Basel Committee on Banking Supervision

Frameworks for early supervisory intervention

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1. Introduction

The international regulatory framework has been significantly strengthened since the global financial crisis to promote a more resilient banking sector. The Basel III framework sets higher minimum requirements for loss absorption, places greater emphasis on higher-quality capital and captures a broader scope of risks faced by banks. The framework has been further strengthened by a leverage ratio requirement, capital buffers to mitigate various sources of systemic risk and a set of standards limiting liquidity and maturity transformation.[1] Lessons from the crisis have also highlighted the important role of supervision and, importantly, that effective supervision must complement regulation. Across jurisdictions, the safety and soundness of both individual banks and the banking system as a whole are recognised as a fundamental objective of supervision. There is also a common recognition that for supervision to operate effectively, identification and intervention at an early stage are critical to prevent problems from escalating or becoming acute.[2]

Supervisory authorities have increasingly focused their attention on how early supervisory intervention can promote financial stability by reducing the probability and impact of a bank failure. There have been important developments in supervisory practices in this regard since the crisis. National supervisory authorities have adopted more forward-looking approaches, incorporating both quantitative and qualitative elements into their risk-based supervisory assessments. In addition to institution-specific supervision, supervisors are also adopting benchmarking exercises and thematic reviews as part of their toolkit to better detect emerging risks and potential outlier banks. Many national authorities have also undergone organisational changes to support these approaches, and have introduced dedicated teams and oversight functions to ensure early supervisory actions are taken and followed up.

This paper examines approaches to early supervisory intervention, with a view to providing supervisors with the opportunity to further their understanding of this challenging topic.[3] Early supervisory intervention is challenging as it involves the supervisory review process, supervisory frameworks and methods, decision-making structures and processes, and, importantly, skilled supervisors that have the "ability" and "will" to act early and effectively. The ability to supervise requires appropriate resources, information, skills and constructive working relationships with other agencies. The ability to act must also be complemented by the will to act, wherein supervisors must be willing to take timely and effective action with a culture for intervention within the supervisory authority, even when these decisions will not be popular and will probably be based on incomplete information.[4] Importantly, early supervisory intervention is challenging because effective supervision is based not on ensuring compliance with the letter of the rules but also with their spirit.[5]

Based on practices observed, early supervisory intervention therefore involves supervisors taking actions to correct an identified weakness or potential issue before rules or buffers are materially breached. In the context of prudential supervision, early intervention programmes are aimed at minimising the

1 The Basel III framework is a central element of the Basel Committee's response to the global financial crisis. It addresses shortcomings of the pre-crisis regulatory framework and provides a regulatory foundation for a resilient banking system that supports the real economy. The Committee's now finalised Basel III reforms are found at www.bis.org/bcbs/basel3.htm.

2 See Basel Committee on Banking Supervision (BCBS), *Core principles for effective banking supervision*, September 2012, www.bis.org/publ/bcbs230.htm.

3 The report draws primarily on the results of a survey of BCBS member authorities. The survey results are supplemented by case studies and other supervisory findings.

4 See J Viñals, J Fiechter, A Narain, J Elliott, I Tower, P Bologna and M Hsu, "The making of good supervision: learning to say 'no'", *IMF Staff Position Paper*, no SPN/10/08, May 2010.

5 See Financial Stability Board, *Progress report on increasing the intensity and effectiveness of supervision,* 7 April 2014, p 6.

impact of material distress and the probability of failure of an individual bank or group of banks on the broader financial system. Early supervisory intervention is firmly entrenched within a risk-based approach to supervision, where the intensity of supervisory attention escalates as the risks and impact that an institution poses to financial stability increases.

However, this report also finds that early supervisory actions taken by supervisors depend not only on the expert judgment of supervisors but also to a large extent on an organisational infrastructure that sets in place: (i) supervisory reinforcement through both vertical and horizontal risk assessments to maximise the early detection of risks; (ii) a clear framework for when actions should be taken; and (iii) internal governance processes and programmes to support supervisory development and capacity-building.

No single supervisor uses or adopts all of the practices outlined in this report. Rather, these practices are a compilation of the range of approaches being used in various jurisdictions. Case studies are included to help illustrate some of these methods. The report also recognises the extensive literature and guidance on the supervisory review process, supervisory frameworks and methods, which many authorities use as part of their day-to-day on- and off-site monitoring. This report limits its references to practices, methodologies and tools used in the context of early supervisory intervention.

1.1 Defining early supervisory intervention

Early supervisory intervention is defined as supervisors taking actions at an early stage to address unsafe and unsound practices or activities that could pose risks to banks or to the banking system. These early supervisory actions can range from supervisory measures that encompass moral suasion to more corrective sanctions, which are triggered when banks are deemed to be in danger of failing. At one end of the spectrum, the use of early supervisory measures is part of the supervisory review process and is guided by forward-looking assessments, risk and impact frameworks and specialist supervisory teams. At the other end, intervention is also undertaken using sanctions, often referred to as prompt corrective actions, which are required under legislation to minimise the impact that an insolvent bank would have on deposit insurance schemes.[6] An illustrative overview of early supervisory intervention is outlined in Table 1.

[6] Prompt corrective action (PCA) was embedded into US banking regulation by the Federal Deposit Insurance Corporation Improvement Act of 1991. See eg FDIC, *Risk management manual of examination policies*, pp 8–9, www.fdic.gov/regulations/safety/manual/section2-1.pdf.

Table 1: Early supervisory intervention

Stage of Intervention / Risk "bucket"	Typical actions
1. "Normal"/low risk	Normal supervisory risk assessment process Conducting regular reviews of the institution Review and analysis of prudential data Providing the assigned risk rating to the institution
2. "Early Warning" / moderate risk	More frequent/ targeted reviews by specialist risk teams Imposing more frequent/additional reporting requirements Direct interaction and meetings with senior management and board Written communication requiring the institution to present a plan and time frame to restore compliance with identified deficiencies More frequent monitoring and communication of measures taken by the institution
3. "Oversight" / risk	More frequent on-site visits, meetings with board Require revisions to business plans or governance arrangements Require recovery plans to be updated Restrictions on existing or planned business activities, limiting balance sheet growth Increasing capital/liquidity requirements, limiting capital distribution, stricter leverage limits Engaging external specialists to assess certain areas
4. "Mandated actions"/ imminent risk	Using formal powers to issue directions Require institution to present and execute a remediation plan in short time frame Institution to demonstrate recovery actions or formal enforcement actions taken
5. "Non-viable" / resolution and wind-up	Resolution regime is triggered

Intensity of supervision

PCA

Early supervisory intervention

Based on the approaches observed in a number of jurisdictions, early supervisory intervention occurs predominantly through pre-emptive supervisory actions that are taken well before quantitative thresholds are breached. These pre-emptive actions are clearly distinguished from prompt corrective frameworks, where the latter focus on quantifiable measures of a bank's financial condition and prescribe specific actions when the capitalisation of a bank falls below certain thresholds. Actions taken are automatically triggered and do not solely rely on supervisory judgment of a bank's financial condition.[7] However, for all authorities surveyed for this paper, early supervisory-based actions occur well before the breach of any regulatory requirement or threshold. Early intervention is therefore closely linked to the supervisory review process, where supervisors have a range of tools and powers commensurate with the circumstance or issue identified. Under an early supervisory intervention framework, supervisors can also apply early intervention measures without having to wait for banks to trigger or breach a threshold.

For many jurisdictions, early supervisory intervention is directly linked to a risk-based supervisory framework that determines the risk profile of a bank and the likely impact of its failure on the banking sector and financial system. Early intervention actions taken therefore are not exclusively due to a formal early intervention framework that prescribes action, but are also taken as part of ongoing supervisory monitoring. Risk-based early supervisory intervention also means that supervisory attention increases as the supervisory rating of an institution deteriorates. The risk-based supervisory review process also provides supervisors with a clear structure and the process for identifying and monitoring risks. A risk-based supervisory framework with a well articulated focus and strategy is also an important element for early intervention. Ideally, an effective supervisory strategy comprises clear objectives yet maintains sufficient flexibility to adapt to changing conditions. Some authorities have set out a well defined supervisory risk appetite that forms part of the authority's own risk management framework.

Case Study 1

Risk Appetite Statements

The Office of the Comptroller of the Currency (OCC) established a Risk Appetite Statement that sets boundaries of acceptable levels of risk in key areas of agency operations. The Risk Appetite Statement provides a clear signpost to guide decisions and helps external stakeholders to better understand the agency's actions.

The Risk Appetite Statement states that the agency has a conservative risk appetite but will accept more risk in certain areas to remain nimble and capable of adapting to the changing needs of supervising national banks and federal savings associations. The risk appetite sets a standard that can be achieved through diligent planning, hard work and continuous assessment.

The Risk Appetite Statement establishes risk tolerance in the following nine categories:

1. Supervision risk – the risk that supervisory processes do not identify and mitigate significant risks to the banking industry.

2. Human capital risk – the risk that resource use and employment practices do not align with the agency's mission and strategic objectives.

3. Strategic risk – the risk that agency strategy selection, prioritisation, modification and implementation jeopardise achievement of OCC goals and objectives.

4. Reputation risk – the risk that negative perception jeopardises the OCC's credibility, achievement of mission and strategic objectives, or ability to maintain the agency as a preeminent bank regulator.

5. Technology risk – the risk that information technology processing, security, stability, capacity and performance jeopardises core agency operations.

6. Operational risk – the risk that people, processes, systems or external events impede the OCC's ability to meet its objectives.

[7] See eg FDIC, *Federal Register*, vol 78, no 175, www.fdic.gov/regulations/laws/federal/2013/2013-09-10_final-rule-interim.pdf.

7. Legal risk – the risk that the agency does not fulfil its obligations under law and regulation or has gaps in mission-critical functions to supervise, license and maintain a sound banking system.

8. External risk – the risk that political, geopolitical or external stakeholder events affect the agency's ability to achieve objectives.

9. Financial risk – the risk that the OCC's financial resources will be impaired because of adverse economic conditions, reduction in assets under supervision, ineffective resource utilisation or increasing expenditures, reducing the ability to successfully complete the agency's mission.

The Risk Appetite Statement characterises the agency's tolerance for each risk as low, moderate or high.

Early intervention relies on supervisors to identify weaknesses before they become irreparable, by using forward-looking risk analysis and early intervention powers. To address this, many supervisory authorities have set up a structured approach to the supervisory review of banks, based on the principle of risk-based supervision. Supervisors typically use a methodology for determining and assessing the nature, impact and scope of the risks that banks or banking groups are exposed to, and which banks present risks to the safety and soundness of the banking system. An effective supervisory review process also requires supervisors to prioritise supervisory activities in accordance with the risk profile and systemic importance of individual banks and banking groups.[8] Using this forward-looking approach, the supervisor identifies the areas of greatest concern by assessing the bank's various business lines and risks; its associated strategies; and the quality of its governance, management and internal controls. The supervisory focus is directed to these areas to allow the supervisor to identify and address weaknesses at an early stage.[9] Therefore, while appropriate methodologies and good sources of information are important, supervisory judgment will almost always be needed to interpret the information and assess the financial health of a bank.

As part of ongoing supervision, authorities undertake risk and impact assessments to determine the strategy, scope and intensity of supervisory oversight. Based on the risk and impact assessments undertaken by supervisors, entities are classified into supervisory categories. These supervisory categories will typically graduate from a "normal" level of supervisory oversight for banks that do not pose any immediate risks to their own viability or for the banking system, to the stage where a bank is actively managed into resolution. Supervisory intensity will therefore vary in accordance with each respective category, and will vary mainly in terms of the frequency of on-site inspections, rigour of risk assessments, and the amount of supervisory resources allocated to the bank. Supervisory activities for entities that have a normal level of supervisory oversight typically involve a "baseline" level of monitoring of key indicators and financial statements as well as a review of regulatory and statistical data or audit reports.

1.2 Challenges of early supervisory intervention

In practice, weaknesses in banks tend to grow over time and do not appear in isolation. The supervisor's challenge is to identify weaknesses before they become irreparable and to deal with a range of problems simultaneously.[10] Early remediation indicators are typically based on changes in regulatory capital and liquidity levels, stress test results, risk management weakness and market indicators. However, in addition to monitoring these early warning indicators, supervisors are expected to be experienced, able and willing

[8] See BCBS, *Core principles for effective banking supervision*, September 2012, www.bis.org/publ/bcbs230.htm, Core Principle 8.

[9] See BCBS, *Guidelines for identifying and dealing with weak banks*, July 2015, www.bis.org/bcbs/publ/d330.htm.

[10] See BCBS, ibid, p 12.

to focus on the bigger picture, to come to judgments that are forward-looking and to anticipate risks that affect the safety and soundness of institutions. Supervisors are also expected to engage in credible and sceptical conversations with the board and senior management of a bank related to its business strategy as well as the effectiveness of its risk governance. Further, when institutions do not respond appropriately, effective supervisors should take meaningful and timely action.[11] For example, as set out in the *Guidelines for identifying and dealing with weak banks*, early supervisory intervention is warranted when the following weaknesses are observed:

- **Poor lending practices**, such as poor underwriting skills or an overly aggressive loan expansion programme, coupled with an absence of incentives to identify problem loans at an early stage and to take corrective action.
- **Excessive concentrations** across the business model, including funding, lending, sources of income and risk. Concentrations can accumulate across products, business lines, countries and legal entities, and can be destabilising. Large exposure regimes aim to limit excessive concentrations.
- **Structural imbalances in a bank's liquidity position**, determined by, for example, an unsustainable maturity structure, a high loan-to-deposit ratio, or a low share of stable sources of funding on total liabilities. An excessive concentration of funding is typical of business models that are overly reliant on ample market liquidity and that ignore the liquidity risk.
- **Excessive risk-taking** may come about when a bank's compensation scheme ties compensation or bonuses to short-term performance (eg short-term increases in the bank's profits, earnings or share price) or performance targets that do not take the related risks into consideration.
- **Weaknesses in risk culture and governance**, ie lack of risk experience and skills among senior executive and non-executive management, a lack of influence of the risk function, and weaknesses in the way risk is measured and reported.
- **Breaches or overrides of existing policies and procedures**, such as limits on concentration, connected lending, value-at-risk exposure of the trading book and liquidity risk tolerance. Individuals within the bank may override policies and procedures by force of personality, dominant ownership or executive position.
- **Fraud or criminal activities** and self-dealing by one or more individuals.
- **External factors such as negative macroeconomic shocks** (including a currency crisis, a weak real economy, inadequate preparation for financial sector liberalisation, a massive market liquidity squeeze) may also lead to problems for banks. External factors may not overwhelm a well managed and financially sound bank, but will expose deficiencies in management and control in weaker banks.

More intense and effective supervision, coupled with pre-emptive and proactive early supervisory intervention, is a complex and challenging objective. Greater supervisory intensity does not in itself lead to more effective supervision. It has been observed that supervision tends to be more effective when supervisors proactively influence the behaviour of banks in key areas (such as governance, risk appetite, risk and financial management and, where appropriate, strategy) in ways that enhance those institutions' safety and soundness and thereby contribute to overall financial stability. The effectiveness of early supervisory intervention depends therefore on how the supervisory authority overcomes challenges in a

[11] See Financial Stability Board, *Thematic review on supervisory frameworks and approaches for SIBs, peer review report,* 26 May 2015.

number of important areas, ranging from making supervisory judgments to gaining stakeholder/public support. Specifically, these challenges may include:

Making supervisory judgments. Risks are inherent in banks' operations. The type of risks that supervisors seek to monitor and assess are those that could have serious repercussions for the bank or have systemic ramifications. A supervisor must also identify and tackle problems at an early stage before they become acute. These risks may be idiosyncratic to the bank, for example, a bank growing too quickly in a certain new business without having the appropriate risk management capabilities. They may be systemic in nature, eg a bank may be engaged in an activity that may be profitable in the short term but have macroprudential consequences. Equally important, the supervisor must assess the quality of risk management and internal controls in determining what constitutes a high-risk area. Identification of these risks always involves supervisory judgment, which is difficult as this is different from ensuring regulatory compliance. The consequences of making the wrong judgment can also be significant: areas considered to be of low to moderate risk will not be given heightened supervisory focus, which in turn may allow excessive risk-taking to build up at individual banks. A supervisor must distinguish clearly between symptoms and causes of bank problems.[12]

Undertaking supervisory action. Once risks are identified, the analysis, judgment and recommendations made by supervisors need to be escalated to the appropriate levels within the supervisory institution for approval and/or action. The efficiency and effectiveness of that process is very important. However, so too are the willingness and capability of the supervisors engaged in that process. Early supervisory intervention therefore raises issues related to incentives for taking timely action, preventing forbearance and maintaining the appropriate skill set. As early supervisory intervention occurs when the bank has not yet breached any regulatory rules, the burden of proof is on the supervisor regarding the necessity of the associated action. The supervisor will have to bear the cost of these actions (eg pushback from the banks, political pressure) and other associated risks, where supervisory action may generate unintended consequences. Meanwhile, the cost of not taking action can be perceived as low to the supervisor in the short term and result in no action being taken.[13] On the other hand, supervisors may also lack the skill set related to analysing risks in a complex and rapidly changing banking environment and influencing behaviour at banks which have not yet breached regulatory rules. The willingness and ability of the supervisors to undertake early and effective supervisory intervention is therefore critical.

Getting banks to undertake remedial actions. In cases of early supervisory intervention, when the bank has not yet breached regulatory rules, it is often more difficult to convince the board/management that there is a prudential/financial stability concern, and even more difficult to get banks to undertake satisfactory remedial actions. Communication with the bank is therefore very important and forms a critical part of early and effective intervention. The framework for supervisory action must strike a balance between rigid regimes for prompt corrective action and general, less prescriptive approaches. A balance also has to be struck between informal methods – to be used if the bank's problems are less serious and bank management is cooperative – and more formal actions that are binding on the bank, with penalties for non-compliance.

Gaining stakeholder/public support. As supervisors operate under public mandates, it is important that the public understands the rationale and impact of early supervisory intervention and evaluates the performance of a supervisory authority through appropriate accountability regimes. At the same time, gaining support from important stakeholders will also enhance the effectiveness and reduce the cost of early supervisory intervention. Communication with the public and key stakeholders is therefore important for the effectiveness of early supervisory intervention. The issue of accountability is particularly

[12] See BCBS, *Guidelines for identifying and dealing with weak banks*, July 2015, www.bis.org/bcbs/publ/d330.htm, p 8.

[13] See BCBS, ibid, p 32.

important in the context of early and effective intervention, where the supervisor will typically be acting on the basis of expert judgment.

The effectiveness of early supervisory intervention therefore depends on the quality of the supervisory framework (structures and processes) to meet the challenges mentioned above. For this reason, supervisors are putting in place robust internal governance processes to ensure that well supported judgments are being made within and across supervisory teams. Developing the will to act in particular is a more difficult task, as it requires authorities to evaluate their internal structures and processes to develop a culture and framework for early and effective intervention, which can incentivise supervisory staff to act. The remainder of this report therefore adds to the existing guidance by exploring how supervisory authorities can actively promote and entrench early intervention as part of their supervisory review process.

2. Frameworks and processes for early supervisory intervention

Important developments and changes have been made to supervisory frameworks, processes and organisation since the crisis to support early and pre-emptive intervention. Importantly, early supervisory intervention depends not just on the judgment and actions taken by individual supervisors, but on an organisational infrastructure that sets in place: (i) supervisory reinforcement through both vertical and horizontal risk assessments to maximise the early detection of risks; (ii) a clear framework for when actions should be taken; and (iii) internal governance processes and programmes to support supervisory development and capacity-building.

2.1 Tools for early risk detection and forward-looking supervision

Early supervisory intervention is supported by forward-looking assessments and programmes, which have been widely adopted by supervisors with more attention paid to strategic and qualitative elements. All of the authorities surveyed for this report confirmed that qualitative risk assessments are included in their early intervention frameworks. Responses also indicated that supervisory assessments of qualitative indicators are used to support the assessment of early intervention measures that are triggered by quantitative indicators, or are used to determine the financial health of the bank as well as the appropriate intervention or supervisory action to be taken. Some authorities also indicated that there are qualitative conditions under which the application of early intervention measures should be considered, and that supervisors can implement early intervention actions based on the identification of unsound practices even though quantitative thresholds or regulatory ratios have not been breached. Early intervention measures therefore also take into account that certain events may have a significant impact on a bank's financial condition and therefore may lead to a situation where the bank is likely to infringe supervisory requirements.

Forward-looking supervisory tools are used as part of the supervisory review process to give supervisors a range of information on the bank and wider market. A number of these tools have been adopted to facilitate the early identification of risk areas that may require supervisory action and intervention. The following tools are not exhaustive, but cover a range of methods that provide supervisors with forward-looking information:

Early warning systems. Many supervisors have established early warning systems to identify the institutions and issues that require closer attention. An early warning system typically provides alerts on significant changes in financial and prudential indicators and identifies outliers within peer groups. Common indicators across peer banks are monitored and analysed to pick up anomalies. Through the review of these indicators and their trends, potential problems are highlighted for supervisory attention and follow-up. Macroprudential regulation and supervision involve monitoring emerging risks and vulnerabilities in the financial system. Surveillance of the banking system and the financial system can provide early warning indicators of problems that might affect individual banks and the system as a whole. As set out in the *Guidelines for identifying and dealing with weak banks*, early warning systems will not normally provide firm evidence of weaknesses, but they can give indications that suggest the need for a deeper investigation by the bank and its supervisor. Early warning systems are particularly important for helping supervisors to direct limited resources towards banks or activities where weaknesses are most likely to be found.

Case Study 2

Early warning systems developed by bank supervisors

The Federal Reserve System has developed two variants of its **Supervision and Regulation Statistical Assessment of Bank Risk** (SR-SABR) model. The first variant employs logistic regression to estimate the probability of a bank's downgrade to a worse CAMELS composite rating class, based on the most recent Federal Financial Institutions Examination Council *Report of Condition and Income* (Call Report), resulting in an adverse change rating. The second variant estimates the probability of failure or critical undercapitalisation during the subsequent two years, resulting in a viability rating. A bank's overall SR-SABR rating is based on the worse of the adverse change rating and viability rating. The Federal Reserve System has also developed Outlier Metrics in the form of algorithms that generate forward-looking risk classifications of low, moderate or high for individual risk and performance dimensions (for example, capital, liquidity, credit, earnings and operations). A subset of the Outlier Metrics are used to scope examinations of community and regional state member banks.

The Federal Deposit Insurance Corporation (FDIC) has developed the **Statistical CAMELS Off-site Rating** (SCOR) model, which runs every quarter on the basis of Call Report data, and uses an ordered logit model of CAMELS ratings to estimate likely downgrades of banks with current composite CAMELS ratings of 1 and 2. The model compares one-year-prior Call Report data to the current on-site examination rating. The coefficients of the estimated relationship are used in conjunction with present Call Report data to estimate future ratings.

For smaller and less complex institutions, the OCC has developed the **Canary Early Warning System**, which enables the supervisor to spot emerging trends in industry risk with early warning models. Canary is an analytical tool used to enhance the identification of emerging credit, interest rate and liquidity risk. Examiners use Canary – along with other tools – to assist in identifying institutions exhibiting and/or trending towards higher risk positions. Canary reports mainly assist the examiners in their daily supervisory activities, and can be also used by supervisors to better understand the development of systemic risks and to develop supervisory strategies. For larger and more complex institutions, teams of dedicated examiners on-site at the institution stay in constant contact with bank management, and receive ongoing reporting from multiple risk disciplines as well as from the bank's internal and external auditors. This arrangement serves as an active monitoring system and early warning indicator of emerging trends and risks. The OCC's large bank examiners also leverage various internal OCC reporting tools, as well as the knowledge and expertise of OCC lead experts to understand emerging risks in particular institutions and across the industry.

The China Banking Regulatory Commission (CBRC) has developed the **Risk Early Analysis Support System** (REASS) to assess the probability of supervisory rating downgrades and to identify emerging vulnerabilities in the banking system. Built upon the CBRC's Off-site Surveillance System Database, the REASS generates a set of early warning indicators on a quarterly basis, including fragility indicators and leading indicators that reflect the short-term and medium-to-long term risks, respectively, of banking institutions. The REASS also contains over 300 supplementary indicators, with which it identifies institutions with higher risks in specific areas, eg rapid expansion in certain business areas with unstable funding. The REASS also classifies commercial banks into various peer groups based on factors such as size, location and supervisory rating, and conducts outlier analysis. The REASS is integrated into the supervisory process, where the system sends quantitative early risk warning information to supervisors, who are asked to follow up with further in-depth analysis and assess the necessity of supervisory action.

The **Trigger Ratio Adjustment Mechanism** (TRAM) early warning model developed by the Bank of England was designed to make assessments of a banking institution based on a mix of statistical methods and supervisory judgments. The assessments are based on three categories of information representing the operation of banking institutions: profit, risk profile, control and structure.

Stress testing. Supervisors are using a range of stress tests, including system-wide, firm-specific and reverse stress testing. Even though stress testing is built around expected and hypothetical scenarios, the outcome of such exercises provides supervisors with additional qualitative and quantitative information on risks and vulnerabilities that the bank is or might be exposed to. The US Comprehensive Capital Analysis and Review (CCAR) programme is an example of the use of stress testing within an early supervisory intervention framework. Under the CCAR, the Federal Reserve assesses annually whether large bank holding companies have sufficient capital to continue operations throughout times of economic and financial stress.[14] If the Federal Reserve objects to a firm's capital plan, the firm may not make any capital distribution unless the Federal Reserve indicates in writing that it does not object to the distribution. In addition, the Federal Reserve may require a firm to resubmit its capital plan if it determines that there has been a material change in the firm's risk profile, financial condition or corporate structure.

Horizontal, thematic and targeted reviews. Some supervisors have introduced the practice of completing horizontal analysis in addition to ongoing supervision. Dedicated teams perform horizontal assessments such as peer benchmarking and thematic analysis and/or sectoral data analysis. Horizontal assessments provide supervisors with a supplementary angle on the financial situation of an individual bank and support an identification of potential outliers operating in similar business lines. They also help supervisors better understand industry trends and risks to financial stability. In addition to regular ongoing monitoring activities and horizontal assessments, some supervisors also use targeted reviews for a deep dive evaluation of particular areas of supervisory concern. This approach not only complements the day-to-day supervision of individual banks but can support early identification of emerging risks in the financial system.

Case Study 3

Horizontal risk conferences in the UK

As part of the continuous supervisory cycle, the Bank of England Prudential Regulation Authority (PRA) invites contacts from the banks and building societies it supervises to risk conferences. These conferences are held twice yearly – one for chairs and one for CEOs. They let the PRA highlight key areas of concern to the firms, and feed back data analysis it has conducted in the past year. It also gives the chance for the regulator to engage with firms, so it always includes challenge sessions, and questions are encouraged throughout.

The 2015 conference covered emerging risks on buy-to-let (BTL) lending. This was achieved by holding a policy session to outline the recent macroprudential action, and also presenting data analysis that highlighted the significant growth in the BTL market and further growth forecasted, which had been the warning signals the PRA needed to undertake early intervention. The data presentation used firms' (anonymised) own data, and so provided them with a stark message, with the hope of causing them to reconsider their lending plans.

[14] The CCAR applies to bank holding companies in the Large Institution Supervision Coordinating Committee portfolio, including US global systemically important banks, and firms with total consolidated assets of $50 billion or more.

A second example of an area covered in the risk conference in 2016 is governance. The central team within supervision had conducted thematic analysis on firms' governance arrangements, focusing on areas such as board composition, and board effectiveness. The presenting team gained opinions from the audience that went alongside the analysis. This sparked debate among the attendees, and representatives from the PRA were able to discuss the reasoning behind each question. This two-way conversation is a key objective of the conferences, as it shows the firms that the regulator is willing to have those discussions.

Governance and risk management. A critical element of the supervisory review process is to evaluate a bank's corporate governance practices, including the quality of board and senior management oversight and the effectiveness of risk management and control functions.[15] Typical assessments include the strength and independence of a bank's internal risk, compliance and internal audit functions, the quality of its information systems, and the interaction between different lines of defence. Supervisory authorities have increasingly formed dedicated supervisory support teams to assess corporate governance, teams which did not exist prior to the crisis. These teams not only help to develop internal guidance, but are also increasingly on-site with supervisory teams to get a better understanding of the internal control environments. This has not only helped the industry to understand supervisory expectations but has also educated supervisors internally on how they can play a role in promoting strong corporate governance practices.

Business model analysis. Business model assessment supports supervisory understanding of a bank's business model and can be an effective tool for early detection of risks and vulnerabilities, thus assisting supervisors in early and effective intervention. Business model analysis forms an important part of the supervisory process and enables the supervisor to foresee risks developing. As the *Guidelines for identifying and dealing with weak banks* set out, it is becoming a regular part of supervisory review in many jurisdictions, as it is allows the supervisor to go beyond what the data show and helps to identify risks before they become significant.

Risk culture analysis. Understanding the governance and culture of the bank is critical for understanding whether early supervisory intervention may be needed. Some authorities have increased their focus on understanding the extent to which the risk culture of individual institutions supports their formal governance structures and management of risk.[16] This includes assessing incentive structures, remuneration and misconduct risk. A supervisor's understanding of a bank's culture can be enhanced by comparing culture across banks. On-site visits and meetings with senior managers allow the supervisor to gain an understanding of how the tone from the top influences staff attitudes and management of risk.

Case Study 4

The Netherlands Bank's approach to assessing governance and culture

For the past five years, supervision of behaviour and culture has been part of the Netherlands Bank's (DNB) supervision of the Dutch financial sector, and both executive and supervisory directors have been made more aware of the importance of behavioural and cultural aspects in decision-making. A dedicated expert centre has been set up, comprising experts from a wide range of backgrounds – psychologists, change experts and governance experts. These specialists study boardroom effectiveness by observing and evaluating board meetings. These examinations not only

[15] The Basel Committee's *Corporate governance principles for banks* provide 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. See www.bis.org/bcbs/publ/d328.htm.

[16] See Australian Prudential Regulation Authority, "Risk culture", *Information Paper*, October 2016, www.apra.gov.au/CrossIndustry/Documents/161018-Information-Paper-Risk-Culture.pdf, p 10.

focus on behaviour and culture at the top; together with the Netherlands Authority for the Financial Markets (AFM), the DNB also investigates whether organisations are able to successfully achieve organisational and cultural change. This forward-looking approach is a major benefit of this relatively new form of supplementary supervision. It aims to identify risks that may emerge from culture and behaviour at an early stage and take the appropriate measures to prevent these risks from materialising.

The DNB uses different instruments to monitor supervised institutions, eg follow-up interviews and on-site assessments. If necessary, institutions are monitored over longer periods of time. Based on the information obtained, the DNB has found that institutions are increasingly taking action as a result of behaviour and culture assessments, and that these actions are often effective. An important additional effect of supervision of behaviour and culture is that DNB supervisors are getting a consistent perspective on the causes underlying various supervisory concerns at the institutions that are supervised. This has given the DNB more options for intervention, and has made the interventions more effective.

2.2 Supervisory structures and oversight

In many authorities, organisational changes have been made to reinforce early detection and early supervisory actions. Supervisors are reinforced and guided by the supervisory risk appetite, frameworks for supervisory intensity and escalation processes. All of the supervisory authorities surveyed confirmed that there is more than one supervisory team responsible for early supervisory intervention. The authorities noted that both on-site and off-site supervision teams were responsible for monitoring institutions and deploying any early supervisory measures, but many responses also noted that in addition to these teams a number of other technical risk specialists and horizontal assessment units are involved in monitoring risks. Increasingly, supervisory authorities are also developing oversight committees and quality assurance units to ensure supervisory decisions and actions are consistently applied and followed through. The involvement of a cross-section of supervisors and risks specialists ensures that emerging issues are captured both at firm level and across the sector. Regardless of the organisational structure in place, when issues have been identified, supervisors should be encouraged to share this information with other teams or supervisors as similar issues could be present in other banks.

In some jurisdictions, significant organisational changes have been made so that the early detection of risks is focused on the largest most systematically important banks. For example, established as a response to the lessons learned from the financial crisis, the Single Supervisory Mechanism (SSM) is responsible for the direct supervision of significant banks. Joint supervisory teams (JSTs) are established for each significant institution and the overall composition and organisation of a JST will vary depending on the nature, complexity, scale, business model and risk profile of the supervised institution.[17] Similarly, in the US, the Federal Reserve's Large Institutions Supervision Coordinating Committee coordinates the supervision of the largest and most complex, systemically important banks. The reorganisation also drew on lessons learned from the crisis, and was designed to enhance communication and facilitate the identification of emerging risks through greater emphasis on cross-firm perspectives.[18]

Horizontal assessment teams also assist supervisors with identifying emerging issues and threats within the industry or in the macroeconomic environment. Industry-level information is critical in helping the supervisor to determine if the bank is an outlier relative to peers, as well as whether industry practices overall are being weakened and need to be addressed at the individual bank level. For example, the Australian Prudential Regulation Authority (APRA) Industry Analysis teams provide supervisors with up-to-

[17] See ECB, *Guide to banking supervision*, November 2014.

[18] See Federal Reserve, *Large financial institutions*, 2017, www.federalreserve.gov/supervisionreg/large-financial-institutions.htm.

date information on industry developments and emerging issues or trends that may adversely impact banks' risk profiles. Supervisors are responsible for determining whether any risks or issues identified necessitate a change to their supervisory action plan for a bank. These reviews may lead to actions relating to a specific bank and/or a selection of banks and can lead to a revision of their prudential requirements.[19]

Supervisory authorities have also established specialised supervisory units, which not only support the ongoing supervision of banks but are also in place to ensure consistency of supervisory approaches. For example, the SSM has established 10 horizontal and specialised divisions to support the JSTs in the conduct of their supervision. These are Risk Analysis, Supervisory Policies, Planning and Coordination of Supervisory Examination Programmes, Centralised On-site Inspections, Internal Models, Enforcement and Sanctions, Authorisations, Crisis Management, Supervisory Quality Assurance, and Methodology and Standards Development.[20] Similar units and divisions are common across all member jurisdictions surveyed. Structurally, the increasing use of horizontal and vertical teams in combination helps to provide different perspectives as well as to provide effective challenge to avoid groupthink.

Authorities are also adopting constructive review and supervisory evaluation functions, which also help support supervisors to act early. Constructive review involves an evaluation of a supervisor's actions from a function within the supervisory authority that helps the supervisor perform their role. For example, a number of authorities have established quality assurance (QA) units, which provide an independent second line of defence, identifying and promoting best practices in the light of supervisors' past actions. Unlike the Internal Audit function, the QA unit performs more ex post analysis on supervisors' judgments and decisions, and then sets out recommendations to supervisors based on the results of the review. The lessons learned provide an important knowledge base for future supervisory decisions, as well as the timing of when those decisions should occur.

Case Study 5

Quality assurance function

In response to public scrutiny of supervisory actions, one authority established a quality assurance (QA) unit devoted to providing assurance on whether the supervisor acted within the standard expected of it and whether this standard was maintained throughout the intervention. This unit is responsible for informing senior management on whether supervision is effective, rigorous, and legally sound. It acts as the second line of defence for supervision. To achieve this goal, the QA unit analyses performance against:

a) supervisory deliverables;

b) methodologies, procedures and organisational arrangements; and

c) tools and systems supporting those procedures.

The QA unit produces the following tangible outputs and escalates to management as appropriate:

a) assessment of the soundness, timeliness and efficiency of the intervention;

b) feedback on the proper use of the supervisory framework and any need for enhancement;

c) recommendations and standards based on the analysis, which are always provided to supervisors and other support functions within the authority; and

[19] See APRA, *The APRA supervision blueprint*, May 2015, www.apra.gov.au/AboutAPRA/Documents/APRA-Supervision-Blueprint-FINAL.pdf.

[20] See ECB, op cit.

d) assessment of any risks, including legal risks, or deficiencies in the supervisory framework that have been highlighted during the recent intervention.

This output is based mainly on ex post reviews, promoting QA awareness by benchmarking supervisory practices against agreed best practices. The QA approach relies on cooperation with supervisors, and is viewed as a support function by supervisors rather than a destructive challenge. Carrying out these reviews helps to highlight any issues with the intervention process; therefore, QA outputs are constructive and forward-looking in nature.

In its first year of activity, the QA unit performed multiple reviews and provided more than 50 recommendations to supervisors. In some cases, the recommendations were considered essential to enhance the supervisory process for early intervention. One specific example of a recommendation was to enhance proportionality in supervisors' day-to-day activities by promoting a risk-based approach to planning. On the advice of the QA unit, this was implemented by giving supervisors greater scope to allocate their time between the banks they supervise based on their judgment of the risk the banks pose to the safety and soundness of the banking sector. This approach ensured resources were directed to the banks that could most benefit from early intervention and also gave supervisors greater accountability for the banks they supervise, leading to early action being taken more frequently with more at-risk banks.

2.3 Supervisory intensity and escalation

Supervisory authorities have increasingly adopted detailed supervisory intervention frameworks that are reinforced by the collective monitoring efforts of on-site, off-site and specialist supervisory risk teams. Early supervisory intervention frameworks set out at which stage and under what conditions supervisors should review their supervisory stance towards an institution, and the actions that supervisors should take accordingly. These frameworks also provide high-level guidance to reinforce that intervention should be taken at the earliest possible stage as well as strengthening the ability of supervisors to take action where necessary. They also outline the type of intervention that banks can expect under different circumstances. Collective supervisory monitoring also increases the surveillance and detection of emerging risks, at both an institutional and industry level. While responsible supervisors are tasked with carrying out supervisory decisions directly with the bank, supervisors can be supported by the analysis and early detection of risks from specialist units. This ensures that early intervention is not solely dependent on the actions of one supervisor, but is the collective responsibility of teams of supervisors.

For example, the Monetary Authority of Singapore (MAS) has in place an Intervention Framework which specifies a list of critical indicators to assist supervisors in identifying potential deterioration in the financial soundness of a bank, their trigger levels and the corresponding corrective actions. There are four trigger levels, and to allow for early intervention, earlier trigger levels are set at levels before the breach of regulatory requirements. The UK Prudential Regulation Authority (PRA) has in place a Proactive Intervention Framework (PIF), which is designed to ensure that PRA supervisors put into effect their objective to identify and respond to emerging risks at an early stage. When a firm moves to a higher PIF stage (ie the PRA has determined that the firm's viability has deteriorated), the PIF sets out the corresponding supervisory actions accordingly. Canada's Office of the Superintendent of Financial Institutions (OSFI) also sets out in its *Guide to intervention for federally regulated deposit-taking institutions* the stages where certain intervention actions would typically occur. The objective of the outlined intervention process is to enable its supervisors to identify areas of concern at an early stage and to intervene effectively. However, the intervention process is not a rigid regime under which every situation is necessarily addressed with a predetermined set of actions. OSFI may choose to intervene at different times or stages and in different ways depending on circumstances. The European Banking Authority *Guidelines on triggers for the use of early intervention measures* specify conditions under which the application of early intervention measures should be considered by supervisors. In particular, they identify triggers for assessing early intervention measures relating to the Supervisory Review and Evaluation

Process (SREP) assessment; however, the SSM will also assess early intervention in case of material changes or anomalies identified in the monitoring of key financial and non-financial indicators or significant events.

Importantly, these frameworks for early supervisory intervention are premised on supervisors having the discretion to act pre-emptively without waiting for thresholds or requirements to be breached. Typically, supervisors will therefore in the first instance use informal methods and less intrusive corrective actions to address issues before risks become material. For example, where the MAS considers a bank's issues to be less critical, and if the institution's management is assessed to be willing and able to take prompt and effective action to deal with the problems, the MAS will adopt remedial tools such as moral suasion through oral advice, written recommendations or issuing a supervisory warning.[21] More formal corrective measures will be used when banks face more serious problems or are not cooperating to ensure compliance with supervisory recommendations. The use of formal corrective action is therefore seen as having moved beyond early supervisory intervention and towards dealing with weak banks.[22]

Based on practices observed, early supervisory intervention begins as soon as a bank is no longer categorised within "normal" supervisory oversight. Early supervisory intervention at this stage typically involves more frequent communication with the bank and written communication with the board. The bank will be subject to more reporting requirements and will be expected to address identified deficiencies within a set period. Recovery and resolution plans may be actively reviewed at this stage. OSFI describes this stage as "early warning" and provides a range of actions available to supervisors. APRA lifts its supervisory intensity and closely monitors key risk areas as soon as a bank is categorised in "oversight", also setting out appropriate actions for supervisors to take in each specific case. The PRA considers there to be moderate risk to the viability of the firm where supervisors have identified vulnerabilities in the firm's financial position, risk management and or governance practices.

Early supervisory intervention typically commences when the level and frequency of communication increases compared to the normal ongoing supervisory dialogue established with the bank. The scope and frequency of communication with the banks is largely determined by their size, risk profile and complexity. As a matter of normal supervisory practice and oversight, supervisors communicate with the bank's management and board as often as the bank's condition and supervisory findings require. A more or less continuous dialogue with management and regular board-level contact is appropriate for the largest banks. For smaller banks, these contacts take place as much as is required. The frequency of communication is also often proportionate not only to the circumstances and scale of the problem but also to the bank's willingness and capacity to promptly remedy the problem. Where supervisors are satisfied with remedial actions taken by the bank, the frequency of communication gradually reverts back to normal supervisory oversight. Establishing these patterns of frequency also helps banks to adapt their behaviour at an early stage of concern.

In most instances, the scope of communication between the supervisor and a bank includes details of potential risks and significant trends identified from its on-site examination, off-site reviews and forward-looking analysis. Early intervention involves supervisors communicating their supervisory findings, decisions and rationale of an action to the bank in a timely manner, and ensuring that any follow-up required from the bank is also closely monitored. Communication with banks at the board level and senior levels immediately below the board is critical for early intervention. Communication at board level is especially useful to reinforce messages given by the supervisor to senior management about required changes. The insights gained from discussions with the bank's board and senior management either help to alleviate potential supervisory concerns or accentuate the need for more escalated supervisory interventions. It is also the most direct way to test the reactions from the bank's management to determine whether the bank's management is capable and willing to address the supervisor's concerns before there

[21] See MAS, *Framework for impact and risk assessment for financial institutions*, p 17.

[22] See BCBS, *Guidelines for identifying and dealing with weak banks*, July 2015, www.bis.org/bcbs/publ/d330.htm.

are any further interventions. Such communication is also the first step in signalling the seriousness of issues identified by the supervisor and the expectation that they will be addressed promptly.

One common form of early intervention is the intensification of supervisory reviews around problem areas coupled with supervisory expectations or directives to address those vulnerabilities. Intensification of supervisory reviews helps build supervisors' and firms' understanding of potential vulnerabilities. Intensive reviews, coupled with a clear articulation of risks and supervisory expectations, can help bring senior management and board-level attention to an issue at an early stage. When there is a package of remedial measures, authorities will identify and prioritise the more serious deficiencies and stipulate a time frame for remedial action in accordance with the urgency and seriousness of the weakness. For significant problems, requiring the remedial action plan to be approved by the board of directors gives the supervisor reasonable assurance that the problems will be satisfactorily addressed within an acceptable period of time.

Early supervisory intervention also involves updates from banks on the progress of the remedial actions taken and the supervisor following up on this progress. Regular updates on the progress of the remedial programme through reports or meetings, as well as the supervisor following up on remedial progress and assessing whether there is satisfactory progress, or where additional remedial actions are necessary, is also widely adopted practice. Supervisory discussions with the bank are often used to assess whether escalation of remedial actions for those exacerbated problems is needed, or if the de-escalation of remedial actions is warranted for those issues that have improved. Lack of progress on actions taken by the bank would then warrant the supervisor considering the use of penalties and sanctions to enforce compliance with supervisory regulations and recommendations.

Communication that is addressed to all banks or a group of banks facing the same issues is an effective way to alert banks to potential issues. Communication to banks and markets about horizontal reviews give banks a useful benchmark based on insights provided by the supervisor on peer groups, which can potentially drive changes in behaviour. Supervisory insights based on peer groups also provide supervisors with the backing they need to act on their judgment. A common example of conveying emerging risks is through official reports, such as financial stability reports. Moral suasion, delivered through public speeches from high-level officials, can also be an effective tool for addressing emerging vulnerabilities by increasing senior management's awareness of an issue and potential consequences of leaving the issue unaddressed. Finally, supervisors can also use guidance or policy statements to provide clarity to all banks about the need to address emerging risks or vulnerabilities associated with certain business activities or practices. Guidance and statements can be an effective and transparent means of communicating supervisory concerns to the sector. Supervisors use these communications to prompt firms to address vulnerabilities before they reach more serious levels of concern.

Publishing stress test results or the assessment of banks' capital planning processes is another method some jurisdictions use to show the supervisory assessment of banks' resilience to adverse economic developments. It can increase public confidence in the banking system, by showing that banks have robust capital planning processes and sufficient capital to continue their operations in times of stress. It can also place market pressure on banks by highlighting certain vulnerabilities that require specific action. Communication around the publication of stress tests is crucial, in order to avoid market speculation about the results. Technical briefings with the press to promote understanding of the results are necessary to ensure appropriate interpretation of the results and manage expectations. Communication should explain the objective of the exercise, which factors were used for the assessment and how the outcomes will be used by supervisors.

2.4 Supervisory communication with the public and key stakeholders

Early and effective supervisory intervention is premised on supervisory authorities having operational independence. In accordance with the Core Principles, the accountability and governance of the supervisor are prescribed in legislation and publicly disclosed. Early supervisory intervention is fundamentally dependent on supervisors having full discretion to take any supervisory actions or decisions on banks and banking groups under its supervision without government or industry interference that compromises their operational independence.

Supervisory actions and intervention are supported in an environment in which the general public understands that actions taken by the supervisory authority are to safeguard and promote the safety and soundness of the banking system. Published information explaining the mission of the supervisor and clarifying the framework under which it operates in general is an important way of achieving this. Publication of banking laws, supervisory rules and policies can also further the general public understanding of the supervisor's mandates and objectives as well the framework within which the supervisor is acting. A number of jurisdictions also publish information on how risk assessments for individual banks are performed, such as qualitative and quantitative factors or risks that are looked at, how these lead to certain scores or grades, how the risk assessment is used in supervisory work and predefined escalation mechanisms and points of interventions. This can help educate stakeholders and the broader public about the reasons for supervisory interventions.

Supervisory communication with external stakeholders is important for enhancing the accountability and transparency of supervisors as well as the effectiveness of supervisory intervention. Key stakeholders typically include other financial authorities (eg the central bank, the market authority, deposit insurance scheme, consumer authority), peer prudential authorities, executive and legislative bodies, and shareholders. Stakeholder management is not only about communication and transparency, but also plays an important role in educating stakeholders on supervisory expectations and activities so that supervisory actions do not come as a surprise when undertaken. The effectiveness of supervisory intervention can be reinforced by consistent messaging/activities by supervisors.

Engaging stakeholders, however, is dependent on a number of different factors, such as secrecy, confidentiality, the risks involved and timing. The mandates of authorities in many jurisdictions are bound by secrecy provisions, which make communication with stakeholders on bank-specific issues limited. For each given situation, the modalities and degree of involvement of external stakeholders will depend on the nature of the specific risk. Managing these stakeholder relations can be complemented by determining how stakeholders are affected, either directly or indirectly, by the supervisor's decision to intervene. Based on this, communication should be tailored to each potential risk, its nature, its timing and the pre-existing disclosure situation. Schematically, it could be inferred that the more macro or cross-sectoral the risk is, the broader the communication might be.

Close communication among related financial authorities is key to support effective early supervisory intervention. In overseeing international banking groups, home and host country supervisors should collaborate and coordinate work both on a bilateral basis and in the context of supervisory colleges. Doing so should result in a better understanding of the banking group's risk profile and plays an important role to address unsafe and unsound practices and activities by banks.

Timing is also of the essence. The communication strategy strongly differs whether the potential risk has been identified at a very early stage or is highly imminent and pressing. Sometimes, it is advisable for the supervisor to delay communication, or to disclose to a very limited number of counterparties, in order to solve the issue or mitigate the impact without triggering a panic. Importantly, the timing of supervisors' communication and public disclosure should not obstruct, delay or inhibit the effectiveness of supervisory intervention.

3. Supervisory capacity and development

Assessments undertaken by the IMF and the World Bank post-crisis showed that while most countries had a range of legal powers to take action, supervisory forbearance was a key weakness for a number of authorities.[23] In many cases, problems escalated because the bank's board and management, as well as supervisors, tended to postpone taking corrective action. The reason for the inaction is the hope on the part of these parties that the problems will be rectified through existing plans and activities. Supervisors may also have been reluctant to be seen to be "managing the bank". In other cases, supervisory forbearance arises because there is often not enough concrete evidence to point to any tangible deterioration in prudential metrics to necessitate corrective action. Concerns may be reflective of broader industry practices or apparent accepted norms, which supervisors do not feel empowered to address for any specific institution in isolation. In addition, politicians or lobby groups may impose explicit or implicit pressure on the supervisor to postpone action.[24]

These challenges are referred to by the IMF as the need for supervisors to have both the ability and the willingness to act early. While many supervisory frameworks, programmes and approaches are now in place to support the early identification of risks, many supervisory authorities are now focusing on how they can develop the supervisory "ability" and "will" to act early and effectively. The ability to supervise requires appropriate resources, authority, organisation and constructive working relationships with other agencies. This must be complemented by supervisors being willing and empowered to take timely and effective action, to intrude on decision-making, to question common wisdom and to take unpopular decisions. Developing this will to act is difficult and requires that supervisors have a clear and unambiguous mandate, operational independence coupled with accountability, skilled staff and a relationship with industry that avoids regulatory capture. This section sets out some considerations for supervisory authorities when assessing ways to further support efforts to bolster supervisory capacity and development.

3.1 Supervisory capacity and the ability to act

Supervisory experience and skills are integral to the goal of achieving early and effective intervention. A supervisor is not only expected to possess technical and analytical skills, but should also have the necessary behavioural and cognitive qualities. As well as a range of skills, supervisory teams benefit from having members with a wide range of past experiences. This includes those with commercial experience and from other divisions within the authority. In order to widen the experience of supervisory staff, supervisory authorities could consider having rotation policies in place between different supervisory and risk units, provide opportunities for supervisory staff to be involved in difficult cases in order to learn how to assess and deal with emerging risks. Experienced supervisors should also be encouraged to share recent examples of early intervention, or provide experiences and suggestions for dealing with pushback from banks on difficult cases. This can encourage challenge and discussion among supervisory teams, making it more likely that potential risks are identified and action is taken, especially when dealing with potentially complex cases.

While supervisory judgment plays a critical role in making decisions to intervene early, supervisors are empowered if they have access to good-quality information. Data can be used by supervisors as an effective supervisory tool, both to monitor banks and for use when proposing early supervisory

[23] See J Viñals, J Fiechter, A Narain, J Elliott, I Tower, P Bologna and M Hsu, "The making of good supervision: learning to say 'no'", *IMF Staff Position Paper*, no SPN/10/08, May 2010, p 10. See also Financial Stability Board, *Progress report on increasing the intensity and effectiveness of supervision,* 7 April 2014.

[24] See BCBS, *Guidelines for identifying and dealing with weak banks*, July 2015, www.bis.org/bcbs/publ/d330.htm, p 32.

intervention to senior management or the bank. The decision to intervene is often based on warning signals from the analysis of relevant data. Therefore, there are significant benefits from collecting and continually reviewing the data sets to ensure they reflect the current risks in the macro environment. If a risk no longer poses a threat to a bank, the indicator no longer serves its purpose and can be removed from the data set. To identify which risks are no longer relevant, the authority could conduct periodic reviews of the risk indicators to ensure they are fully capturing market, liquidity, credit and other risks. Exchanging information with market participants (eg rating agencies, economists and auditors) can help inform these reviews and put the data into context. These measures will help ensure the data set is managed in the most effective way, allowing for the best possible usage. In addition to quantitative information, having a sound understanding of the supervised bank is crucial for a supervisor to make informed judgments about the need for intervention. As discussed in earlier sections, business model analysis and understating the governance and culture of the bank are critical for understanding whether early supervisory intervention may be needed.

Case Study 6

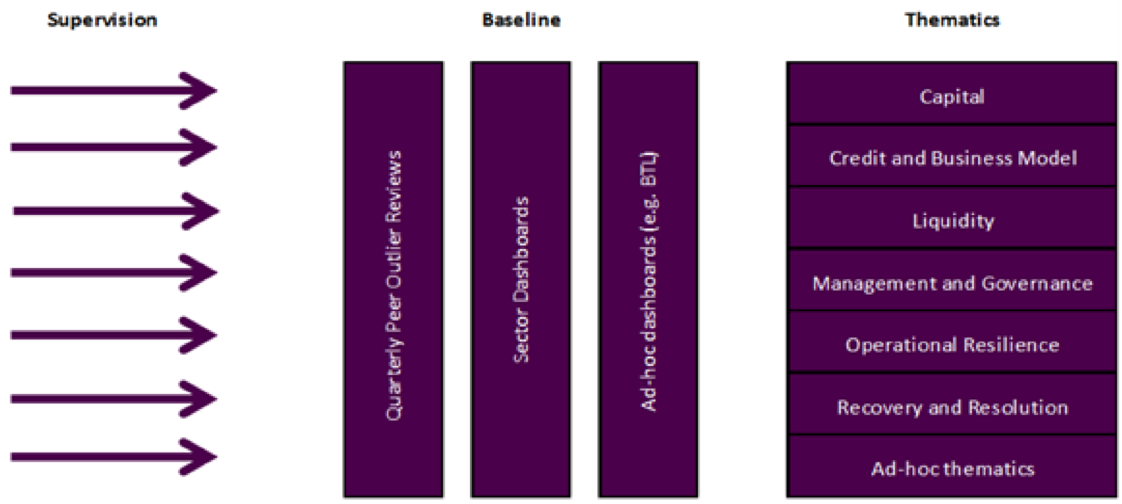
Two-dimensional approach to data analysis

In order to best utilise the data collected, a number of jurisdictions have structured their supervisory department in a way that creates a two-dimensional approach to analysis:

1. Supervisors conduct detailed analysis on their individual banks.
2. A central team housed within the supervision department performs baseline thematic work and cross-bank data analysis.

The thematic analysis is done vertically and horizontally, dissecting the data in complementary ways to individual supervisory teams' work (Figure 1). This is done across key supervisory areas (eg capital, governance and operational resilience) as deep-dive work. This analysis gives supervisors greater insight into the wider context of the banking sector and where their bank sits in relation to peers. They can use this to inform their supervisory judgment and to determine whether early intervention is necessary.

Figure 1: Baseline thematic data analysis



Furthermore, the central team promotes roundtable discussions between supervisors of similar banks so that they can share experiences and highlight outliers. Developing a macro picture enables supervisors to see whether early intervention is needed. This acts as a second line of defence and is on top of the plausibility checks that are conducted on data collection/submission errors.

An example of the two-dimensional approach informing judgment on early intervention is when a central team identified slipping underwriting standards of one bank in the supervisory department. The supervisor had not realised that the bank had significantly looser lending criteria than its peers, therefore had not seen an issue when the underwriting standards loosened further. After conducting a thematic review of credit and business model standards across all banks, the central team highlighted the outlier status to the supervisor. The supervisor was able to intervene, placing an additional capital requirement on the bank until it tightened its underwriting standards. The supervisor was able to show the outlier data to the bank to support the need for intervention. This early intervention rectified the risk to the safety and soundness of the banking sector from irresponsible lending before the risk crystallised.

This approach can be used for qualitative as well as quantitative information. For example, a thematic review of bank governance highlighted that certain banks were outliers in terms of a number of aspects, such as in the proportion of independent non-executive directors on the board.

Training can ensure both technical and interpersonal skills are developed and maintained. Training should focus on two key technical attributes important for supervision. First, supervisors need to understand how to identify warning signals in banks and when intervention is appropriate. This training can be conducted by experienced supervisors who have taken such decisions in the past. Those supervisors can highlight good practices and potential issues to the less experienced supervisors. Second, a sound knowledge of the information available to supervisors, such as peer analysis, and how to maximise its use for early and timely interventions, is critical. Training is relevant for all levels of staff, from frontline supervisors to senior management. To ensure all staff attend a suitable amount of training, the supervisory authority could develop a range of requirements and incentives as part of the usual appraisal system. For example, this could involve experienced supervisors training less experienced supervisors. Practical steps that authorities can take include requiring a minimum number of hours of training each year, and allocating time within a working week specifically for training purposes.

Case Study 7

Supervisory development centres

To ensure supervisors were fully meeting their training needs, the authority set up a Supervisory Development Centre. This training programme takes place away from the distractions of day-to-day supervision so that supervisors can focus on development. It emphasises the importance of behavioural prowess, such as persuasive and influencing skills, which can be vital when undertaking early intervention.

At the centre, supervisors analyse examples of successful and unsuccessful intervention, and the reasons behind the success or failure. There are also sessions led by experienced supervisors who have worked on failing banks, who present their lessons learned and answer any questions from the attendees. This approach allows supervisors to build on cognitive skills developed during day-to-day supervision.

The most valuable session is the mock senior panel session, where supervisors are required to pitch a proposal for undertaking early action. They are given a case study bank, and have to investigate any possible issues. This allows them to identify what the reason for undertaking early intervention is before presenting this to seniors. Once they have completed this part of the exercise, supervisors are asked to undertake a role-play with actors pretending to be the CEO of a bank. In this session, supervisors must demonstrate a range of behavioural skills, such as confidence, persuasion and motivation. It is the final session of the Supervisory Development Centre and demonstrates how much the supervisor has learnt from the centre.

Following the first Supervisory Development Centre, the authority saw a change in behaviour in those supervisors who attended. One supervisor undertook early supervisory intervention shortly after attending the Supervisory Development Centre. The centre reinforced the supervisor's behavioural skills and enabled them to see beyond just the data and perceive an issue with governance in the bank. They were also able to use the real-life example covered in the centre as evidence for the need to intervene, despite not having previously intervened themselves.

This pilot has now been extended across the entire supervisory authority and occurs twice annually.

3.2 Supervisory development and the willingness to act

Ensuring that there are appropriate support structures within supervisory authorities to facilitate early intervention is important to give supervisors the will to act on the bank they supervise. Senior management and senior supervisors play an important role in supporting supervisors to raise issues early, and to reinforce the expectation that early intervention is part of the normal supervisory review process. Visible actions and endorsement by senior management and other functions within a supervisory authority are crucial for generating a tone from the top in supporting supervisors to take early and decisive action. Tone from the top is defined here as the messaging that frontline supervisors receive from senior management regarding their expectations. Authorities also need to ensure that there is an appropriate internal structure to enable and facilitate supervisors to make decisions and act on them when necessary. For example, engaging regularly with senior management through committees or groups that meet on a regular basis demonstrates supervisors' responsibilities. For example, at one authority a weekly debrief with senior management engages supervisors and ensures they are aware of any early actions being undertaken within the department and who is involved.

To facilitate supervisors in making early supervisory interventions, supervisory authorities could review their decision-making processes and delegations of responsibility to see if improvements can be made to minimise unnecessary internal processes and levels of decision-making. Supervisory authorities have created important structures and processes that help to facilitate and promote the ability of supervisors to take actions when needed. However, timeliness is a key element of addressing risks promptly, but can be undermined if the decision-making process within a supervisory authority is too complex or rigid. In order to address this, one authority has clearly outlined fundamental procedures, for example authorisation and escalation channels, for a variety of possibilities to reduce time delays when implemented. Backup procedures and contingency planning have also been developed to cope with unforeseen situations, such as if the supervisor is unable to contact a foreign supervisory counterpart to approve an intervention.

Case Study 8

Increasing access

Following a review of internal structure in one authority, it was found that supervisors were often frustrated with the bureaucracy they had to deal with before taking any significant action on a bank. Once supervisors had decided to intervene, they had to write a detailed note arguing the reasons for and against intervention, and outlining other possible options. They then had to present this to senior management at a quarterly meeting. This reduced supervisors' access to the decision making process and was identified as a significant hierarchy issue.

To address this issue, the authority took steps to streamline the process for intervention and increase access to decision-making. Supervisors no longer had to write a detailed note or wait for the quarterly meeting to present the case for intervention. Instead, they could attend the weekly senior management meeting and present on just the key issues regarding the proposed intervention. In exceptional circumstances, action was allowed to be taken with agreement from just the team manager and then presented to senior management after intervention occurred. This significantly reduced the time it took for senior management to approve an action and meant that intervention could be conducted earlier and be more effective.

Alongside these steps to streamline decision-making, the authority opened access to supervisors who wished to observe the decision-making process. They encouraged supervisors to sit in on senior-level discussions so that they were more aware of how issues were dealt with and why some proposals for early intervention were not implemented. This raised awareness of the discussions that occurred around reasons for intervention and meant supervisors were more likely to successfully present their case for taking early action.

The benefits of these practical steps were demonstrated during the crisis, when supervisors undertook early intervention on a more regular basis and under greater time pressure. In one case, a supervisor wanted to intervene by removing the Chief Risk Officer in a bank because they had identified serious deficiencies in their ability to fulfil the role. The supervisor gained the team manager's sign off to intervene ahead of presenting to senior management, and intervention could be undertaken the next day. Minimising this internal hierarchy maintained the safety and soundness of the banking system, which could have been at risk if the supervisor had to wait a quarter before intervention could take place.

Supervisors benefit when senior management gives them a clear and strong message that they support supervisors taking early intervention and continually remind supervisors that they expect early intervention as part of the normal supervisory process. For example, senior managers could show they are always open to discussions with supervisors who are considering making early supervisory interventions. The aim is to create the vital culture for early intervention within the organisation. Although senior management should encourage supervisors to discuss concerns regularly, there will be times when early intervention is not supported by senior management and is not undertaken. Senior management should also be conscious that supervisors may be discouraged if they are not supported on this occasion. In order to avoid this, the reasons should be clearly explained to the supervisor. It could also be documented for future reference of instances when intervention was not taken forward despite the risks. This provides valuable information that less experienced supervisors can learn from.

Another impediment to timely action is an unclear delegation of responsibility or lack of engagement with senior management. This leads to doubts among supervisors about whether they are in control of decisions and will slow the process of intervention once the decision has been made. Delegating responsibility will empower frontline supervisors to act on a developing issue earlier than if decisions are taken at senior management level. This morale boost is key to demonstrating that senior management supports and trust supervisors' judgments. Freeing up access to intervention decisions can be demonstrated by allowing supervisors to intervene in a short time frame. For example, the supervisor can impose restrictions on the bank's ability to advertise a new product until it has improved its risk management. These interventions should be quick and easy to implement and can be used more frequently by supervisors when they see an issue arising.

Delegation of responsibilities is particularly relevant for the supervisors of smaller banks, who can be allowed to take action with less senior management oversight. Taking this proportionate approach frees up time for those supervisors who are likely to have a greater number of banks to supervise at once. This approach may not be applicable in some cases, such as for the largest banks, as supervisors do not have overall responsibility and senior management is routinely involved in decision-making. If this is the case, engaging regularly with senior management through committees or groups that meet on a regular basis will demonstrate supervisors' responsibilities.

Supervisors with experience making timely intervention are invaluable to the supervisory authority. This is true whether the intervention was successful or not. However, supervisors who have been associated with a failing bank may be viewed as tarnished rather than valued. This attitude makes it difficult for the supervisory authority to realise the benefits of having an experienced supervisor, and means that the supervisor's knowledge may not be fully utilised. Positive reinforcement can mitigate this risk. Supervisory authorities can develop or add to existing internal mission statements taking early and timely actions as a key pillar. This sets out the standards expected of supervisors and demonstrates organisational support for judgment-based early intervention. The aim is to encourage supervisors to act early and to intervene, even when the risk of bank failure is not imminent. The experiences of these supervisors could also be promoted by asking them to hold informal learning sessions to share their knowledge, and through training.

Positive reinforcement can also be reflected in supervisors' appraisal system. This is often viewed as difficult because it is not common in the public sector to link variable remuneration to specific targets. Furthermore, it is difficult to measure a supervisory action's level of effectiveness, as there are several factors which drive the failure of a bank that are out of the supervisor's control. Despite these challenges, setting targets is important to reinforce the value of taking early action. Appraisal systems can use the results of reviews of supervisory actions to determine whether the appropriate action was taken. If the review highlighted a positive action by a supervisor, this could be rewarded with career progression or, if applicable, linked to variable remuneration. Assessing supervisors on the results achieved through early intervention as part of their annual appraisal provides the necessary incentive for them to consider early intervention throughout the normal supervisory cycle.

Legal backing, in the form of a sound legal framework coupled with support from legal specialists, can also help remove impediments and uncertainty about taking early action. In the absence of a sound legal framework, supervisors may be reluctant to intervene due to the uncertainty around the legal risks involved. This is especially true when dealing with banks that are not receptive to recommendations, as it may invite challenges concerning the legitimacy of supervisory actions, putting reputational risk on the authority and supervisor. To counteract this, supervisors could be given immunity from receiving personal legal challenges if they are operating within their remit. Similar to other specialist functions, the legal unit within the supervisory authority can provide support to supervisors who are considering taking early action. As well as providing advice on specific cases, the legal unit could also help identify and close any potential gaps in the existing legal framework that may impede intervention. In practical terms, this can be achieved by identifying, usually at bank level, instances of banks gaming the system and taking advantage of loopholes in the legal framework. Once these have been identified, the legal unit can intervene on these issues at a system-wide level.

4. Observations

Based on the approaches observed in a number of jurisdictions, programmes and processes aimed at intervening in an early and effective manner have several important characteristics:

Observation 1. Early supervisory intervention is very closely linked to the supervisory review process and a forward-looking risk-based supervisory framework. The practices observed show that early supervisory intervention is firmly entrenched within a risk-based approach to supervision, where the intensity of supervisory attention escalates as the risks and impact that an institution poses to financial stability increase. Early supervisory intervention therefore involves supervisors taking actions to require institutions to correct an identified weakness or potential issue before minimum regulatory requirements or buffers are breached. Early intervention actions taken therefore are not exclusively due to a formal framework that prescribes action, but are also taken as part of ongoing supervisory monitoring.

Observation 2. Early supervisory intervention operates based on the collective monitoring efforts of a number of different supervisory teams that are both on- and off-site. Supervisory authorities have increasingly adopted detailed supervisory intervention frameworks that are reinforced by the collective monitoring efforts of on-site, off-site and specialist supervisory risk teams. In many authorities, organisational changes have been made to reinforce early detection and early supervisory actions. The use of horizontal risk assessments also ensures checks and balances across supervisory teams of different institutions. Forward-looking information, including peer group data, is fundamental to providing supervisors with a rich source of information that will allow them to identify early warning signals and intervene earlier and more effectively. Collective supervisory monitoring also increases the surveillance and detection of emerging risks, at both an institutional and an industry level. While responsible supervisors are tasked with carrying out supervisory decisions directly with the bank, supervisors can be supported by the analysis and early detection of risks from specialist units. This ensures that early intervention is not solely dependent on the actions of one supervisor, but is the collective responsibility of teams of supervisors.

Observation 3. Communication with banks forms a large part of how supervisors intervene early, primarily as the first stage in an escalation process. These actions are undertaken early and primarily through less intrusive means, such as letters and other written communication. At the same time, supervisors have a range of general and specific powers and will use escalation processes as a means of communicating to banks the required actions that need to be undertaken. The use of general supervisory powers therefore places the onus on institutions to rectify the identified weakness, rather than on the supervisor to make more difficult decisions to apply a corrective or restrictive measure to the activities of the institution.

Observation 4. **The will and ability of the supervisor to act early are to a large extent reinforced and supported by the structure, process and powers of a risk-based supervisory framework.** For many authorities, well defined policies and escalation processes help to guide the actions that need to be taken by supervisors under given circumstances, such as time periods given to institutions to rectify identified weaknesses or changes in ratings stances. Supervisory actions are therefore taken that are commensurate with the seriousness of the breach as well as the stage in the escalation process, which again appear to give supervisors a good understanding of what actions need to be taken at any given stage. Structurally, the increasing use of horizontal and vertical teams also helps to provide different perspectives and effective challenges to avoid groupthink.

Observation 5. Supervisory development and capacity-building are critical for early supervisory intervention. Early and effective intervention is not only based on the supervisory tools or methods in place, but also the training and development that enable and support supervisors to take action. Supervisors with diverse backgrounds can help the authority to have broad and deep technical and behavioural skills in the organisation. Training can ensure these skills are maintained and further developed, and let experienced supervisors feel valued for their knowledge.

Observation 6. Incentives for undertaking early supervisory intervention can be strengthened through appropriate support structures, clear delegation of responsibilities, effective appraisal systems and sufficient legal backing. Ensuring that supervisors are willing to act requires authorities to focus on creating a culture for early supervisory intervention within their organisation. Supervisors are incentivised and supported by robust internal governance processes and a clear and strong message that the organisation supports supervisors taking early and timely interventions. Authorities can also consider reviewing their internal processes to minimise unnecessary hierarchy, which can empower supervisors to take action on an identified issue and enable intervention to be undertaken earlier.

Observation 7. Supervisory actions and intervention are supported in an environment where key stakeholders and the public understand that actions taken by the supervisory authority are to safeguard and promote the safety and soundness of the banking system. Early supervisory intervention is enabled not only by proper communication between supervisors and individual banks, but also with external stakeholders more generally. Communication enhances the predictability of the supervisors, which in turn can persuade banks to adapt their behaviour at an early stage and dissuade banks from engaging in unsound practices. Supervisory communication is also important for enhancing the accountability and transparency of supervisors and plays an important role in educating stakeholders on supervisory expectations and activities, so that supervisory actions do not come as a surprise when undertaken. Successful communication with external stakeholders is also pre-emptive, and factored in from the outset.