various sources, including but not limited to: banks' financial reporting; banks' business plans; internal reporting; relevant surveys and studies; and dialogues with internal and external stakeholders of the banks. All these sources help to understand the details of banks' lines of business, their sources of revenue and profit, their customer base, their operating approach, and the direction of the board management.

Business model analysis is conducted by looking at different dimensions and considering banks' business environment and strategic and financial plans, as well as through horizontal supervisory review, root cause analyses and a review of the key vulnerabilities of the bank. The surrounding financial and economic environment is also taken into account for the supervisory assessment.

Most supervisors analyse bank profitability not only through current earnings but also through the breakdown of income, costs, impairment provisions, and consideration of how they have evolved in recent years. Supervisors take into account environment changes, such as technological changes, and how these may impact future bank profitability. Some supervisors may also conduct horizontal reviews to understand a bank's financial performance and the degree to which it is driven by its risk appetite, including relative to peers.

If deficiencies or issues are found in banks' business plans or models, supervisors bring such issues to the banks' attention. Many supervisors have an expectation that banks should achieve their business goals in the long run. A few supervisors may require banks to make changes to their business models or strategies – for example, by adjusting their financial plans or changing their organisational structures, or limiting certain business activities. A few supervisors may also draw up risk mitigation plans for the banks which were identified as having deficiencies.

Case study 5: Business model analysis

Under one jurisdiction's approach, business model analysis (BMA) aims to assess: (i) the ability of a bank or banking group's business model to generate acceptable returns over the following 12 months; and (ii) the ability of its strategy to generate acceptable returns over the following three years.

A BMA is based on a wide range of sources of information, such as the strategic plans of banks and banking groups; data collected through financial, internal or regulatory reporting; audit reports; and recovery and resolution plans.

A BMA starts by identifying the activities, market positions, business lines, products or group entities which are the most important for the bank or banking group in terms of viability or sustainability. The BMA must be accompanied by an analysis of the business environment in which the bank or banking group operates so as to help supervisors understand the macroeconomic conditions, the market trends (including regulatory trends, technological trends, and societal or demographic trends), the competitive landscape and how the business environment is likely to evolve.

When assessing the viability of a bank or banking group's business model, supervisors should analyse its profitability, the breakdown of its incomes and costs, its impairment provisions and the trends in its profitability indicators. They should also examine its funding structure, assets and liabilities, and the trends in its solvency and liquidity positions. Furthermore, supervisors should consider the risk appetite of the bank or banking group and its concentrations in customers, sectors and geographies. Supervisors should identify the external and internal factors or dependencies that influence the success of the business model, the areas in which the bank or banking group has a competitive advantage over its peers, and the strengths of its relationships with customers, suppliers or partners (including the reliance on its reputation, the loyalty of its customers and the effectiveness of its partnerships).

When assessing the sustainability of a bank or banking group's strategy, supervisors should seek to understand the success drivers of the strategy and financial plan. They should also assess the plausibility and consistency of the assumptions that drive the strategy and forecasts as well as the capability of the bank or banking group to execute its strategy, taking account of the complexity and ambition of the strategy, by evaluating the adherence of the bank or banking group to its previous strategies and forecasts. These assessments may lead supervisors to take supervisory measures to address the identified problems or concerns.

Case study 6: Business model risk

One jurisdiction has developed a method to capitalise business model risk in line with the overall capital framework. In doing so, this method avoids a capitalisation overlap with other risk types, such as credit risk. The method focuses on tail risks that occur over a one-year time horizon. This means that capitalising for business model risks is most relevant for banks which run business lines that are particularly sensitive to sudden large drops in income during times of stress which are not capitalised for in other risk areas. This could be the case for banks or business lines with a large share of volatile fee and commission income and/or with uncertain operational expense patterns. The method entails stressing the above-mentioned elements and applying a capital charge for the business model-specific tail risks that are not capitalised for in other risk areas. This method is consistent with the capital framework and leads to prudent capital buffers to protect depositors, bondholders and the financial system for banks whose business model leaves certain risks undercapitalised in the standard capital framework.

3.2 Interest rate risk in the banking book[14]

The effectiveness of banks´ IRRBB management frameworks and the level of their interest rate exposures are key factors taken into account by supervisors when evaluating banks´ capital adequacy.[15] In assessing IRRBB exposures, all supervisors expect banks to consider both economic value- and earnings-based measures supported by appropriate and reasonable behavioural and modelling assumptions. Supervisors assess the sufficiency and quality of data and the existence of robust modelling techniques. Supervisors evaluate the development of appropriate IT systems and the soundness of the model validation process. In addition, supervisors draw conclusions as to the suitability of the banks´ models, taking into account their risk profile and their internal validation processes.

Regarding the economic value-based measures, some supervisors require banks to follow the standardised framework set out in the Committee's standard;[16] however, some supervisors require banks to follow it specifically in the case of inadequate IRRBB management techniques. Some supervisors have adopted the standardised framework for regulatory reporting, disclosure and outlier identification purposes, while insisting on the internal measurement systems for risk management and the ICAAP.

In order to monitor banks' IRRBB, all supervisors periodically receive regulatory reports. These reports typically include information on the impact of interest rate shock scenarios on the economic value of equity and net interest income. Supervisors use regulatory reports together with outlier tests[17] and different economic and financial indicators to identify banks that have a high IRRBB exposure or complex risk profiles. With this information, supervisors typically request additional information from banks and hold further discussions. This analysis could trigger other supervisory actions or outcomes. Finally, it is a common practice to draw on specialised teams to assist with the IRRBB supervisory assessments.

3.3 Concentration risk

The concept of concentration risk may cover a wide range of concentration types, such as single name, geographical, sectoral, and products or services provided by banks, as well as concentrations in the incomes of banks. Consequently, the scope of the Pillar 2 assessment of this risk differs from jurisdiction to jurisdiction.

[14] Some jurisdictions are still implementing the IRRBB standard, so the information presented in this section is subject to change.

[15] In April 2016, the Committee published the IRRBB standard, containing an updated version that revises both the 2004 *Principles for the management and supervision of interest rate* and the methods expected to be used by banks for IRRBB treatment. These principles lay out the Committee's expectations for banks' identification, measurement, monitoring and control of IRRBB as well as its supervision. These standards are being adopted by the jurisdictions. See BCBS, *Interest rate risk in the banking book*, April 2016, https://www.bis.org/bcbs/publ/d368.htm.

[16] BCBS (2016), op cit, p 22.

[17] Some supervisors consider additional materiality tests based on interest income or other specifics, besides those established by IRRBB standards (BCBS (2016), op cit, p 2).

All supervisors expect banks to consider the impact of concentration risk, and all supervisors have developed approaches or methodologies for assessing concentration risk.[18] The majority of supervisors have done so through a combination of off-site monitoring and on-site examination. Some supervisors use off-site monitoring only, and some supervisors consider input from supplementary audits performed by audit firms. The majority of supervisors undertake on-site inspections focused on concentration risk as a part of an inspection on credit risk. Off-site monitoring is performed mainly through regulatory reporting.

The majority of supervisors use quantitative methods for assessing concentration risk, but other elements are factored in as well: elements from regulatory reporting, ICAAP, banks' analyses and reports, peer reviews and other qualitative information. One jurisdiction assesses concentration risk based solely on a quantitative method, which is applied automatically and translated into a Pillar 2 capital expectation.

Regarding indices and thresholds for the assessment and monitoring of concentration risk, about half of supervisors use the Herfindahl-Hirschman index (HHI), a few supervisors incorporate the Gini coefficient, and a handful of supervisors also use internal supervisory models. For one supervisor, the indices are different according to the bank's business model. Some supervisors are planning to introduce, or considering introducing, the HHI into their concentration risk assessments. Finally, a few supervisors do not have a specific quantitative method for assessing concentration risk but rather rely on other means for assessing that risk, such as banks' ICAAPs.

All supervisors apply some type of large exposure limit, and the majority of supervisors plan to incorporate concepts from the Committee's large exposure framework[19] into the assessment of credit risk concentration. Among supervisors that set Pillar 2 capital expectations, only a few set explicit Pillar 2 capital expectations for concentration risk. It is more common for supervisors to consider concentration risk together with other risks assessed as part of the Pillar 2 process.

In terms of a breach of large exposure limits, a few supervisors have an automatic response to address a limit breach. About half of the supervisors indicated that this could lead to additional Pillar 2 capital expectations, although this would be subject to supervisory discretion. A few supervisors would not require additional Pillar 2 capital expectations in response to a breach. Of these, one supervisor would increase Pillar 1 regulatory capital. Several supervisors specified separate consequences in the event of a breach, and some referred directly to capital. For example, banks may have to take necessary actions, either decreasing exposure or increasing capital or Pillar 2 capital expectations.[20]

3.4 Other risks

Under the Basel Framework,[21] all supervisors require banks to consider all risks, including both traditional financial risks (eg credit risk, market risk, interest rate risk) as well as reputational, legal, and strategic risks. Supervisors require banks to consider risks that may not appear to be significant in isolation but when

[18] Large exposures to single counterparties or groups of connected counterparties are not the only type of concentration risk. Other types include reliance on concentrated funding sources and a significant net short position in securities, because the bank may incur severe losses if the price of these securities increases (BCBS, *Supervisory framework for measuring and controlling large exposures*, April 2014, https://www.bis.org/publ/bcbs283.htm, paragraph 8).

[19] BCBS (2014), op cit.

[20] The Committee has spoken extensively regarding concentration risk and the importance of thoroughly understanding different ways that risks could be concentrated across a consolidated group. Since the global financial crisis, Committee publications have re-emphasised the importance of considering risk from a variety of different perspectives, but especially from the group or global level perspective. See BCBS, *Core Principles for Effective Supervision*, https://www.bis.org/publ/bcbs230.pdf, paragraph 22.

[21] BCBS Supervisory Review Process 30, "Risk management", https://www.bis.org/basel_framework/chapter/SRP/30.htm.

combined with other risks could lead to material losses. Supervisors expect banks to consider all risks that can affect capital, including the ones that might have an indirect or slowly developing impact.

The application of Pillar 2 add-ons may not be sufficient to compensate for failed or absent risk management practices. In fact, capital should not be regarded as a substitute for addressing fundamentally inadequate control or risk management processes.[22] For example, some risks – such as legal risk – could result in the revocation of a bank's licence to operate. For non-quantifiable risks, most supervisors require banks to establish risk assessment methodologies, stress testing approaches, and control and mitigation tools for each risk category, as well as a general description of control and mitigation systems.

Case study 7: Integrating climate-related risks in the supervisory review process

In recent years, an increasing number of supervisors have increased their focus on how climate change can translate into financial risks for the financial sector. Financial institutions are exposed to the physical risks of climate change, as they may incur severe losses caused by weather events. Furthermore, the financial industry faces risks in relation to the transition to a carbon-neutral economy, due to considerable exposures to high-emission sectors. These exposures make them vulnerable to new climate policies, rapidly advancing carbon-neutral technology and changing market conditions.

It is important that banks be aware of climate-related risks. A growing number of supervisors therefore expect banks to address the prudential risks from climate change through their existing risk management frameworks.

Some supervisors are taking steps to embed climate-related risks in the supervisory approach. For the supervisory review submission in 2019 in one jurisdiction, non-significant national banks and asset managers were asked to submit their own risk assessment on how climate-related risks affect their exposures and how they monitor and manage these risks. Banks were asked to self-report on four thematic areas that represent core elements of how banks operate: governance, strategy, risk management and measurement, and disclosure:

- Banks' governance on climate-related risks and opportunities: banks are asked to report on how climate-related prudential risks are embedded in their sound business and governance arrangements.
- The actual and potential impact of climate-related risks on banks' strategy and financial planning: banks are asked to report on their strategic approach in managing the prudential risks and opportunities from climate change and their long-term view in setting their strategy.
- Risk management and measurement: banks are asked to report on how the prudential risks from climate change are addressed through their existing risk management frameworks.
- Climate-related financial disclosures that could promote more informed investment, lending and insurance underwriting decisions: banks are asked to report on their approach for disclosure of prudential risks from climate change.

For all four areas, the supervisor developed a scorecard as a first attempt to map and benchmark the current level of climate risk management at institutions. It is important to note, however, that the outcome of the scorecard has no consequences for capital requirements or add-ons. At this stage, the main goal is to initiate a dialogue with banks on their exposures to climate-related risks, their governance and strategy in managing those risks, and what methodologies and metrics they have in place to limit their exposures to those risks. In addition, some supervisors from different jurisdictions are involved in efforts to size climate-related risks and explore how those risks can be incorporated in a supervisory framework.

[22] BCBS, *Basel II: International convergence of capital measurement and capital standards: a revised framework – comprehensive version,* Part 3, "The second pillar – supervisory review process", https://www.bis.org/publ/bcbs128c.pdf, paragraph 723.

4. Outcomes and actions taken under Pillar 2

Supervisors are expected to evaluate how well banks are assessing their capital needs relative to their risks and to intervene, where appropriate. This interaction is intended to foster an active dialogue between banks and supervisors such that when deficiencies are identified, prompt and decisive action can be taken to reduce risk or restore capital. Accordingly, supervisors may wish to adopt an approach to focus more intensely on those banks with risk profiles or operational experience that warrant such attention.[23]

This section describes some of the outcomes of the Pillar 2 supervisory review process. The first part covers general corrective actions, such as requirements to strengthen risk management as well as potentially limit certain lines of business. The second part focuses on capital expectations and how the Pillar 2 supervisory review process translates specifically into capital outcomes.

4.1 Corrective actions

Based on the outcomes of the supervisory review processes, supervisors may require banks to take corrective or remedial actions to address the deficiencies or weaknesses identified in their internal control frameworks. These corrective actions may be required from a wide range of persons, bodies or functions within the banks: management bodies, audit committees, senior managers, audit functions, compliance functions, risk management functions, staff and heads of business units.

These corrective actions may take a wide range of forms, covering the whole banking organisation or being limited to a specific activity, business line, operation, internal unit, process or IT system of the bank. The corrective actions may result in requiring a clear allocation of responsibilities for internal control within banks in order to avoid conflicts of interests and preserve the independence of banks' internal control functions. They may also result in requiring updated written internal control policies and procedures or reinforcing the resources banks allot to functions involved in internal controls.

Corrective actions may be applied to strengthen the identification, measurement, assessment, management, mitigation, monitoring, reporting or follow-up of risks, audit findings, incidents or deficiencies in order to ensure effective controls, accurate and comprehensive reporting of their results, and timely resolution of deficiencies revealed by the internal controls. This could include discussions with the banks on improving their organisational structure, risk framework and systems, as well as board and senior management involvement in the ICAAP process, so as to enhance firm-wide risk oversight. Additional capital cannot be sufficient to address weaknesses identified in banks' risk management governance. Some supervisors find, however, that capital add-ons can incentivise banks to strengthen their risk management.

When banks do not address identified deficiencies or if the deficiencies are significant and could pose significant harm to depositors and the financial system, most supervisors generally have stronger powers to try and mitigate issues. These powers include but are not limited to:

- Ability to impose limits on lending, business activities and other decisions by the bank.
- Restrictions on dividends, capital distributions and bonuses.
- Prohibitions on investing in certain instruments.
- Obligations to close specific branches.

However, these powers are generally used only in limited circumstances.

[23] BCBS Supervisory Review Process 10, "Importance of supervisory review process, https://www.bis.org/basel_framework/chapter/SRP/10.htm, paragraph 3.

To address deficiencies in business models, most supervisors may require banks to make adjustments to products originated or distributed by the banks, limit certain activities, reduce their exposures to certain assets or positions (through hedging or sale of assets), restrict investments in certain products, or require the divestment of financial products (eg where the valuations of those products would not be deemed to be sufficiently conservative). They may also require more frequent or in-depth internal audit of certain activities.

Case study 8: Supervisory corrective actions

In one jurisdiction, the Pillar 2 capital requirements are binding. The Pillar 1 minimum requirements, Pillar 2 capital add-ons and Basel III buffer requirements form the cumulative minimum capital requirements. In determining Pillar 2 capital add-ons, the supervisor considers risks that are not adequately provided for under Pillar 1 and the state of the bank's risk management and controls. This includes an evaluation of how well the bank is assessing its capital needs relative to its risk from the review of the ICAAP, which is submitted to the supervisor on an annual basis.

The banks' ICAAP should include forward-looking and multi-year capital plans and Pillar 2 capital stress test results. The supervisor reviews the banks' ICAAP submissions and evaluates the adequacy of capital maintained by the bank to address all risks to which it is exposed. If the supervisor is not satisfied with the outcome of the supervisory review, it can take certain actions, including but not limited to requiring the bank to improve its risk management processes or lower the risks which it assumes, maintain additional capital or restrict the payment of dividends.

As the bank's capital ratios deteriorate, the supervisor initiates discussions with the bank's management on their capital restoration plans and may require the bank to activate their capital restoration plan, including taking the corrective actions set out above. The supervisor may also restrict or suspend the operations of a bank if there is a breach of the minimum capital adequacy ratio applicable to the bank.

Case study 9: Prompt Corrective Action framework

The objective of the Prompt Corrective Action (PCA) framework is to ensure that banks take timely and guided corrective measures to restore their financial health and make their balance sheets stronger.

A bank is placed under the PCA framework on the basis of the audited financial results and the supervisory assessment made by the supervisory authorities. Key indicators used for evaluation and invocation of the PCA framework are the capital adequacy ratio, Common Equity Tier 1 (CET1) ratio, asset quality – non-performing assets (net NPA ratio), profitability (return on assets) and Tier 1 leverage ratio. These indicators are placed in a PCA matrix to identify the breach and the extent of breach ranging from 1 to 3 (worst).

For a breach of any of the above thresholds, PCA can be invoked and corrective action can be triggered. The PCA framework applies without exception to all banks operating in the jurisdiction, including small banks and foreign banks operating through branches or subsidiaries based on breach of risk thresholds of identified indicators.

Actions prescribed to banks include: arranging for an infusion of capital; restriction of dividend distributions; realising the value from the sale of non-core assets; reduction of high risk-weighted assets (RWAs); a plan to reduce NPAs and contain generation of new NPAs; dedicated efforts to increase recoveries; reducing credit concentrations in identified sectors, industries and borrowers; improving the provision coverage ratio; reducing bulk deposits; improving low-cost deposits; and a restriction on branch expansion and certain capital expenditure. With a breach graded 3, a bank becomes a candidate for resolution through amalgamation, reconstruction or winding-up.

The performance and progress of banks on various financial and non-financial parameters are closely monitored on a quarterly basis through off-site analysis as well as structured meetings with bank management. Recent experience shows that banks under PCA show improvement on various parameters – for example, the share of low-cost deposits; an increase in the provision coverage ratio; an increase in recoveries from NPAs; a reduction in the riskiness of their assets, as reflected by a reduction in their RWAs; a lower percentage increase in gross NPAs, and control over operating expenses.

Case study 10: Holistic approach to Pillar 2 expectations

One jurisdiction takes a holistic approach to Pillar 2, meaning that, at each institution, supervisors assess Pillar 2 in its entirety and separately from the institution's compliance with Pillar 1 requirements. In this jurisdiction, Pillar 2 is not seen as an add-on to Pillar 1. Supervisory authorities in this jurisdiction expect banks subject to Pillar 2 to have a process for assessing their capital adequacy (ICAAP) beyond Pillar 1 minima, taking into account their unique risk profiles and business models.

Banks subject to Pillar 2 assess overall capital needs under the ICAAP as a parallel approach to assessing their ability to meet Pillar 1 requirements. Supervisors determine whether each of these banks has a satisfactory process to ensure that adequate capital is held against all material risks and the bank can maintain adequate capital as underlying conditions change.

Under this approach, certain large institutions are also subject to a separate process under which they each submit an annual capital plan. That capital plan can also serve as the institution's ICAAP (ie institutions are not required to submit both a capital plan and a separate ICAAP). Furthermore, supervisory authorities in this jurisdiction have for several years conducted supervisory stress tests on certain large banks on an annual basis, as an additional way to assess the adequacy of those banks' capital positions.

This jurisdiction does not have explicit, binding Pillar 2 capital requirements. However, as a result of its comprehensive supervisory review, a bank's supervisor may take action if it is not satisfied that capital is adequate. The supervisor may require the bank to take actions to address identified supervisory concerns, which may include requiring the bank to hold additional capital to bring capital to levels that the supervisor deems commensurate with the bank's risk profile. In addition, the supervisor may, under its enforcement authority, require a bank to modify or enhance risk management and internal control processes, enhance other capital planning practices, reduce its exposure to risk, or take any action deemed necessary to address identified supervisory concerns.

4.2 Supervisory Pillar 2 capital expectations

Supervisory capital requirements under Pillar 2 differ across jurisdictions. The treatment of capital and the use of explicit capital expectations under Pillar 2 depend on the jurisdictional design of Pillar 2. Practices among jurisdictions range from holistic approaches that are not tied to or are separate from Pillar 1 to strong quantitative approaches that allocate specific capital expectations on a risk by risk basis. Some jurisdictions also differentiate their Pillar 2 approaches for non-systemic banks. One reason for differences in capital requirements and approaches is different jurisdictional objectives. For example, some jurisdictions may have macroprudential as well as microprudential purposes for Pillar 2 capital expectations.

Case study 11: Addressing imbalances in the real estate and domestic mortgage lending market with a Pillar 2 capital charge

Nominal interest rates have been exceptionally low in many jurisdictions for almost a decade. This has led to strong growth in both bank credit and real estate prices over several years, resulting in imbalances on the mortgage and residential real estate markets.

In the case study jurisdiction, the activation and subsequent increase of the countercyclical capital buffers have helped to contain the further build-up of imbalances in the owner-occupied segment of the market. At the same time, however, affordability risks in mortgage lending have continued to increase, particularly in the residential investment segment.

In this context, the implementation of additional targeted measures for residential investment property lending, such as regulatory changes or revision of self-regulation, are currently being discussed. Given the process of implementing such regulatory tightening, the jurisdiction's financial market supervisory authority decided to intensify its microprudential supervision with the following actions:

– Conduct on-site supervisory reviews at the most exposed banks in order to qualitatively assess their practices in mortgage lending as well as respective risk management capabilities.

– Conduct an enhanced mortgage stress test exercise across a number of banks in parallel (covering >70% of the total mortgage market) in order to quantitatively identify outliers.

Based on the results from the above actions, specific and binding Pillar 2 capital charges were imposed on outliers and overly exposed banks.

Case study 12: Mortgage risk weight floor

When the Basel II agreement came into force in a certain jurisdiction in 2007, several local companies were granted permission by the local authority to use the internal ratings-based (IRB) method to calculate the risk weights on their credit exposures. As a result, the risk weights on the local mortgages decreased significantly. The most important mortgage institutions all used the IRB approach, and many of the largest institutions had, as of 2014, an average risk weight of around 5% for these exposures in their internal models.

In May 2013, the local authority introduced a risk weight floor through Pillar 2 of 15% for these exposures, which was raised to 25% in May 2014.

In August 2018, the local authority decided to change the method used for the application of the risk weight floor. The reason for this change was structural changes in the local banking market that had led to different participants in the mortgage market possibly facing different capital requirements for mortgage exposures. The local authority therefore evaluated how the resilience of the banking system could be maintained while also counteracting a distortion in competition in the market. The local authority concluded that the manner in which the risk weight floor was applied needed to be revised. The change was necessary to safeguard financial stability, by upholding the level of capital requirements for mortgage exposures in the local market, and to maintain a level playing field in the mortgage market. Both of these goals were achieved by replacing the risk weight floor with a requirement under the local capital requirements regulation. The new requirement was included in the Pillar 1 requirements.

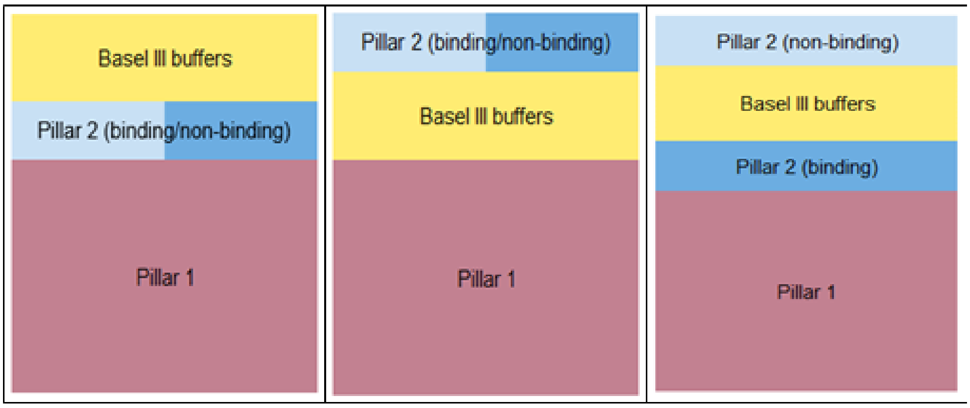
The credit institutions that are subject to the measure are the ones that have permission to use the IRB approach and an exposure to mortgages. The local authority applied for reciprocity of the measure in relevant neighbouring jurisdictions to ensure application of the risk weight floor to nationally authorised branches located in those jurisdictions. Branches of foreign credit institutions in such jurisdictions that are exposed to the local mortgage market and use the IRB approach for those exposures are therefore also subject to the requirement.

A number of Committee jurisdictions set explicit Pillar 2 capital expectations. Usually, these expectations are binding (required), but they can also be non-binding (not legally required) or guidance. Furthermore, the quality of capital that banks should meet for binding capital expectations is generally of the same composition as for Pillar 1. However, some jurisdictions require some other mix of CET1, Tier 1, and Tier 2 capital, while others require CET1 only.

Among jurisdictions that have some form of explicit Pillar 2 capital expectations, the majority of supervisors "stack" binding capital expectations in between Pillar 1 requirements and Basel III buffers. Jurisdictions that use non-binding capital expectations typically place them above Pillar 1 requirements and Basel III buffers, and therefore above distribution constraints. One authority applies binding capital expectations below the Basel III buffers for the purposes of determining when supervisory measures would be triggered, but it does not include the binding Pillar 2 capital expectations in the calculations for the CDC trigger.

For jurisdictions that have an explicit capital hierarchy, Figure 1 below presents a simplified summary of the different configurations.[24] Jurisdictions that set Pillar 2 capital expectations above Basel III buffers (centre panel) do so in different ways. For some, the Pillar 2 capital expectations are binding, whereas for others they might reflect a capital target or non-binding expectations.

Summary of explicit Pillar 2 hierarchies[25] Figure 1



Case study 13: Setting binding and non-binding Pillar 2 requirements, and the capital hierarchy

One jurisdiction can set binding and non-binding capital expectations depending on the weaknesses identified. Binding requirements are generally issued when the overall supervisory review process identifies issues.

Firm-specific binding requirements are intended to account for idiosyncratic risks, and systemic risks are intended to be captured in not-binding expectations, which are above Basel III buffers in the capital hierarchy.

24 Not all Basel Committee jurisdictions use an explicit Pillar 2 hierarchy.

25 Box sizes do not represent actual buffer amounts.

Binding capital add-ons must be met continuously by banks in this jurisdiction and may be the result of shortcomings identified during ICAAP assessment; deficiencies in the risk governance framework and in control systems; weaknesses in the internal models banks use to determine Pillar I requirements; and/or inappropriate or exceeded capital targets. The supervisory authority in this jurisdiction may also set banks' capital targets, in order to ensure that Pillar I and binding Pillar II requirements are continuously satisfied, even in the event of financial deterioration. Capital targets are generally set when supervisors identify (a) shortcomings in the ICAAP assessment process, (b) capital needs through supervisory stress tests and/or (c) weaknesses in banks' capital adequacy. A breach of capital targets, however, does not automatically result in PCA.

Binding Pillar 2 requirements are between Pillar 1 minimum requirements and Basel III buffers in the capital hierarchy. Non-binding expectations are on top of Basel III buffers. For banks in this jurisdiction, the Basel III capital conservation buffer and countercyclical capital buffer can be used to cover non-binding Pillar 2 capital expectations.

Regarding the quality of capital, banks should meet binding Pillar 2 capital requirements following the Pillar 1 composition (56% CET1, 75% Tier 1, 100% total capital). However, the supervisory authority may require banks, in particular cases, to have the binding Pillar 2 expectations comprise CET1 only. On the other hand, the non-binding Pillar 2 capital expectations should be made up entirely of CET1.

Pillar 2 capital expectation are contained in the Supervisory Review and Evaluation Process (SREP) capital decision addressed to all banks at the end of the supervisory review process.

Case study 14: Systemic vulnerabilities not adequately captured in Pillar 1

Recently, a jurisdiction issued public guidance on a domestic stability buffer. The buffer is intended to cover a range of systemic vulnerabilities that, in local authority's judgment, are not adequately captured in the Pillar 1 capital requirements. The buffer supplements the Pillar 1 buffers (capital conservation duffer, surcharge for domestic systemically important bank (D-SIB)) and applies only to D-SIBs.

The objective of the buffer design is to ensure that banks are holding adequate capital to protect against risks, and encourage them to use their buffers during times of stress to avoid unnecessary sales of assets or drastic reductions in lending that will have negative procyclical effects. The buffer is reviewed on a semiannual basis, and decisions on the level of the buffer, along with supporting rationale, will be publicly announced twice a year. The buffer ranges from 0 to 2.5% of a bank's total RWAs. The level (ie percentage of RWA) is the same for all D-SIBs and must be met with CET1 capital only.

The ongoing calibration of the buffer (ie increases and decreases) is informed by an assessment of a set of vulnerability and risk indicators. The set of vulnerabilities currently addressed by the buffer comprises:

– Local consumer indebtedness.

– Asset imbalances in the local market.

– Local institutional indebtedness.

The buffer is not a Pillar 1 buffer, and breaches will not result in the application of automatic constraints on capital distributions. If a D-SIB breaches the buffer, the bank must submit a satisfactory remediation plan to the local authority.

As of 2018, the buffer was set at 1.5%. In late 2018, the local authority reassessed the above vulnerabilities and concluded that, on balance, the systemic vulnerabilities identified remain elevated while economic conditions continue to be accommodative. Therefore, the authority decided to set the level of the buffer at 1.75% of total RWA effective 30 April 2019. Decreases in the buffer will occur when the local authority deems D-SIBs' exposures to the vulnerabilities to have diminished.

Capital buffers in the Basel Framework are generally meant to be used in times of stress or extraordinary circumstances.[26] For example, the capital conservation buffer in Pillar 1 "is designed to ensure that banks build up capital buffers outside periods of stress which can be drawn down as losses are incurred".[27] They are by definition meant to bolster a bank's capital position, often due to a risk specific to a bank, a risk specific to a financial system or a risk that is not fully captured in the capital framework.[28] However, in many jurisdictions there can be a market or bank perception that buffers should not be breached. In fact, some banks have additional management buffers to ensure that regulatory buffers are not breached or that senior management and the board are notified.

For jurisdictions with binding capital expectations, only a few would consider allowing breaches of binding capital expectations in the absence of stress subject to supervisory approval. A few others would allow breaches, but only in a systemic stress situation. All jurisdictions that use non-binding capital expectations would allow them to be breached in a wide range of circumstances. One jurisdiction allows breaches in normal times, but only under specific conditions and with corresponding actions by the bank.

Reponses to breaches of binding capital expectations are fairly consistent across supervisors and are typically disclosed publicly. All supervisors would intensify supervisory actives and use prompt corrective action as appropriate. Some supervisors would also directly require banks to raise additional capital. In contrast, responses to breaches of non-binding capital expectations are more case-specific and less likely to be disclosed either ex ante or ex post. If either set of expectations is breached, supervisors would require capital restoration timelines and supervision activities would become more intensive.

In practice, supervisors typically restrict distributions where Pillar 2 capital expectations have not been met. For some, this is a natural result of the stacking order, ie Pillar 2 capital expectations are below the CDC trigger. Others have restricted dividends based on breaches of non-binding Pillar 2 capital expectations.[29]

Most supervisors allow banks to use capital in Basel III buffers to also satisfy non-binding capital expectations but not binding capital expectations. The recognition of an overlap can vary by type of Basel III buffer. For example, the capital conservation buffer is most often cited as a being able to also satisfy Pillar 2 capital expectations. One supervisor would consider such a reduction, but only for non-systemic banks. Furthermore, such a reduction would be allowed only in very rare circumstances, for certain asset classes with the standardised approach and after a cross-institution comparison, taking into account respective IRB risk weights. Another supervisor would consider it on a case by case basis.

5. Conclusion

As intended under Pillar 2 of the Basel Framework, jurisdictional approaches to developing, implementing and executing a supervisory review regime are aligned with local needs and expectations. This approach both complements and supports the other two pillars of the Basel Framework. While the specifics of some

[26] The Committee's work on the usability of buffers is mentioned in the press release from the Committee's November 2018 meeting, https://www.bis.org/press/p181129.htm.

[27] BCBS Consolidated Framework, Risk-based capital requirements, Buffers above the regulatory minimum (30.1), https://www.bis.org/basel_framework/chapter/RBC/30.htm.

[28] BCBS Working Paper no 30, *Literature review on integration of regulatory capital and liquidity instruments*, https://www.bis.org/bcbs/publ/wp30.pdf.

[29] Some supervisors restrict dividends for reasons other than breaches of Pillar 2 capital expectations.

approaches may differ between jurisdictions, the directional outcomes of the approaches are generally consistent.

Since the publication of supplemental Pillar 2 guidance in 2009, jurisdictions have continually updated their approach to banking supervision.[30] Although some jurisdictions have begun to adopt similar approaches or tools, eg stress testing, flexibility in adapting the supervisory review process to local needs allows jurisdictions to tailor their approach to their jurisdictional risks and circumstances. These tailored approaches have in part resulted in a range of practices.

There is a rich range of practices among Committee member jurisdictions in how they implement Pillar 2 of the Basel Framework. In key areas – such as risk management – all supervisors assess and evaluate banks' risk frameworks, thresholds and triggers. In areas of emerging risks, each supervisor is pursuing those areas that appear to pose the greatest risk to the banks it supervises and to its banking system. Supervisors also tailor and apply rules of proportionality as they supervise banks with different risk profiles and in different economic and financial environments.

30 BCBS, *Enhancements to the Basel II framework*, July 2009, https://www.bis.org/publ/bcbs157.htm.

Annex A: Selected definitions

As local Pillar 2 practices have developed, additional terms and concepts have arisen with specific meaning in different jurisdictions. A list of selected definitions is provided below:

- capital stack or hierarchy: the relationship between Pillar 2 capital expectations, Pillar 1 minimum capital requirements and Basel III buffers. This often has important implications for how automatic constraints on distributions are applied in various jurisdictions.
- Pillar 2A: risks to the bank that are either not captured or not fully captured under the Pillar 1 requirements of the Capital Requirements Regulation (CRR). Binding Pillar 2 capital expectations. These are publicly disclosed.
- Pillar 2 add-on or Pillar 2 charges: some jurisdictions use these terms in lieu of (or interchangeably with) "Pillar 2 capital expectations", generally in circumstances where (through the Pillar 2 process) the supervisor requires the bank to hold additional capital so that sufficient capital is being held relative to the bank's risks. In order to ensure that the language in the report is inclusive of all jurisdictions' approaches, this report does not use this terminology.
- Pillar 2B: risks to which the bank may become exposed over a forward-looking planning horizon (eg due to changes to the economic environment). Non-binding Pillar 2 capital expectations.
- Pillar 2 binding capital expectations: the level of capital set by supervisors that should be maintained at all times (legally binding, similar to Pillar 1 minimum capital requirements), whereby a breach would generally prompt a non-discretionary corrective action on the part of supervisors.
- Pillar 2 buffer: some jurisdictions use this term interchangeably with "Pillar 2 capital add-on" or "Pillar 2 capital expectations". Similar to "Pillar 2 capital add-on", it is generally used by supervisors whose Pillar 2 process results in banks being required to hold capital above the minima. In order to ensure correct interpretation of the information provided (given the various Pillar 2 approaches), this report does not use this terminology.
- Pillar 2 capital expectations: capital expectations in excess of Pillar 1 minimum capital requirements (including Basel III buffers) established through the supervisory review process.
- Pillar 2 guidance (P2G): Pillar 2 capital guidance is a supervisory tool setting non-legally binding Pillar 2 capital expectations at a level over and above overall capital requirements based on the supervisory review and evaluation process findings, in particular (i) an assessment of the adequacy of an institution's own funds (quality and quantity), eg the ability to meet the applicable own funds requirements in stressed conditions; or (ii) supervisory concerns over the (excessive) sensitivity of an institution to scenarios assumed in supervisory stress testing. As P2G is positioned above the combined buffer requirement and is non-legally binding guidance, it is not relevant for the purpose of the calculations of maximum distributable amount.
- Pillar 2 non-binding capital expectations: all other capital expectations set by supervisors (non-legally binding). Bank capital targets, for example, would be considered non-binding.
- Pillar 2 requirements (P2R): binding capital requirements for risks underestimated or not covered by Pillar 1, which can have direct legal consequences for banks.
- Supervisory Review and Evaluation Process (SREP): a supervisory framework for assessing and measuring the risks for each bank. Through the SREP decision, the supervisor may ask specific banks to hold additional capital or set qualitative requirements.