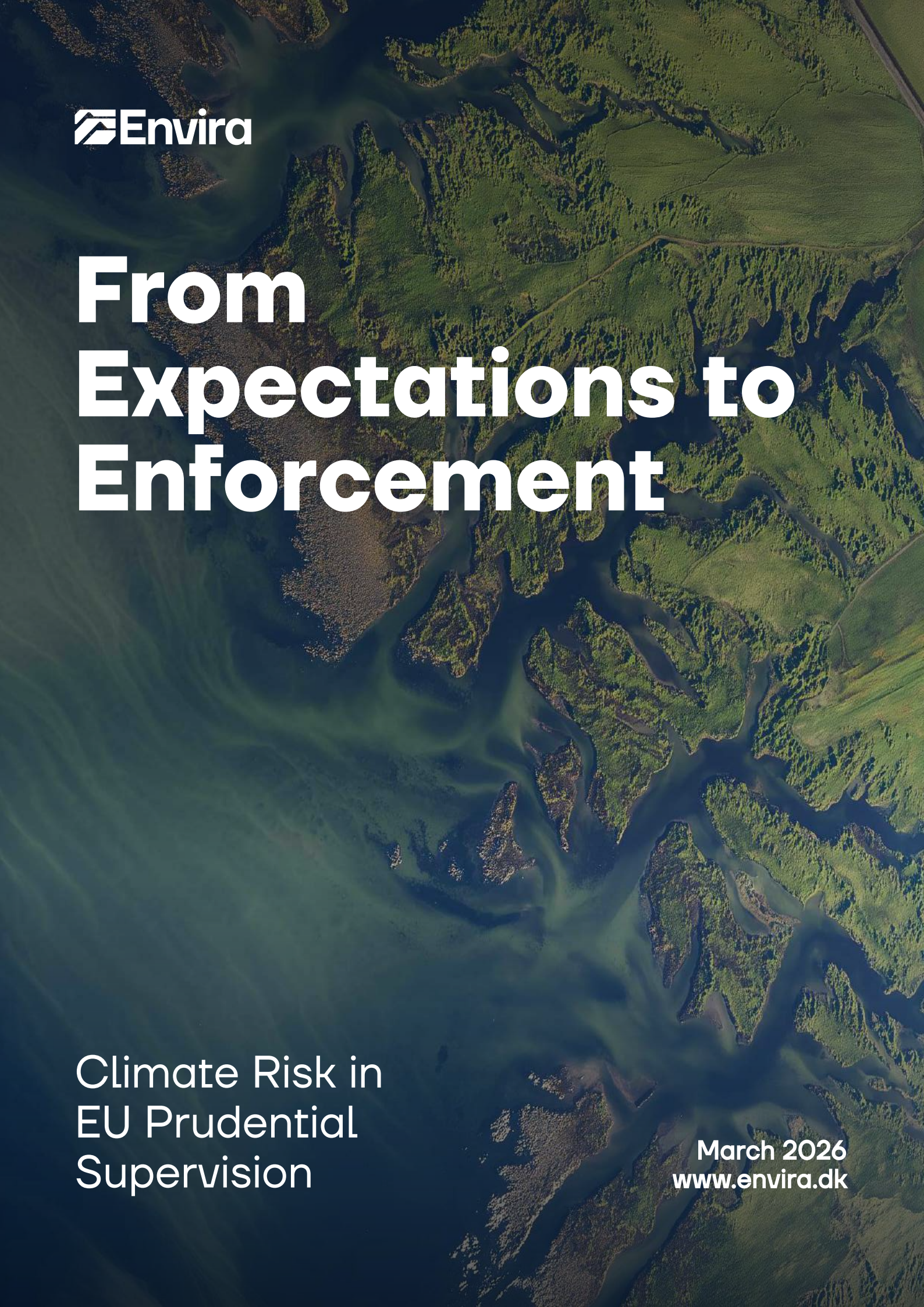

Envira

From Expectations to Enforcement

Climate Risk in EU Prudential Supervision

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01 Executive Summary

European banking supervision is entering a decisive phase in the treatment of climate-related risks. Following several years in which climate risk featured primarily in disclosures, guidance, and exploratory exercises, recent regulatory reforms place climate-related risks squarely within the prudential perimeter. The 2024 EU banking package (CRR III and CRD VI), together with EBA guidelines on ESG risk management, establish binding expectations that climate risk be governed, assessed, and managed through the same core prudential framework as traditional financial risk.

Using both public materials and input made directly available by supervisors , this report assesses how European supervisors are operationalizing climate risk supervision leading up to the full application of the revised framework in January 2026.

1.1 Scope and approach

This report analyzes supervisory practice with respect to CRR/CRD implementation along four core dimensions:

- Supervisory capacity and organizational anchoring
- Guidance and expectation-setting towards banks
- Supervisory testing through thematic reviews, inspections and stress tests
- Escalation and enforcement through binding supervisory practices

1.2 Key Findings

Supervisory

Most European supervisors have established some organisational anchoring for climate risk supervision, either through dedicated functions or embedded models within existing prudential teams. However, the degree of institutionalisation and dedicated resourcing varies materially. Where climate expertise is diffuse and lightly resourced, supervisors appear constrained in their ability to sustain method development, on-site validation and follow-up at pace.

Guidance and expectation-setting

Supervisory expectations related to climate risk are now well articulated in most key jurisdictions across the EU. Guidance increasingly frames climate-related risks as financial risk drivers to be integrated into governance, risk appetite, ICAAP, credit processes and internal controls. While the legal force of such guidance varies, convergence on content is high.

Supervisory testing

Thematic reviews, stress tests and analytical exercises are increasingly used to assess banks' climate risk capabilities. These tools have improved supervisory insight and benchmarking, but in many jurisdictions, they remain primarily diagnostic. Explicit linkage between identified deficiencies and routine supervisory outcomes is uneven.

Escalation and enforcement

The greatest divergence across supervisors appears at the enforcement stage. Publicly visible use of binding supervisory measures linked explicitly to climate-related prudential deficiencies remains limited at national level. The ECB stands out for systematically linking thematic assessments to remediation timelines and escalation mechanisms. Denmark provides rare national-level evidence of formal escalation through binding supervisory orders following climate-relevant credit risk inspections.

1.3 Conclusion

Taken together, the findings indicate that climate risk supervision in Europe has largely succeeded in establishing expectations and there are emerging signs of supervisory testing, but supervision has only partially transitioned into an enforceable prudential discipline. As CRR III and CRD VI enter full application, climate-related requirements are becoming binding rather than preparatory. The effectiveness of supervision will therefore increasingly depend on whether deficiencies identified across governance, risk management and internal controls translate into credible supervisory consequences comparable to those applied to traditional prudential risks.

02 Introduction

EU prudential banking supervision is moving from climate risk as an expectations and disclosure topic to climate risk as a prudential risk driver addressed through core Pillar 2 mechanisms. The 2024 EU banking package, together with the EBA ESG risk management guidelines, reinforces this shi by embedding climate-related considerations within governance, internal controls, ICAAP and supervisory review, and by expanding standardized Pillar 3 ESG disclosures.

The supervisory implication is straightforward: climate-related risks are increasingly expected to be managed and evidenced within the same control architecture as traditional prudential risks, rather than through standalone sustainability narratives.

This report assesses supervisory practice immediately ahead of the full hardening of the EU framework. Evidence is drawn from limited direct input from supervisors, supplemented by a structured desk-based review of publicly available supervisory material.

03 Regulatory context

The integration of climate-related risks into EU prudential banking supervision is not the result of a single regulatory act or supervisory initiative. It reflects a cumulative shi in the EU prudential framework over the past decade, in which climate and environmental risks have moved from the periphery of disclosure and governance debates into the core of supervisory expectations. This section anchors that shi in the EU rulebook and supervisory guidance.

At its core, the EU prudential framework treats climate-related risks as financial risk drivers rather than as a standalone risk category. Physical and transition risks transmit through established prudential risk types such as credit, market, operational and business model risk. This framing underpins recent reforms. It enables supervisors to rely on existing legal hooks under CRR and CRD style obligations, particularly governance, risk management and internal capital adequacy requirements, while tightening expectations as methodologies and data mature.

The most explicit codification of this approach appears in the 2024 EU banking package and the accompanying EBA Guidelines. Together, they embed climate and environmental considerations directly into the prudential perimeter.

CRR III expands and standardizes Pillar 3 ESG disclosures, requiring large institutions to provide more granular and comparable information on exposures to physical and transition risks, and on how these risks are integrated into governance, strategy and risk management. These disclosures are not designed only for market discipline. They are also intended to function as supervisory action.

CRD VI complements disclosure expansion by reinforcing expectations on governance, oversight and internal processes. Management bodies are expected to identify, manage and monitor environmental, social and governance risks as part of fiduciary and prudential responsibilities. Climate-related risks are positioned alongside traditional material risks in supervisory assessment of internal governance, risk appetite frameworks and internal control systems. The directive also strengthens the basis for supervisory intervention where deficiencies persist, including qualitative measures under Pillar 2 and, where warranted, capital-related consequences.

The EBA Guidelines on the management of ESG risks translate these legislative changes into operational expectations. The guidelines set out a structured framework covering risk identification, governance, measurement, management and monitoring across short, medium and long-term horizons. They emphasize scenario-based analysis, proportionality and the need to work with imperfect data while demonstrating credible progress. They reinforce the principle that climate-related risks should be integrated into existing risk management processes, not treated as a parallel sustainability exercise.

For supervisors, the guidelines provide a common reference point for assessing whether institutional approaches are commensurate with risk profiles and business models.

Taken together, CRR III, CRD VI, the EBA guidelines and the associated Pillar 3 technical standards establish a coherent prudential narrative. Climate risk is no longer framed as optional or purely forward-looking. It is embedded in binding expectations on governance, internal processes and transparency, with direct implications for supervisory review and evaluation.

However, a legal mandate does not determine how supervisors act in practice. A clear distinction must therefore be maintained between the existence of supervisory expectations and the way those expectations are tested and enforced.

This report evaluates how European supervisors have approached this area immediately ahead of the new rules taking full effect.

04 Integration of climate risk into supervisory practice

This section examines how European supervisors translate prudential expectations into supervisory practice, focusing on operating models and tools used to support integration.
The analysis draws on two sources of evidence. First, supervisors were invited to provide input on their organizational arrangements, staffing and supervisory actions related to climate risk. Only a limited number of authorities responded in detail to this request. Second, the assessment is based on a desk-based review of publicly available supervisory material, including reports, guidance documents, inspection summaries, speeches and supervisory communications. As a result, the evidence presented reflects what can be substantiated from public sources and should be read as indicative of observable supervisory practice rather than a comprehensive account of internal supervisory processes.

The section is structured around four supervisory themes: input factors, guidance to the market, thematic inspections and supervisory enforcement.

4.1 Input Factors: Organization and Supervisory Resources

Integrating climate-related risks into prudential supervision requires supervisory capacity, not only expectations. Input factors here refer to organizational arrangements and supervisory resources that enable supervisors to test integration and follow up deficiencies.

Across the authorities reviewed, there is no single organizational model that can be identified as universally superior. Supervisors have adopted different approaches reflecting institutional size, mandate, legal environment and supervisory culture. However, a consistent pattern in the evidence is that identifiable organizational anchoring and dedicated full-time capacity support deeper supervisory work.

The ECB represents the most institutionalized model. A dedicated organizational anchor for climate work, combined with mainstreaming into Joint Supervisory Teams through recruitment and structured training, has supported a shi beyond guidance and diagnostics toward time-bound remediation and enforcement-capable supervision. The visibility of sustained staffing and an explicit internal operating model distinguishes this approach.

Among national supervisors, Denmark and France provide relatively clear evidence of dedicated capacity. Denmark has established a dedicated ESG supervision function that supports capacity-building and supervisory action. France does not operate a standalone climate supervision directorate, but benefits from expert teams and analytical capability, including stress-testing expertise and proximity to international climate risk work. In both cases, public evidence points to specialist capacity that supports continuity and depth.

Hungary's MNB also exhibits a relatively formalized setup following the expansion of its statutory mandate. Dedicated sustainable finance and climate risk analytical functions have been established within the supervisory arm, supported by specialized staff and internal research capability. While the enforcement posture in the reviewed material remains largely preparatory, the organizational visibility distinguishes the MNB from peers operating with more diffuse arrangements.

A larger group of supervisors operate embedded models where climate risk responsibilities are distributed across prudential supervision, financial stability and policy teams. Germany, Austria, Sweden, the Netherlands, Italy, Spain, Belgium, Ireland and Portugal broadly fall within this category. In these cases, climate and environmental risks are addressed within existing supervisory divisions, oen supported by light central coordination or internal forums. Public information on dedicated staffing and resourcing is typically limited.

Overall, the evidence suggests that organizational anchoring is widespread, but institutionalization through clearly identifiable structures and dedicated resources is more uneven. This matters because embedded models can support integration in principle, but they oen struggle to sustain method development, data strategy, and on-site validation at pace without explicit resourcing.

4.2 Guidance to the Market: Translating Expectations into Bank-Facing Requirements

Guidance to the market has been the most consistently deployed supervisory instrument for advancing climate risk integration across the EU. At this stage, guidance serves three functions: clarifying what prudential integration entails, signaling supervisory priorities, and preparing institutions for progressively more intrusive supervision. The evidence shows broad convergence on content, alongside variation in legal form, operational specificity and linkage to follow-up.

For significant institutions, the ECB's 2020 guide on climate-related and environmental risks has functioned as the de facto supervisory baseline. Its practical significance lies in its operational framing. It articulates expectations across governance, risk appetite, credit processes, ICAAP, stress testing and disclosure, and positions climate risk as a prudential concern to be addressed through existing risk categories. Critically, the ECB operationalized guidance by requiring self-assessments and action plans, creating a structured supervisory feedback loop. This moved guidance from static reference to active supervisory tool and established a common language for thematic reviews, inspections and SREP assessments.

National supervisors have largely aligned guidance with this baseline, adapted to domestic perimeters and legal traditions. In several cases, guidance has taken the form of recommendations or circulars that are expectation-setting but not immediately binding, reflecting a sequencing strategy focused on capability-building. Hungary's MNB exemplifies this approach through climate-related recommendations requiring self-assessments and board-approved action plans. These instruments are framed as preparatory but still provide a basis for follow-up and supervisory dialogue.

Other authorities have used guidance as a bridge from expectations to enforceable requirements. BaFin's trajectory illustrates this. Early guidance on sustainability risks signaled expectations ahead of EU-level codification. The subsequent incorporation of climate and environmental risks into the binding MaRisk framework clarified that climate-related considerations are subject to routine supervisory scrutiny as part of risk management obligations. This reduces ambiguity for banks and strengthens the basis for supervisory challenge even without climate-specific capital rules.

Denmark combines governance-related rule changes with targeted good-practice communications and supervisory publications that are closely aligned with EU-level timelines and are linked to supervisory activity. Guidance has been used to clarify expectations ahead of inspections and to signal heightened focus, particularly in relation to credit risk management, borrower assessment and internal control effectiveness.

Several supervisors, including Sweden's FI and the Netherlands' DNB, rely more heavily on analytical publications and supervisory communications to convey expectations. In these cases, guidance is embedded in reports, speeches or thematic publications that demonstrate observed risks and supervisory concerns rather than prescribing detailed compliance steps. This can support learning and proportionality, but it increases reliance on subsequent supervisory testing to give guidance prudential effect.

Across jurisdictions, guidance has evolved from high-level statements toward more operational articulation of what supervisors expect banks to evidence. There is increasing emphasis on risk appetite, credit processes, stress testing and ICAAP. At the same time, the legal force of guidance varies. In many NCAs, climate risk guidance remains formally non-binding and relies on supervisory persuasion and the anticipated hardening of EU requirements. Only in a limited number of cases is guidance fully embedded into binding prudential rulebooks.

4.3 Thematic inspections and Supervisory Action

Thematic inspections and related supervisory tools are the primary mechanisms through which supervisors move from expectation-setting to verification. They provide the evidence base for assessing whether integration exists beyond policies and disclosures, and whether banks translate climate-related considerations into prudential processes and decisions. The evidence indicates that thematic tools are now widely used, but depth, scope and linkage to routine supervision vary materially.

The ECB has deployed the most comprehensive and systematized set of thematic tools. Its 2022 climate risk stress test and thematic review provided a coordinated supervisory assessment across governance, risk management, stress testing and data. While framed as learning exercises, they served a diagnostic and disciplinary function. They revealed weaknesses in banks' ability to translate climate risk into stress testing, credit risk management and ICAAP, and created a consistent evidence base for follow-up. The ECB then linked results to institution-specific feedback, remediation timelines and subsequent SREP assessments. This linkage is the key distinction, it demonstrates how thematic tools can become part of business-as-usual supervision rather than remain stand-alone diagnostics.

At national level, Denmark provides clear evidence of thematic inspections focused on climate-relevant credit risk practices. The Danish FSA conducted targeted on-site inspections examining how banks incorporate ESG and climate considerations into corporate lending decisions, borrower assessments and internal controls. These inspections tested transaction-level practices, not only portfolio analysis, including the use of climate-relevant information in credit approval and monitoring. Findings then fed directly into formal supervisory orders, illustrating a tight connection between thematic assessment and escalation.

Other supervisors use thematic tools with a stronger analytical or exploratory emphasis. The German BaFin has incorporated climate-related elements into surveys of less significant institutions and conducted horizontal analyses, including scenario-based assessments of physical risks. These exercises support benchmarking, identification of capability gaps and supervisory prioritization. In the reviewed material, their primary function to date is learning and supervisory focus rather than enforcement.

Sweden's FI relies heavily on analytical tools, including portfolio-level transition risk analysis and systematic review of banks' Pillar 3 sustainability disclosures. It has also required larger banks to include climate-related scenarios in internal stress testing, and published aggregated outcomes to highlight methodological heterogeneity. These measures function as supervisory tests of banks' ability to operationalize climate risk within existing risk management frameworks, even when not labelled as inspections.

Across jurisdictions, thematic tools typically follow a sequencing logic. Early exercises emphasize exposure mapping, scenario analysis and capability assessment. Over time, tools become more targeted and intrusive, moving toward on-site validation of credit processes, internal controls and governance. The ECB has made the link to SREP explicit. Most national supervisors, in the public evidence reviewed, are at an earlier stage and use thematic tools primarily to inform supervisory dialogue and future prioritization.

4.3 Thematic inspections and Supervisory Action

Enforcement and escalation are the clearest differentiators across European authorities. They determine whether climate-related deficiencies are treated as prudential weaknesses capable of triggering formal consequences, or whether supervisory pressure remains primarily persuasive and developmental. The evidence shows a clear hierarchy: the ECB demonstrates an end-to-end escalation pathway, Denmark provides national evidence of binding remedial action, and most other NCAs show limited public evidence of climate-specific enforcement.

The ECB provides the clearest example of an operational escalation chain. Following deficiencies identified through self-assessments, the 2022 climate stress test and thematic review, the ECB moved beyond guidance and dialogue to formal supervisory measures. Where institutions failed to meet defined milestones, the ECB imposed binding qualitative requirements through SREP. In a limited number of cases, these were formalized in supervisory decisions and accompanied by escalation mechanisms including periodic penalty payments, or the explicit possibility of such payments in the event of continued non-compliance. Climate-related deficiencies were linked to supervisory outcomes, including governance and risk-management requirements, and for a small number of institutions, SREP score impacts with implications for Pillar 2 capital requirements. This sequence demonstrates that climate risk integration can be enforced using existing prudential powers and without relying on climate-specific capital rules.

Denmark is the clearest national example of formal prudential escalation in the surveyed material. The Danish FSA has issued legally binding orders following targeted inspections of ESG-related credit risk management. Orders required remedial action in borrower assessment, documentation and internal control effectiveness. In the cited cases, this did not translate into explicit climate-driven capital add-ons, but the use of public orders constitutes a meaningful escalation step and signals that deficiencies are treated as supervisory breaches warranting enforceable intervention.

Across the majority of national competent authorities covered in this report, publicly evidenced enforcement linked explicitly to climate-related prudential deficiencies remains limited. Germany, Sweden, the Netherlands, Italy, Spain, Belgium, Ireland and Portugal provide public evidence of expectations, thematic work and follow-up, but the reviewed material does not show fines, binding orders, or Pillar 2 capital measures explicitly attributed to climate risk failings.

As CRR III and CRD VI move into steady application, the scope for a purely preparatory approach is likely to narrow. Supervisors will be better positioned to treat persistent deficiencies as breaches of binding prudential obligations. The evidence reviewed suggests that escalation and enforcement will be the decisive test of whether climate risk supervision transitions from integration-first development to steady-state prudential discipline.

05 Conclusion

This report has assessed how European banking supervisors have integrated climate-related risks into prudential supervision immediately before the full application of CRR III, CRD VI and the EBA ESG risk management guidelines. The evidence indicates a decisive shi in supervisory framing. Climate risk is no longer treated primarily as a disclosure or governance topic. It is increasingly treated as a prudential risk driver expected to be embedded in governance, risk appetite, ICAAP, stress testing and supervisory review.

At the same time, the evidence shows a persistent gap between expectations and publicly visible enforcement. Supervisory integration is well advanced in guidance and shows some maturity in thematic supervision. Several authorities have invested in organizational capability. However, with notable exceptions, most national supervisors remain cautious in deploying formal escalation tools in ways that are publicly attributable to climate-related prudential deficiencies. Climate-related weaknesses are more commonly addressed through supervisory dialogue and non-public qualitative measures, if at all, rather than through binding orders, penalties or capital consequences.

As the EU prudential framework hardens, this divergence becomes increasingly consequential. The ECB's practice demonstrates that climate risk can be enforced using existing prudential powers and that credible escalation strengthens incentives for bank investment in data, modelling and controls. For many national supervisors, the coming period will test whether climate risk supervision moves from a preparatory phase into steady-state prudential discipline.

Ultimately, the credibility of climate risk as a core prudential concern will depend less on the sophistication of guidance or analytics and more on whether persistent weaknesses trigger supervisory consequences comparable to those applied to traditional financial risks. The next test lies in the transition to full CRR III and CRD VI application. Much of current supervisory practice has been explicitly preparatory while data and methodologies mature. As the revised framework takes effect, this logic will no longer suffice. Climate-related expectations are becoming binding prudential requirements, and supervisors will need to shi from diagnostic and encouragement-based approaches to systematic compliance testing and clearer escalation where minimum standards are not met.

Whether supervisors close the gap between current practice and full-rule compliance will determine if climate risk integration becomes a stable element of prudential discipline rather than a statement of intent.