

2025 SUSREG ANNUAL REPORT

AN ASSESSMENT OF SUSTAINABLE FINANCIAL
REGULATIONS AND CENTRAL BANK ACTIVITIES

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The development of the Sustainable Financial Regulations and Central Bank Activities (SUSREG) framework has been a collaborative effort. In particular, the authors would like to thank Deloitte Switzerland's sustainable finance team (Christian Jung, Greta Cenotti, Amanda Bänziger, Anna Birkelbach, Oscar Krumlinde, Kaja Brodtkorb, Simon Itim, and Julie Kohler) for their support to the SUSREG initiative.

The authors would like to thank WWF colleagues for their contributions at various stages of the project, in particular Ristiyanti Hayu Pertiwi, Adam Ng, Edith Verhoestraete, Carolin Carella, Pina Saphira, Jochen Krimphoff, Maria Fernanda Contreras del Valle, Amanda Ansermino, Jakob Mayr, Koen Stuyck, Laurence Picton, Christine Wortmann, Mar Asuncion, Lennys Rivera, Dominyka Nachajute, Dominik Rothmund, Fiona Armentasari, Antoine Pugliese, Mutai Hashimoto, and those who wished to remain anonymous.

WWF would like to thank the individuals, organizations and institutions who contributed to make the SUSREG framework and assessment more robust and the results more reliable by responding to the consultation process and providing feedback on the assessment results. In particular Chiara Colesanti Senni (University of Zurich), Joe Herbert (Positive Money), Lydia Marsden (University College London), and Jerome Crugnola-Humbert who have reviewed the SUSREG methodology and annual report.

This report is part of WWF Greening Financial Regulation Initiative
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Published in December 2025 by
WWF - World Wide Fund for Nature, Switzerland.

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WWF is one of the world's most respected and experienced conservation organizations, with over 5 million supporters and a global network active in more than 100 countries. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which people live in harmony with nature. WWF has worked with the finance sector for more than a decade via innovative collaborations that seek to integrate ESG risks and opportunities into mainstream finance, to redirect financial flows in support of the global sustainable development agenda. Through its Greening Financial Regulation Initiative (GFRi), WWF engages specifically with central banks, financial supervisors as well as insurance regulators on the need to fully integrate climate and environmental risks into mandates and operations. The GFRi tracks regularly how central banks and supervisors are making progress via its SUSREG tool. It also undertakes research, capitalizing on in-house expertise and external partners, and offers targeted assistance, trainings and workshops to individual financial supervisors, central banks and policy makers using scientifically based data, tools and methodologies.

The SUSREG methodology has been endorsed by :



“

Over the past decade, we've seen tangible progress: mainstreaming climate scenario modelling exercises, promoting better language and definitions to characterize climate risks, creating standardized financed emissions accounting frameworks, adopting climate-related disclosure regulations in some jurisdictions, and advancing high-level transition planning principles. These tools have helped financial actors and regulators better assess climate risk; today, many institutions report their climate risk exposure –and how they plan to mitigate it—to shareholders and supervisory authorities. But despite better information, behavior has not changed: since 2015, greenhouse gas emissions have increased year over year, major new investments in fossil fuel development continue to flow in the billions of dollars, and investment in renewable energies remains insufficient.”

STATEMENT TO CENTRAL BANKS AND PRUDENTIAL SUPERVISORS ON THE 10-YEAR ANNIVERSARY OF THE TRAGEDY OF THE HORIZON SPEECH: A CALL FOR GLOBAL FINANCIAL REFORM

”

EXECUTIVE SUMMARY

In 2025, the SUSREG assessment^[1] highlights both meaningful progress and persistent gaps as financial authorities respond to the growing risks of climate change, nature loss, and social challenges. This year's report expands its scope to include capital markets and introduces a new thematic focus on deforestation, freshwater, and ocean health, reflecting the growing recognition of nature-related risks in the financial system.

Supervisory approaches are diverging globally. While some jurisdictions, notably in Europe and parts of Asia Pacific, are strengthening climate- and nature-related regulations, some other jurisdictions are loosening standards, resulting in greater fragmentation. Central banks are making uneven progress, while some have begun to integrate climate and biodiversity risks into their monetary policy tools and disclosures, many still have not embedded sustainability considerations into their core operations. These gaps are not just technical. They often stem from constrained legal mandates, insufficient data infrastructure, and a reluctance to adjust core monetary policy instruments in ways that may entail visible economic and distributional costs.

Insurance supervision is gradually raising expectations for climate risk integration, though nature and social risks remain significantly under-addressed. In capital markets, momentum is building around disclosure, fund-naming rules, and anti-greenwashing measures, yet taxonomy alignment and transition-planning requirements are still at an early stage.

Despite this progress, nature and social risks are often acknowledged only superficially, and enforcement remains limited. The report highlights the need for deeper integration of nature-related risks, stronger macroprudential tools, improved disclosure, and more robust, binding transition plans. With the 2030 global goals approaching rapidly, decisive and coordinated regulatory action is urgently needed to ensure the financial sector accelerates the shift toward a net-zero, nature-positive, and socially equitable future.

KEY FINDINGS OF THE 2025 SUSREG ASSESSMENT

- Nature risk remains largely high-level. Many supervisors now reference biodiversity, water, and ecosystem impacts and dependencies in their guidance, but few translate these into phased, detailed expectations on governance, risk identification, metrics, data, and location-based assessments, or provide clear interim approaches (such as proxies or sectoral heatmaps). As a result, integration into core risk processes remains limited, uneven, and largely exploratory.
- With micro-prudential supervision maturing, financial regulators and supervisors should begin deploying macro-prudential measures to better manage system-wide climate and nature risks. Instruments such as the Systemic Risk Buffer (SyRB) and exposure limits remain rarely activated, despite being central to addressing concentration and build-up of risks across the financial system.
- While supervisory expectations are increasing, enforcement mechanisms remain weak, with limited evidence that supervisors systematically follow up on non-compliance. In many jurisdictions there is little transparency around the sanctions or remedial actions applied, reducing their signaling effect and weakening incentives for regulated entities to meaningfully improve their practices.
- The social pillar continues to receive comparatively little attention. Although closely linked to climate and nature, social risks are still rarely integrated into supervisory frameworks. A practical starting point is to focus on the most material social risks, such as just transition impacts that drive credit, operational, and political risks.
- Asset-manager disclosure rules often apply only to products labeled as “sustainable” creating a two-tier market in which systemic climate and nature risks across mainstream portfolios remain undisclosed and unmanaged. This “greenwashing by omission” loophole leaves the vast majority of capital effectively opaque.
- Central banks are making initial steps, but the integration of climate and nature risks into core monetary policy operations remains very limited. This inaction is often justified through a misinterpreted notion of “market neutrality.” Failing to reflect climate and nature risks in decision-making is not a neutral position. It effectively subsidizes environmentally damaging and high-risk activities. A genuinely neutral stance must be risk-based, aligning monetary policy implementation with the true risk profile of underlying assets.
- Green taxonomies continues to expand, yet their impact on capital allocation remains constrained without mandatory, decision-useful disclosures at both product and institution level. In particular, requirements to report metrics such as a Green Asset Ratio are often absent, limiting market pressure to reallocate capital at scale.



^[1] Please note that the 2025 SUSREG assessment only includes documents published up until the 31st July 2025; any documents issued after the cut-off date were not considered in the assessment.

TOP PRIORITY ACTIONS

- 01. Step Up Nature-Risk Supervision and Central Banking Operation with a “Nature-as-System” Mindset**
 Financial regulators, supervisors, and central banks should move beyond high-level guidance on nature toward setting clearer and more detailed expectations that define risk drivers, metrics, data requirements, and due diligence standards, and should develop and run nature-related scenario analyses and stress tests themselves. The results should guide both supervisory expectations for banks and insurers as well as central bank operations (including monetary policy implementation and reserve management), so that financial institutions manage nature-related risks with the same rigor they apply to climate risk and central banks avoid amplifying those risks through their own balance sheets and tools.
- 02. Activate Macroprudential Tools and Strengthen Systemic Surveillance**
 Financial regulators and supervisors should begin deploying macroprudential tools to address climate and nature risks. Tools such as the Systemic Risk Buffer (SyRB), borrower-based measures, exposure and concentration limits, and system-wide stress tests offer concrete ways to manage risk build-up across the financial system. These instruments should be applied using a precautionary and “ETP” (early, targeted, and proportionate) approach, recognizing both the uncertainty and the potential for non-linear climate and nature shocks. They should also be underpinned by strengthened international coordination (for example through the Bank for International Settlements (BIS), the Financial Stability Board (FSB), and other relevant standard-setters) to ensure consistency for authorities that choose to act.
- 03. Start Calibrating Pillar 1 Capital for Environmentally Harmful Exposures**
 Financial regulators and supervisors should begin calibrating Pillar 1 capital requirements for environmentally harmful exposures by proposing and, where the legal framework allows, implementing changes to both the standardized and internal ratings-based (IRB) approaches. This could include introducing sector- and location- specific risk-weight multipliers under the standardized framework, as well as applying targeted minimum values or limits on key IRB parameters (such as Probability of Default (PD) and Loss Given Default (LGD)) for activities assessed as having high climate or nature-related risk. Over time, these adjustments should be grounded in emerging evidence from scenario analysis, loss data, and forward-looking risk assessments, and applied in a transparent and predictable way so that institutions can adapt their business models while internalizing the full risk and cost of environmentally harmful activities.

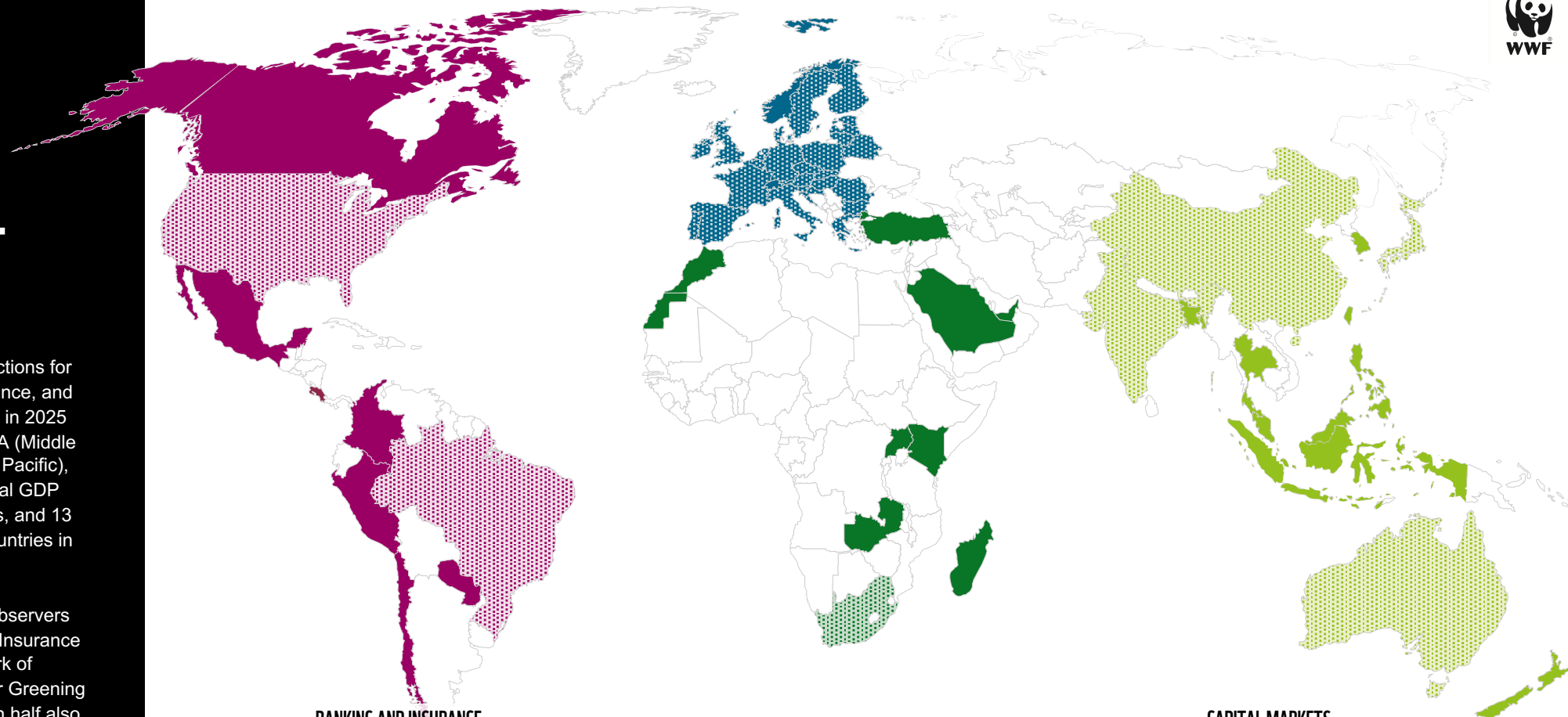
- 04. Mobilize Green and Transition Finance as a Strategic Opportunity**
 Financial regulators, supervisors, and governments should frame sustainable finance not only as a risk-management imperative but also as a core growth and competitiveness agenda for the financial sector. Clear, usable taxonomies and transition-finance frameworks can help banks, insurers, and investors expand the pipeline of investible green and transition projects, develop new products (such as sustainability-linked loans and bonds), and tap into growing global demand for credible sustainable assets.
- 05. Establish a Stable Disclosure and Transition-Planning Regime for Financial Institutions and Corporates**
 Financial regulators should mandate corporate and financial-institution sustainability disclosures aligned with recognized standards such as the Task Force on Climate-related Financial Disclosures (TCFD), the Taskforce on Nature-related Financial Disclosures (TNFD), and the International Sustainability Standards Board’s (ISSB) IFRS Sustainability Disclosure Standards S1 and S2 (General Requirements for Disclosure of Sustainability-related Financial Information and Climate-related Disclosures), and complement these with a double-materiality perspective and clear expectations for credible, time-bound transition plans for large corporates and financial institutions. Once adopted, these requirements and transition-planning obligations should not be rolled back, as any reversal would undermine legal certainty, reduce trust, and penalize firms that have invested in robust reporting systems and internal controls.
- 06. National-level and International inter-agency coordination**
 Governments should create statutory green-finance committees bringing together the finance ministry, central bank, regulators, and environmental agencies to coordinate the national transition pathway. Meetings, agendas, and progress reports should ideally be made public and supported by a stakeholder advisory panel comprising representatives from industry, academia, and civil society. A single Green Macroeconomic Policy Roadmap should set common objectives linked to mitigation and adaptation targets and map them to key regulatory and legislative agendas. In parallel, regulators could participate in cross-jurisdictional peer-learning platforms and structured technical-assistance programs, through which more advanced authorities can share models, datasets, and scenario libraries, supported by pooled international funding to help resource-constrained supervisors build data, reporting, and analytical capacity.

GEOGRAPHICAL COVERAGE

The assessment covers 50 jurisdictions for banking, 46 jurisdictions for insurance, and 12 jurisdictions for capital markets in 2025 across the Americas, Europe, MEA (Middle East and Africa), and APAC (Asia Pacific), representing over 89% of the global GDP and 75% of global GHG emissions, and 13 of the 17 most biodiversity-rich countries in the world.

Most of these are members and observers of the International Association of Insurance Supervisors (IAIS) and the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), with half also as members of the Basel Committee on Banking Supervision (BCBS).

We conducted the assessment against the regulations, supervisory expectations, and guidance issued by the central banks, financial regulators, supervisors and relevant authorities in these countries.



BANKING AND INSURANCE

AMERICAS
BERMUDA
BRAZIL
CANADA
CHILE
COLOMBIA
COSTA RICA
MEXICO
PARAGUAY
PERU
USA
CALIFORNIA (US STATE)
NEW YORK (US STATE)

EUROPE

AUSTRIA	LUXEMBOURG
BELGIUM	NETHERLANDS
DENMARK	NORWAY
EUROPEAN UNION	PORTUGAL
FRANCE	SPAIN
GERMANY	SLOVENIA
GREECE	SWEDEN
HUNGARY	SWITZERLAND
ITALY	UK

MEA

KENYA
MADAGASCAR
MOROCCO
SAUDI ARABIA
SOUTH AFRICA
TÜRKIYE
UAE
UGANDA
ZAMBIA

APAC

AUSTRALIA
BANGLADESH
CHINA
HONG KONG
INDIA
INDONESIA
JAPAN
MALAYSIA
NEW ZEALAND
PHILIPPINES
SINGAPORE
SOUTH KOREA
TAIWAN
THAILAND

CAPITAL MARKETS

AUSTRALIA
BRAZIL
CHINA
EUROPEAN UNION
FRANCE
GERMANY
INDIA
JAPAN
SINGAPORE
SOUTH AFRICA
UNITED KINGDOM
UNITED STATES OF AMERICA

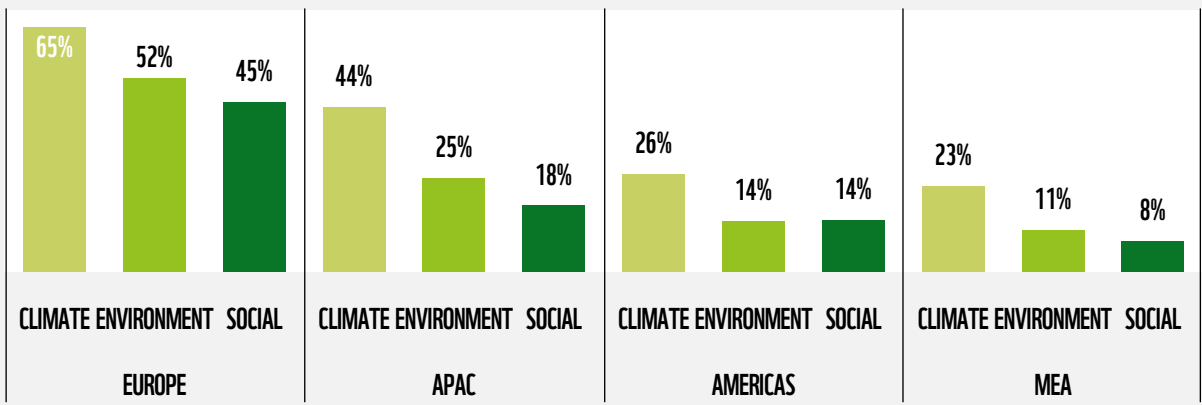


BANKING SUPERVISION



POSITIVE OUTLOOK IN EUROPEAN AND APAC BANKING SUPERVISION, BUT OPPORTUNITIES FOR IMPROVEMENT REMAIN IN OTHER REGIONS


FIGURE 1: AVERAGE FULFILMENT OF SUSREG BANKING-SUPERVISION INDICATORS BY TOPIC AND REGION IN 2025



The European Central Bank (ECB) reports clear supervisory follow-through and measured progress against its climate and environmental guidance issued in 2020. By end-2024, banks’ practices aligned with its expectations improved, with 56% of banks displaying “leading” practices (vs. 3% in 2022), while those with no practices fell to 5% (from 25%). All banks now include climate risk in their stress-testing framework (41% in 2022). Since March 2023, the ECB issued 28 binding decisions on strengthening internal risk management to start properly considering C&E risks, 22 of which involved the potential imposition of periodic penalty payments (PPPs) if banks failed to meet the requirements set out in these decisions, nine outlier banks received further decisions after the 2023 deadline as they did not have the foundational elements in place. To support banks, the ECB announced it will publish an updated compendium of good practices later this year, building on insights from prior climate stress tests and thematic reviews. The ECB also conducted an industry dialogue in Oct 2025 and plans to conduct more formal assessment in 2027.

Note: Following methodological consultation, we reweighted indicators and raised the evidentiary bar by excluding non-binding industry guidance and stock-exchange rules. As a result, scores may decline without underlying regulatory change, hence, we do not present prior-year comparisons unless restated on the 2025 basis.


CLIMATE



Climate risks integration generally sees the highest fulfilment across all assessment pillars. In the SUSREG assessment, all covered EU jurisdictions score above 50% alignment on climate-risk integration, supported by the EBA’s 2025 Guidelines on the management of ESG risks and ongoing SSM supervisory expectations based on the ECB guide on climate and environmental risks. At the same time, the Commission’s 2025 Omnibus simplification package, if adopted as proposed, would narrow the scope and delay key elements of the sustainability disclosure regime for companies, by raising thresholds and delaying certain CSRD/CSDDD obligations.

Accelerated progress in APAC reflects prudential guidance and transition-planning moves. Singapore has issued environmental-risk management guidelines for banks and consulted detailed transition-planning guidance for banks, insurers and asset managers. Hong Kong’s 2024 Sustainable Finance Action Agenda signals “comply or explain” transition plans from 2030, and Australia’s APRA continues to embed Prudential Practice Guide CPG 229 and to run climate-risk self-assessments across regulated entities.


ENVIRONMENT



Broader environmental risks still trail climate in supervision, but momentum is building. Switzerland’s FINMA has issued a dedicated circular on nature-related financial risks: the circular enters into force in stages from January 2026 for climate-related financial risks, with full coverage of other nature-related risks applying from January 2028. EU-level rules, including the EBA ESG-risk Guidelines and ESRS standards such as E4 Biodiversity & Ecosystems, are being transposed into member-state frameworks. Non-EU European peers (Norway, Switzerland, UK) generally show lower overall fulfilment in the SUSREG assessment.

In MEA and the Americas, most prudential initiatives still concentrate on climate risks, with limited explicit nature-specific integration to date, except in Brazil. The Central Bank of Brazil’s framework on social, environmental and climate risks, and its evolving climate and nature-related disclosure requirements, represent a more integrated approach. In APAC, early steps on nature are emerging: Malaysia’s VBI AF sectoral guides and Bank Negara Malaysia’s collaboration with the World Bank on nature-related financial risk assessment illustrate a pragmatic and phased pathway beyond climate and towards TNFD-aligned approaches.

SOCIAL



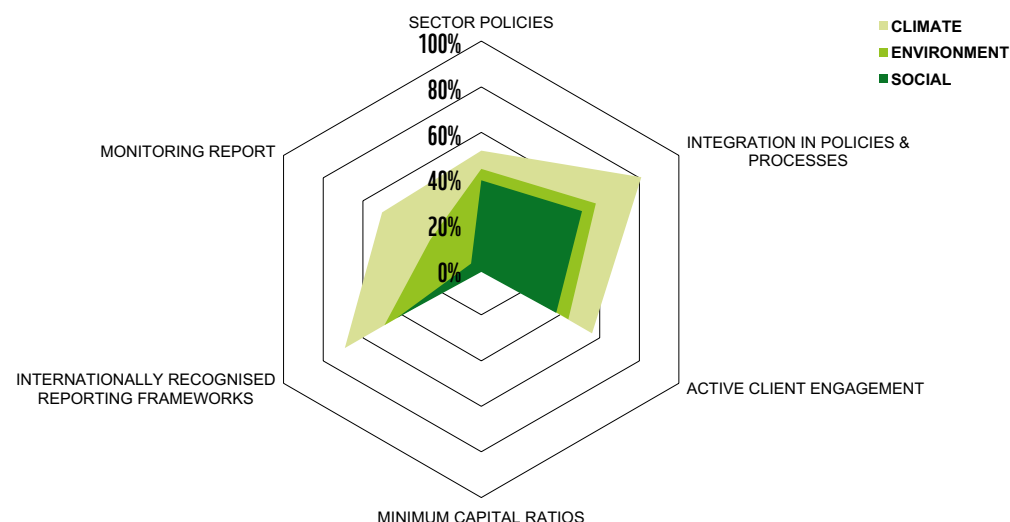
As in previous SUSREG assessments, the social pillar remains less developed than climate and environment. Social risks and impacts should be considered in parallel with climate and environmental factors, given society’s dependence on natural resources and the growing effects of resource degradation and the climate crisis on livelihoods.

In jurisdictions with lower regulatory maturity, supervisors understandably prioritize climate first. As frameworks evolve, nature-related considerations are beginning to enter supervisory expectations, disclosures and internal organization. On this trajectory, proportionate progress on social risk is expected to follow, building on a more robust climate- and nature-risk foundation



REGULATORY AND SUPERVISORY GAPS PERSIST IN SECTOR-POLICY EXPECTATIONS, CAPITAL-RATIO CALIBRATION, AND SUPERVISORY FOLLOW-THROUGH

FIGURE 3: AVERAGE ACHIEVEMENT OF 50 COUNTRIES ON SELECT INDICATORS OF BANKING SUPERVISION



Note: The number displayed on the graph represents the average fulfillment of indicators. Partially met criteria are assigned a 50% fulfillment, while fully met criteria result in 100% fulfillment.

Bank Negara Malaysia (BNM) demonstrates good supervisory monitoring by reporting how regulated entities are implementing its *Climate Risk Management and Scenario Analysis (CRMSA)* policy issued in November 2022. In its *Annual Report 2024*, BNM notes steady progress across the industry: among 66 financial groups, 83% have set climate targets (rising in count from 48 in 2023 to 55 in 2024); 95% have included climate risks in their Risk Appetite Statements; and 83% have developed sustainability strategies and frameworks (increasing from 58 in 2023 to 62 in 2024). These metrics demonstrate ongoing supervision and active follow-through by BNM as a supervisor.



MICRO-PRUDENTIAL SUPERVISION, DISCLOSURES, AND ENFORCEMENT MECHANISM

With growing global recognition of the need to embed sustainability into strategies, business models, and risk management, the integration of climate and environmental considerations into banks' policies and processes has become a core supervisory expectation. In our 2025 sample, 80% of assessed jurisdictions have incorporated climate-related expectations into their supervisory frameworks, and around 50% have extended these to cover all three dimensions (climate, environment, and social.) This reflects broad uptake of foundational governance, strategy, and risk-management requirements by financial regulators.

By contrast, systematic calibration of capital requirements remains rare. So far, there are no Pillar 1 calibrations and only selective, case-by-case use of Pillar 2 measures to reflect climate and environmental risks. Low alignment likely reflects ongoing challenges with data availability, risk-weight methodologies, and model-validation standards needed to quantify these risks robustly. Some pilots exist, for example, Hungary's preferential Pillar 2 treatment for certain green exposures, and the Reserve Bank of New Zealand's prudential capital treatment to improve access to finance for Māori communities. However, these initiatives

function more as capital discounts than as risk-based integrations or capital charges reflecting underlying climate and nature risks.

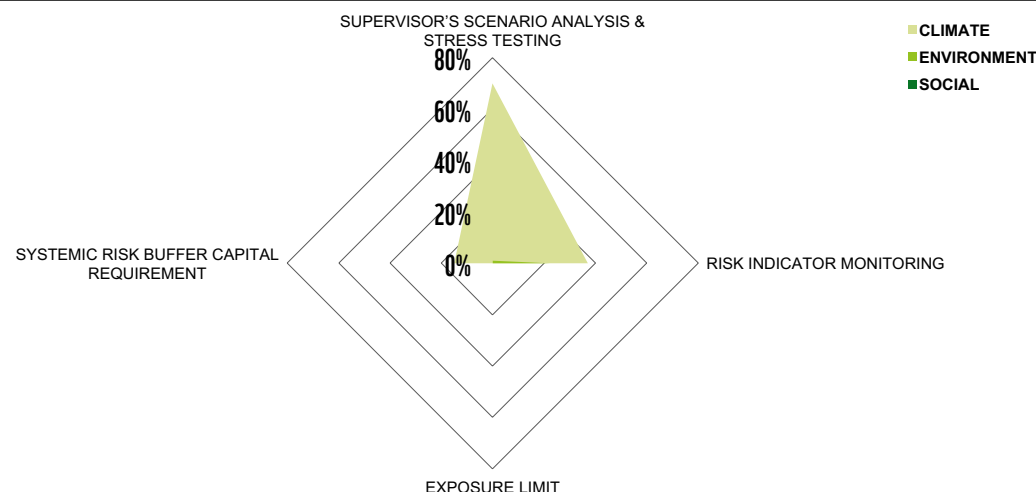
About half of banking supervisors have published reports on banks' progress in meeting climate-related supervisory expectations, though fewer do so for environmental and social factors. These publications could be strengthened by pairing them with clear remedial timelines and, where gaps persist, proportionate Pillar 2 measures, ensuring that transparency leads to tangible improvements. A similar pattern appears in expectations for banks to adopt sector policies for high-risk or high-impact industries. Supervisors could enhance effectiveness by requiring board-approved sector standards, clear client-engagement or exit criteria, and standardized covenant templates for high-risk sectors.

In contrast, expectations for banks to align their public disclosures with internationally recognized sustainability reporting frameworks show relatively strong uptake across climate, environment, and social areas. This is largely driven by consistent supervisory references to frameworks such as the TCFD and the ISSB standards.



MACROPRUDENTIAL TOOLS SUCH AS SYSTEMIC RISK BUFFERS AND EXPOSURE LIMITS ARE RARELY ACTIVATED ACROSS THE ASSESSED COUNTRIES

FIGURE 4: AVERAGE ACHIEVEMENT OF 50 COUNTRIES ON SELECT INDICATORS OF BANKING SUPERVISION



Note: The number displayed on the graph represents the average fulfillment of indicators. Partially met criteria are assigned a 50% fulfillment, while fully met criteria result in 100% fulfillment.

Banka Slovenije's risk and resilience dashboard integrates traditional systemic risk measures with climate indicators to monitor stability. It combines quantitative and qualitative indicators and provides forward-looking signals via a color code (assessment up to one quarter ahead) and arrows showing expected direction over the following year. Climate risks include transition and physical risk metrics such as weighted carbon intensity of the banking system, portfolio tilt to polluting sectors, the share and growth of exposures to climate-sensitive sectors, and portfolio shares linked to municipalities with high or elevated physical risk (including drought, wind, extreme heat and floods). The dashboard is presented in the Financial Stability Review and used to assess systemic risks and resilience.



MACRO-PRUDENTIAL SUPERVISION

Macroprudential measures remain relatively underdeveloped across the assessed countries, as shown in Figure 4, with low achievement across most indicators. These tools are an essential part of the supervisory ecosystem. They help identify key risks and stressors facing the financial system and provide mechanisms to manage and mitigate them, including risks that could become systemic and threaten overall stability and resilience. Macroprudential measures include capital buffers (such as the Systemic Risk Buffer (SyRB) and Countercyclical Capital Buffer (CCyB)), sectoral capital requirements, borrower-based tools, exposure or concentration limits, and system-wide stress testing.

The lowest fulfilment is recorded in the area of prudential rules that limit banks' exposures to certain activities and aim to prevent systemic risks, with only around 3% achievement across climate, environmental, and social dimensions. Such measures can reduce the likelihood of significant losses and strengthen overall financial stability. However, in many jurisdictions, hard exposure caps require explicit legal authority and cross-border reciprocity. More proportionate alternatives include concentration limits, targeted risk-weight add-ons, or supervisory expectations integrated into the Supervisory Review and Evaluation Process (SREP).

Similarly, capital buffers for systemic sustainability risks can help protect against correlated losses and strengthen financial stability. Uptake remains limited, only around 15% of assessed jurisdictions have moved in this direction, largely driven by the Capital Requirements Directive VI framework. The EU's CRD VI now enables (but does not require) authorities to apply the systemic risk buffer (SyRB) to sets or subsets of exposures facing physical or transition climate risks, where such use is effective and proportionate. Where applied, these buffers should be grounded in clear evidence, adjusted as conditions evolve, and coordinated with other measures such as tighter limits on higher-risk exposures.

More than half of supervisors worldwide have now conducted system-wide climate scenarios or stress tests. Coverage of broader environmental and social factors in the analysis, however, remains limited due to data, methodological, and modelling gaps. A pragmatic next step would be to publish a small set of transparent "watch" indicators to guide supervisory dialogue with banks and signal where risks are becoming concentrated and beginning to materialize.

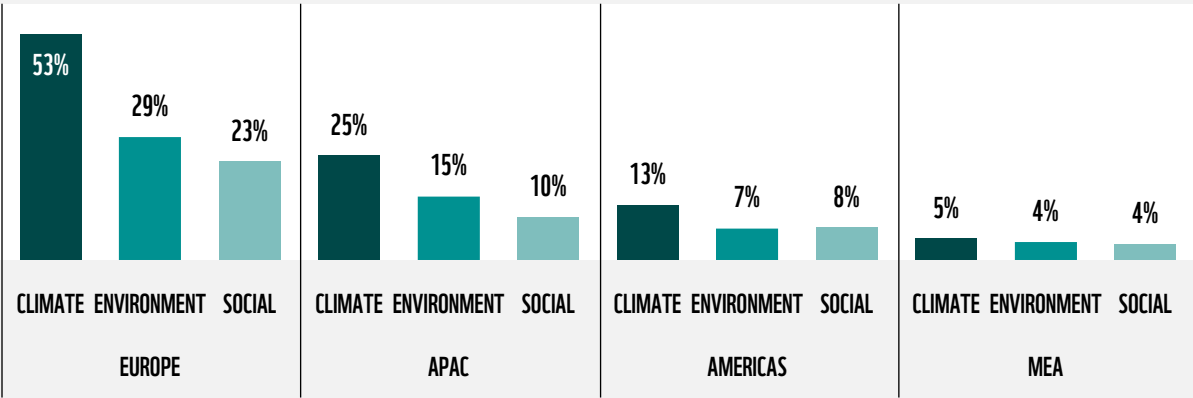


CENTRAL BANKING



PROGRESS IN ADJUSTING CENTRAL BANKING OPERATIONS HAS BEEN STAGNANT OVER THE YEARS, DESPITE THE SIGNIFICANT SIZE OF CENTRAL BANKS’ BALANCE SHEETS

FIGURE 8: AVERAGE FULFILMENT OF SUSREG CENTRAL BANKING INDICATORS BY TOPIC AND REGION IN 2025



The Eurosystem’s corporate bond reinvestments were “tilted” toward better climate performers using an European Central Bank (ECB) climate score combining lower historical emissions, credible forward-looking targets, and quality of climate disclosures. The aim was to gradually decarbonise holdings while keeping purchase volumes driven by monetary-policy needs, with the option to restrict the worst performers. However, the Eurosystem no longer conducts purchases or reinvestments of corporate bonds under either the Asset Purchase Program (APP) or Pandemic Emergency Purchase Program (PEPP). The APP reinvestments ended in July 2023 and PEPP reinvestments were fully discontinued at end-2024. Therefore, the tilting mechanism is no longer active for new flows. Climate integration continues via other tools (e.g., collateral framework climate factor).

Note: Following methodological consultation, we reweighted indicators. As a result, scores may decline without underlying changes in the policy and strategy of the central banks, hence, we do not present prior-year comparisons unless restated on the 2025 basis.

CLIMATE

Across regions, sustainability shows up most visibly in central bank leadership statements and supervisory work, while adjustments to monetary policy operations are emerging but still selective. A few authorities are now embedding climate risk into operational toolkits, for example, through introducing climate-risk haircuts in collateral frameworks, primarily to protect balance sheets and implementation resilience rather than to steer credit.

Where legal footing and data allow, we see measured adjustments such as calibrated collateral “climate factors”, integrating climate into in-house credit assessments, and portfolio temperature-alignment targets for own-account investments. For instance, Banque de France has committed to align its corporate bond holdings with a 1.5°C trajectory by end-2026, building on its equity portfolio, which is already aligned with a <1.5°C trajectory.

ENVIRONMENT

Nature-related risks have scarcely entered monetary operations. Where tools have shifted, measures remain climate-specific, from the ECB’s planned collateral ‘climate factor’ to targeted lending in several central banks in APAC. So far, biodiversity-related metrics have not been specifically built into central bank collateral frameworks (including haircuts) or asset purchase programmes. Instead, biodiversity is reflected as part of general environmental criteria or through investments in sustainable or green bond portfolios.

That said, central bank portfolio disclosures are inching forward on nature. The ECB now discloses a nature-loss exposure indicator for Eurosystem and ECB corporate portfolios, Banque de France has expanded reporting on the nature impact/exposure of its portfolio, DNB piloted TNFD LEAP approach on its own-account investments, and MNB discloses nature-related risks and impacts of its foreign exchange reserves and monetary policy portfolios using the WWF Risk Filter Suite.

SOCIAL

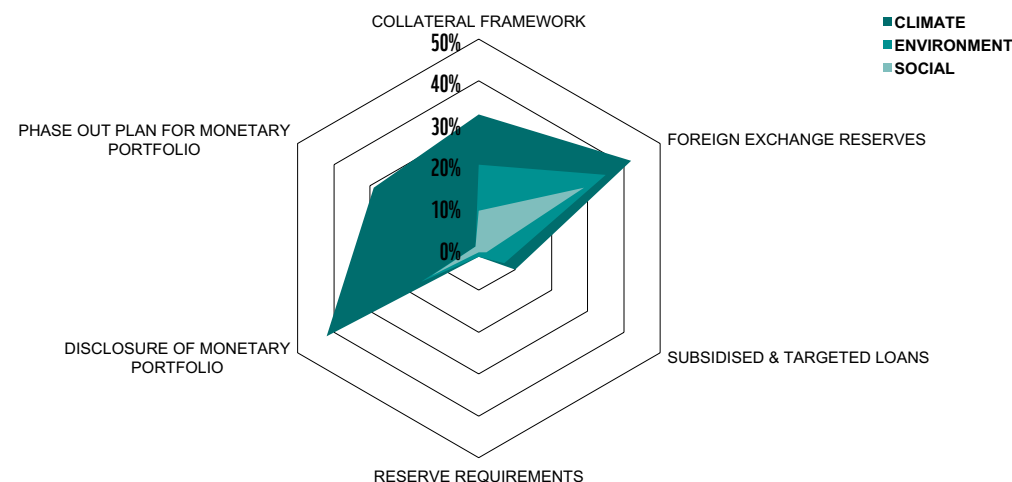
Social topics remain weakly reflected in monetary operations. Most observable progress on ‘S’ comes via SRI strategies in central-bank portfolios and adding sustainable/social bonds to own-funds and reserves, rather than systemic ‘S’ criteria in central bank collateral frameworks (including haircuts) or asset purchase programs.

For instance, in 2024 the Eurosystem held 0.5% sustainability and 1.3% social bonds in its sovereign/sub-sovereign book. Brazil’s central bank formalised sustainability in reserve management (counterparty ESG, strategic allocation to green/sustainability/social bonds). Banco de la República (Colombia) likewise established policies and procedures that favor investments aligned with ESG factors and hire external managers that have extensive experience including ESG criteria in their investment processes.



THE MAJORITY OF APPLIED MONETARY POLICY TOOLS REMAIN CLIMATE AND NATURE-BLIND, WITH CENTRAL BANK ACTIONS LARGELY LIMITED TO THEIR OWN-PORTFOLIO MANAGEMENT

FIGURE 10: AVERAGE ACHIEVEMENT OF 50 COUNTRIES ON SELECT INDICATORS OF CENTRAL BANKING



Note: The number displayed on the graph represents the average fulfillment of indicators. Partially met criteria are assigned a 50% fulfillment, while fully met criteria result in 100% fulfillment.

In 2025, Bank Al-Maghrib continued to green its foreign-exchange reserves by subscribing to a US\$150 million sustainable bond issued by the International Fund for Agricultural Development (IFAD), its second private placement with IFAD following a EUR 100 million sustainable bond in July 2024. Under IFAD's Sustainable Development Finance Framework, the proceeds finance projects that transform rural areas by improving livelihoods, food security and resilience. The repeat transaction underscores the strength of the long-term partnership between IFAD and Morocco, while further increasing the share of sustainability-linked assets in Bank Al-Maghrib's prudential reserve portfolio. This builds on earlier steps, including the US\$100 million investment of reserves in World Bank green bonds in 2016.



MONETARY POLICY

Integrating climate and environmental factors into monetary policy and central banking underscores the pivotal role of central banks in enabling the necessary economic transition. Such transition can only be facilitated when nature and climate are valued within a central banks' financial mechanisms, such as collateral frameworks, climate-related disclosures of monetary portfolios, and the management of foreign exchange reserves. These three indicators show the highest achievement scores from a climate-perspective at 31%, 40%, and 42% respectively. These levers are preferred because they primarily strengthen risk management and transparency, preserve neutrality, and rely on data and market segments where metrics and liquidity are relatively more developed

Despite the key role central banks play in promoting a resilient and sustainable economy, the assessment revealed on average a low achievement in the following areas from a climate perspective, and virtually no fulfillment when considering environment and social: Offering subsidized loans or preferential targeted refinancing on climate considerations (10%); Considering climate-related risk when determining reserve requirements for banks (2%); and Establishing a phase-out plan on assets linked to the most environmentally-harmful activities (27%).

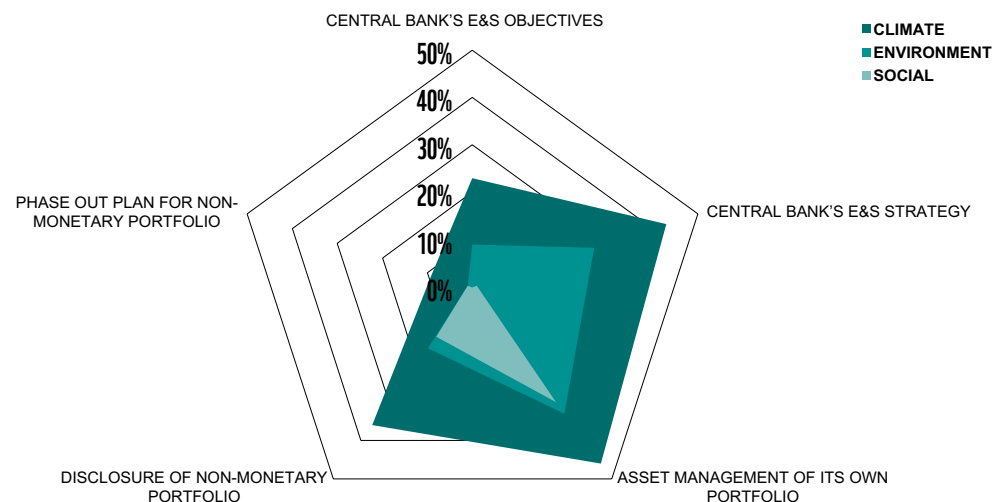
A prudent path is to adjust tools only where this improves risk control and implementation resilience, run small pilots (e.g., collateral add-ons tested internally), publish the method and denominators, and scale gradually as data quality and legal clarity improve. Crucially, when climate-related risks are directly priced into key monetary policy tools (such as collateral frameworks, haircuts, and asset purchases) the effect is systemic. These tools anchor benchmarks for pricing and collateral across markets, sending ripple effects through the financial system and real economy, and signaling that fossil-fuel-heavy assets are structurally riskier and therefore more costly to hold and finance.

Neutrality serves to safeguard central banks' mandates and the effective transmission of policy. However, in the face of rising climate risks in the economy, inaction is not neutral. Where climate risks are demonstrably mispriced, risk-based adjustments can both correct implementation biases and align system-wide price signals more closely with underlying risk, while still respecting mandate boundaries and leaving broader climate policy (taxes, standards, subsidies) to elected authorities.



CENTRAL BANKS PRIORITIZE CLIMATE RISKS WITH GROWING FOCUS ON DEVELOPING STRATEGIES, ROADMAPS, AND INTEGRATION INTO OWN ASSET MANAGEMENT INVESTMENTS

FIGURE 11: AVERAGE ACHIEVEMENT OF 50 COUNTRIES ON SELECT INDICATORS OF CENTRAL BANKING



Note: The number displayed on the graph represents the average fulfillment of indicators. Partially met criteria are assigned a 50% fulfillment, while fully met criteria result in 100% fulfillment.

Banco Central de Chile is advancing a research agenda to embed environmental and energy variables in the macro models it uses for monetary policy. The work maps inflation channels (e.g., energy-price shocks, drought impacts on food and electricity) and explores implications for the neutral rate, productivity, and risk premia, so climate and transition dynamics can be reflected in forecasting and scenario design. The policy paper outlines how climate change may have medium-to-strong direct effects in Chile, with significant indirect effects from global green transitions, and are building tools and satellite models to quantify these mechanisms alongside standard projections.



CENTRAL BANKS' OWN INVESTMENT STRATEGY AND LEADERSHIP

Central banks operate not only as “guardians” of both monetary and financial stability, but they also play a significant role in addressing systemic climate- and environmental-related risks and impacts. Thus, the practice of central banks incorporating climate, environment and social factors within their own asset management practices ensures that these larger investments avoid contributing to environmentally- harmful activities and promotes the resilience of these investments to sustainability risks.

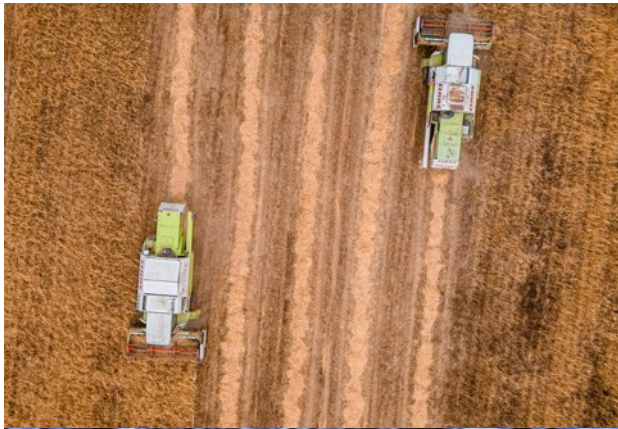
The higher achievement rate of 46% across the assessed central banks indicates a trend of considering the sustainability aspects of the stability of the wider financial system, primarily through Socially Responsible Investment (SRI) policies, minimum safeguards, and selective holdings of green/sustainability/social bonds. This may also indicate to other institutional investors that this is priority considered by the so-called “guardians” themselves, with leadership

expressed via disclosures and research that make methods replicable.

Both the assessment and disclosure of non-monetary portfolio risks as well as the establishment of an official science-based internal strategy and transition plan are similarly considered from a climate perspective, with 34% and 43% achievement, respectively. However, both the setting of nominal anchors beyond conventional ones, and the decision of phasing out environmentally-harmful activities scored much lower across climate, environment and social. Most central banks now publish sustainability strategies, but few pair them with explicit nominal anchors or targets, for example, goals aligned to the Paris Agreement or the Kunming Montreal Global Biodiversity Framework. As a result, commitments tend to emphasize risk management and transparency rather than time-bound portfolio pathways tied to Paris or Kunming objectives.



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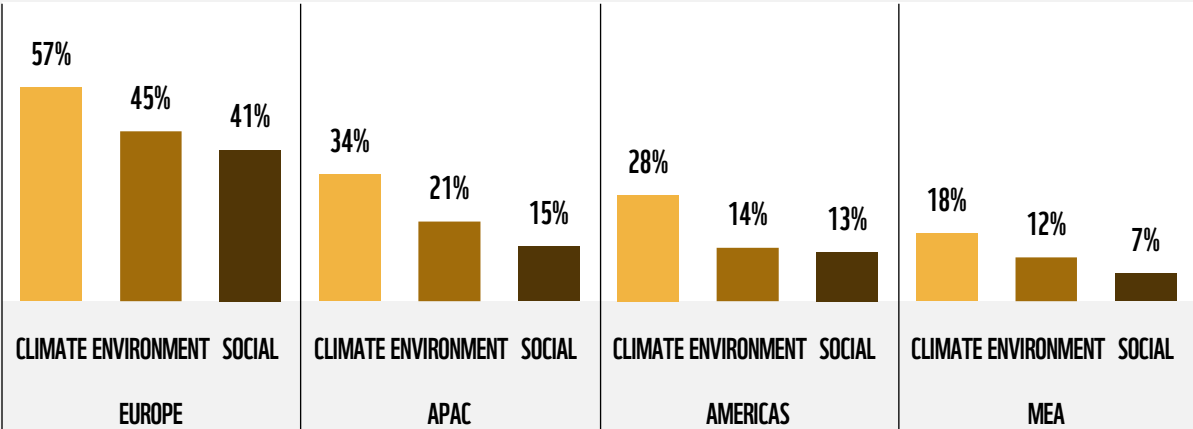


INSURANCE SUPERVISION



INSURANCE SUPERVISION LAGGING BEHIND BANKING, WITH MOST PROGRESS ON CLIMATE RISK INTEGRATION ACROSS JURISDICTIONS

FIGURE 14 AVERAGE FULFILMENT OF SUSREG INSURANCE SUPERVISION INDICATORS BY TOPIC AND REGION IN 2025



The EU's 2025 Solvency II amendment (Directive (EU) 2025/2) marks a significant strengthening of prudential expectations for insurers. Now in force and being transposed across Member States, the revision explicitly embeds sustainability risk management into the core solvency framework. It introduces a new “small and non-complex” category to operationalize proportionality, while elevating climate scenario analysis to a Level-1 legal requirement within the Own Risk and Solvency Assessment (ORSA). Insurers must assess at least two long-term climate scenarios, below 2°C and well above 2°C, every three years, including quantified business-impact analyses. Boards are also required to adopt prudential plans with measurable targets to address financial risks from ESG factors, aligning these, where relevant, with corporate transition and sustainability plans under the CSRD. This marks the first time that climate and broader sustainability considerations are fully integrated into the binding prudential requirements of Solvency II.

Note: Following methodological consultation, we reweighted indicators and raised the evidentiary bar by excluding non-binding industry guidance and stock-exchange rules. As a result, scores may decline without underlying regulatory change, hence, we do not present prior-year comparisons unless restated on the 2025 basis.

CLIMATE

Climate factors have the highest fulfilment across all SUSREG assessment pillars, with the highest alignment observed in the European Union. Despite the planned Omnibus deregulation and political uncertainty over key directives such as CSRD and CSDDD, the EU still leads the global field, notably due to the amendments to the Solvency II directive and the EIOPA proposals on prudential rules for insurers.

In Asia-Pacific, Singapore and Malaysia also belong to the countries with the most advanced integration of climate factors into insurance regulation and supervision, while the USA experienced setbacks at the federal level in 2025 due to political headwinds. Globally, and despite progress over the last years, the integration of climate risk in insurance supervision still lags behind banking supervision.

ENVIRONMENT

The integration of wider environmental and nature-related aspects into insurance regulation and supervision still lags behind climate-related considerations, with only 10 countries fulfilling more than 50% of SUSREG’s environment criteria, comprising Singapore, the European Union and several EU member states, with France and Hungary in the lead.

However, there are also encouraging signs of progress in some jurisdictions. For example, in Switzerland, the new Swiss Financial Market Supervisory Authority (FINMA) circular on climate and nature, published last year, will require insurers to assess and manage material nature-related risks by 2028.

SOCIAL

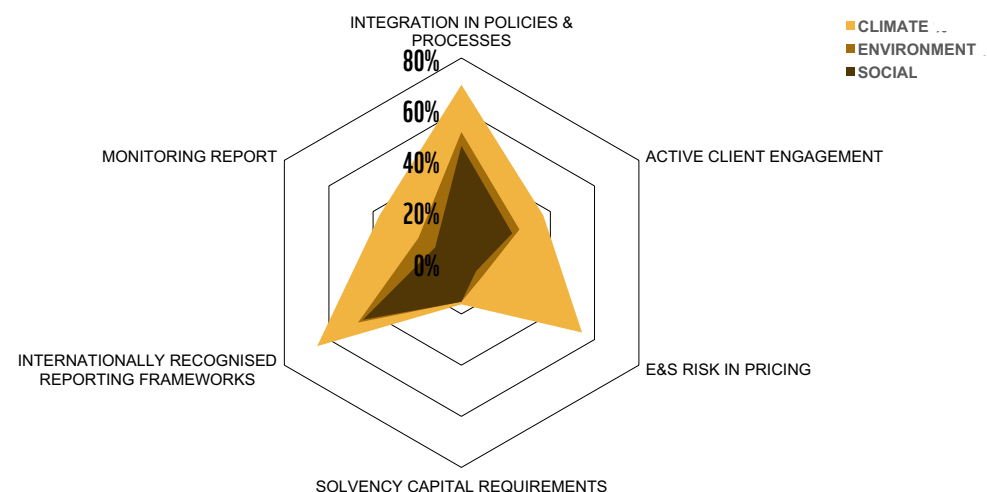
Despite the key role of insurance to support development and provide financial protection to society, the explicit integration of social aspects into insurance regulation and supervision remains less developed than climate and nature-related considerations. The European Union and its member states are the most advanced in this respect, followed by China in Asia-Pacific.

Social risks and impacts also intersect with environmental topics, with climate change and nature loss contributing to rising issues of unaffordability and unavailability of insurance in several regions and leading to a protection gap which disproportionately affects the poor. This is a growing concern for insurance supervisors, with the EU and California being among the most proactive to tackle the problem.



MOST INSURANCE PRUDENTIAL FRAMEWORKS STILL LACK KEY ELEMENTS, INCLUDING ACTIVE CLIENT ENGAGEMENT AND DEDICATED SOLVENCY CAPITAL REQUIREMENTS

FIGURE 16: AVERAGE ACHIEVEMENT OF 50 COUNTRIES ON SELECT INDICATORS OF INSURANCE SUPERVISION



Note: The numbers displayed on the graph represent the average fulfilment of indicators. Where an indicator is split between investment and underwriting, both components are weighted equally. Partially met criteria are counted as 50% fulfilment, while fully met criteria are counted as 100%.

The UK Prudential Regulation Authority (PRA)'s 2025 Climate Change Adaptation Report sets out the latest review of firms' progress against SS3/19 (now CP10/25).



It finds that banks and insurers have taken positive steps in governance, risk management and climate scenario analysis, but that levels of readiness and embedding vary and further progress is needed by all firms. Governance structures for climate risks are now widely in place, yet consistent application across business lines, maturity of risk-management and scenario-analysis processes, and closure of critical data gaps remain key priorities. The PRA expects firms to show how climate risks are reflected in their ICAAPs/ORsAs and Expected Credit Loss (ECL) measurement, supported by prudent assumptions, proxies and evolving tools, and will continue to monitor progress and provide further updates.



MICRO-PRUDENTIAL SUPERVISION, DISCLOSURES, IMPLEMENTATION

There is a growing global recognition of the importance of including sustainability within the strategies, business models, and risk management of insurers. In 2025, 70% of the assessed jurisdictions have integrated climate considerations, while 46% of the countries set supervisory expectations for insurers to integrate all three SUSREG aspects (climate, environment, and social) into their policies and processes.

Supervisors expect insurers to actively engage with their clients on climate, environment and social topics in only about a third of the jurisdictions surveyed. On a positive note, though, the integration of climate risk in insurance pricing is now required in more than 50% of the jurisdictions in our sample.

A dedicated calibration of capital requirements to incorporate climate and environmental risks remains rare (and is often limited to natural catastrophe insurance risk). A lack of sufficient data evidence is commonly cited by supervisors

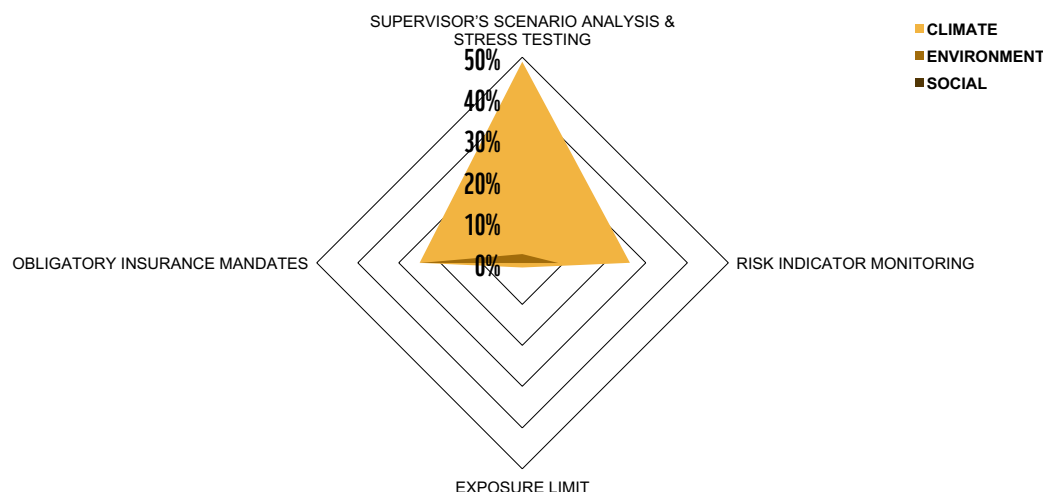
as the main reason. However, pioneering proposals exist, such as the European Insurance and Occupational Pensions Authority (EIOPA)'s recommendation to increase capital requirements for European insurers' investments in fossil fuels. The integration of climate and environmental considerations into Pillar 2 processes (ORSA) is also progressing in the more advanced jurisdictions.

The expectation for insurers to follow internationally recognized sustainability reporting frameworks when disclosing information is now more widespread, with many supervisors asking insurers to align their public disclosures with frameworks like the TCFD and ISBB. However, only about a third of the assessed insurance supervisors have published reports, on the progress of insurers in meeting their supervisory expectations on climate, with even lower achievement when considering environment and social factors.



MACROPRUDENTIAL SUPERVISION IN INSURANCE REMAINS LARGELY FOCUSED ON CLIMATE STRESS TESTING, WITH OTHER TOOLS STILL LACKING

FIGURE 17: AVERAGE ACHIEVEMENT OF 50 COUNTRIES ON SELECT INDICATORS OF INSURANCE SUPERVISION



Note: The numbers displayed on the graph represent the average fulfilment of indicators. Where an indicator is split between investment and underwriting, both components are weighted equally. Partially met criteria are counted as 50% fulfilment, while fully met criteria are counted as 100%.

Philippine Crop Insurance Corporation (PCIC) implements the government's agricultural insurance program, providing insurance protection to farmers against losses arising from natural calamities, plant diseases and pest infestations affecting palay, corn and other crops. PCIC operates as a government-owned and controlled corporation under the supervision of the Department of Agriculture as an attached agency. Crop insurance helps safeguard farm incomes and can also serve as "surrogate" collateral for banks and other financial institutions, encouraging them to continue participating in and supporting government credit programs. By reducing farmers' exposure to shocks, the program is intended to strengthen financial inclusion and rural resilience, lessen dependence on post-disaster aid and support more stable agricultural credit markets.



MACRO-PRUDENTIAL SUPERVISION

Macroprudential measures in insurance supervision remain underdeveloped. Macroprudential tools here refer to elements like systemic capital buffers, system-wide stress testing, sectoral risk monitoring, exposure/concentration limits, and mandatory insurance. These measures are particularly significant in the supervisory ecosystem, as they provide an in-depth understanding of the key risks and stressors the financial system faces, as well as offering mechanisms to manage and mitigate such systemic risks.

About half of the surveyed insurance supervisors worldwide have now run system-wide climate scenario analyses or stress tests. The most advanced of these exercises have started to integrate considerations such as coverage insurability and affordability, as seen in France and Australia. A quarter of the jurisdictions in our sample have also developed climate risk indicators monitoring. However, the inclusion of broader environmental and social factors remains very limited given data, methodology, and modelling gaps.

No insurance supervisor has yet issued prudential rules to limit the exposure of insurers to certain

activities in order to prevent and protect against the build-up of systemic risk, based on environmental and social considerations. This remains a blind spot of insurance supervision, although the state of New York has made groundbreaking proposal with its Insure Our Communities Act which, if adopted, would prohibit investments and insurance underwriting for fossil fuel projects (see page 63 for more details).

About a quarter of the countries surveyed have some form of mandatory insurance against climate and other natural disasters (e.g. earthquakes), typically tailored to the specific hazards they face and their local political context. In the context of widening insurance protection gaps, interest in such schemes is growing, illustrated by the introduction of mandatory natural-catastrophe insurance for companies in Italy this year and ongoing proposals in Germany. However, if underlying risks are not addressed (for example through prevention, land-use planning, etc), these mandatory schemes can create problems for insurance markets by concentrating high risks and undermining long-term insurability.



CAPITAL MARKETS



REGIONAL OVERVIEW

The 2025 capital markets assessment shows that sustainability regulations across capital markets continue to vary by region and country.

Europe remains the frontrunner, with France particularly going beyond the EU regulations on SFDR. The AMF has aligned fund-naming rules with ESMA’s ESG names guidance (including the “80%” threshold and limits on transition terms) and updated its doctrine accordingly. It has also started enforcing against misleading sustainability communications through supervisory actions and settlements (e.g., Primonial REIM, €40,000). However, at the EU level, the proposed “Omnibus” amendments to the CSRD/ESRS could narrow the scope and delay key reporting elements, potentially softening the EU’s current leadership position if enacted. In the **UK**, the FCA’s Sustainability Disclosure Requirements introduce an economy-wide anti-greenwashing rule as well as naming and marketing rules for asset managers.

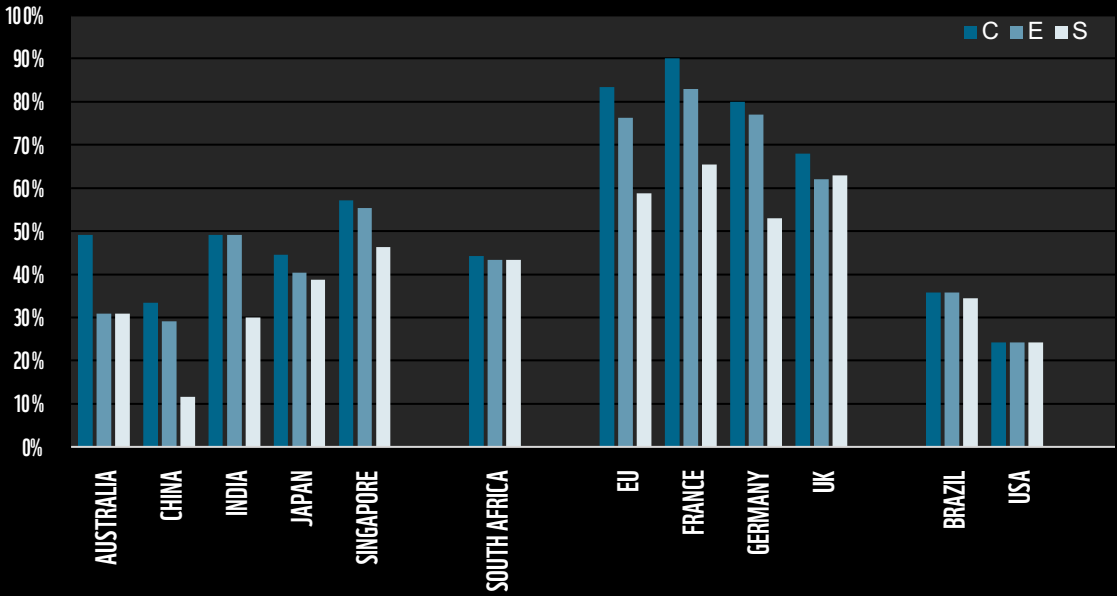
In APAC, **Singapore** leads via MAS Environmental Risk Management Guidelines for asset managers and disclosure/reporting

rules for retail ESG funds. India has strengthened its green bond framework and introduced a full regulatory regime for ESG Rating Providers. Australia combines active greenwashing enforcement with a new mandatory climate-related financial reporting regime, supported by ASIC Regulatory Guide 280.

In Africa, **South Africa** shows measured progress. The JSE’s Sustainability & Climate Disclosure Guidance aligns issuers with global standards and is being updated for IFRS S1/S2, while the FSCA’s sustainable-finance program (2023–25) signals movement toward future mandatory disclosures.

In the **Americas**, **Brazil** demonstrates clear regulatory momentum. CVM Resolution 175 unified fund rule while Resolution 193 mandates ISSB-aligned sustainability reporting for public companies beginning in 2026. The **United States**, by contrast, remains less aligned with the SUSREG framework. Although the Securities and Exchange Commission (SEC) strengthened its fund names rule to address misleading ESG fund names, its climate disclosure rule remains on hold amid ongoing litigation.

FIGURE 21: AVERAGE FULFILMENT OF SUSREG CAPITAL MARKET INDICATORS BY TOPIC & COUNTRIES IN 2025



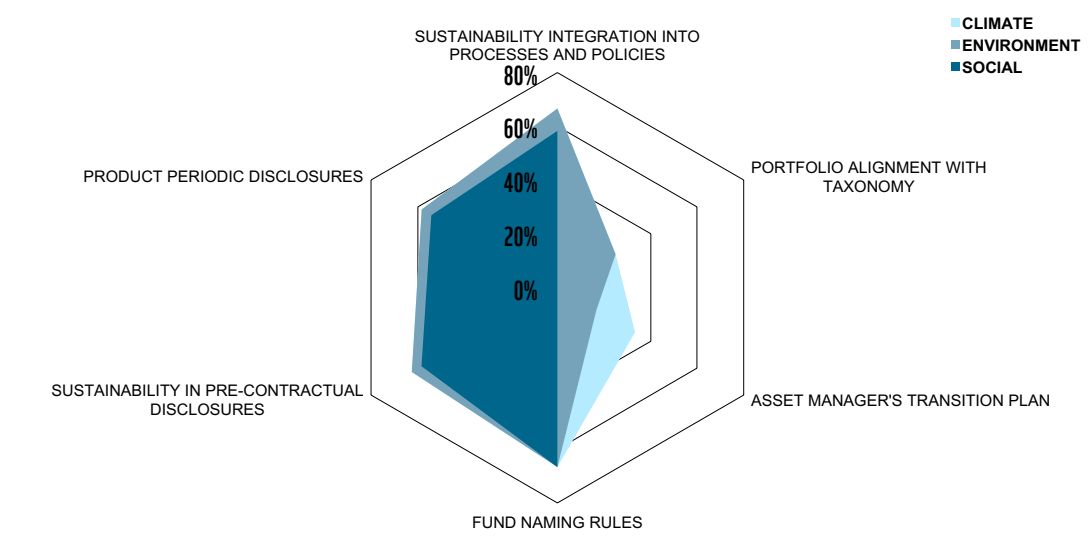
France goes beyond EU minimum rules by combining binding rules with stringent voluntary labels and enhanced investor disclosures expectations. The AMF’s ESG naming doctrine (DOC-2020-03), updated in January 2025 to implement ESMA’s fund-names guidance, governs how any fund marketed in France may use ESG terms in its name, key information documents, and marketing. Additionally, the annual AMF-ACPR report (e.g., June 2024) reviews climate commitments by asset managers, banks, and insurers to check claims against their actual actions.

To complement this regulatory backbone, France also supports voluntary state-backed green-finance labels. The Greenfin label (updated in January 2025) now excludes companies developing new fossil projects and applies strict exclusion thresholds across the fossil value chain. The ISR label also excludes companies developing new fossil projects and tightens expectations for transition plans. As of January 2025, the French environment ministry reported 108 Greenfin-labelled funds with about €35 billion Asset Under Management (AUM)^[1].

[1] France Ministry for the Economy and Finance. (2025). Mobilizing savings for the benefit of the ecological transition: the green finance label “Greenfin” celebrates its tenth anniversary in 2025 and evolves with the times.

REGULATION OF SUSTAINABLE ASSET MANAGEMENT IS ADVANCING FASTER AT THE PRODUCT LEVEL THAN AT THE ENTITY LEVEL

FIGURE 24: AVERAGE ACHIEVEMENT OF 12 COUNTRIES ON SELECT INDICATORS OF CAPITAL MARKETS



Note: The number displayed on the graph represents the average fulfillment of indicators. Partially met criteria are assigned a 50% fulfillment, while fully met criteria result in 100% fulfillment.

In March 2023, the Japan Financial Services Agency (FSA) revised its Comprehensive Supervisory Guidelines for Financial Instruments Business Operators to tackle greenwashing in publicly offered ESG investment funds. Examiners now use explicit checkpoints covering whether fund names fairly reflect the strategy, consistency between stated objectives, investment selection and disclosures, the manager's governance, resources and expertise for ESG analysis, as well as due diligence and monitoring of holdings.

In parallel, the FSA finalized a Code of Conduct for ESG Evaluation and Data Providers (December 2022). This voluntary, comply-or-explain code sets principles on methodology transparency, data quality, governance and conflict-management, and encourages clear separation between ratings, second-party opinions and verification services. Providers publicly state adherence, and the FSA tracks and publishes endorsements, creating market discipline without a licensing regime.



ASSET MANAGEMENT SUPERVISION

In our framework, the supervision of asset managers includes two interconnected dimensions. The first is entity-level supervision, which looks at how sustainability is embedded in governance, risk management, and investment processes within organizations. The second is product-level supervision, which regulates how sustainability features in products are presented and promoted to investors. In practice, the majority of regulatory efforts have focused on the product level, such as guidelines for fund naming, transparency before contracts, and periodic reporting. This route is taken likely because the regulation at the product level is more explicit, enforceable, and protects investors, enabling authorities to address deceptive claims and enhance market transparency, despite uneven integration at the entity level.

Among these instruments, fund naming guidelines are the most structured and enforceable. Their design emphasizes accuracy in labeling, rather than on portfolio development or results, which makes them easy to manage administratively. This accounts for their significant adoption rate: 71% of pilot jurisdictions implement naming regulations that address climate, environmental, and social factors, with only China and South Africa missing these provisions. The EU's ESMA fund naming guidance (2024), featuring quantifiable allocation thresholds and exclusion criteria, illustrates how measurable benchmarks can support market discipline and enhance comparability among funds.

Among the pilot jurisdictions, only India and the United States lack binding sustainability integration mandates for asset managers. This regulatory asymmetry produces a two-speed market in which global managers must navigate inconsistent supervisory expectations across their product lines.

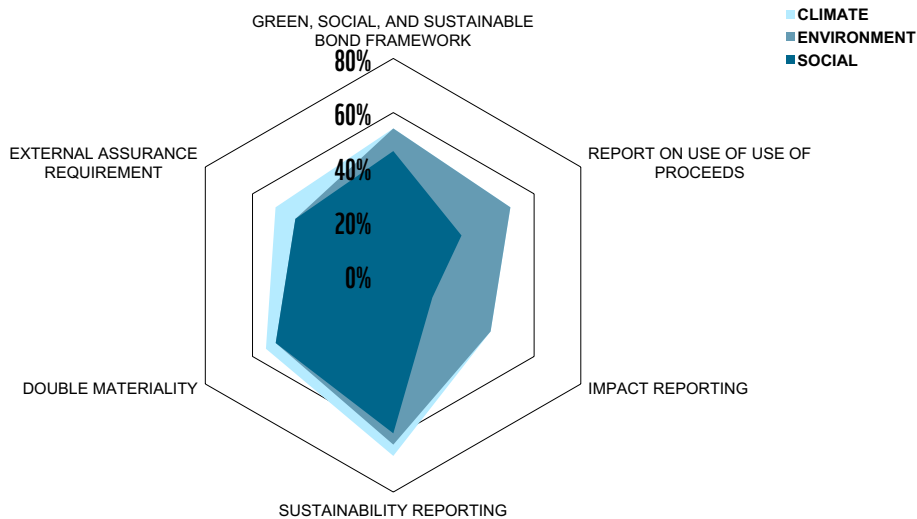
In contrast, disclosing the share of portfolios with green taxonomy alignment and developing transition plans are more complex tasks. These require a deeper integration of sustainability considerations into investment decision-making processes, which many asset managers have yet to fully implement. Currently, only the EU region, including France and Germany, mandates the disclosure of portfolio alignment with the green taxonomies of all assessed countries. The EU also requires disclosure of a transition plan for asset managers subject to the CSRD.

Looking ahead, supervisory focus will need to balance market integrity with transition effectiveness. As sustainability transitions from a niche area to a common investment approach, the supervision focus must expand from merely preventing misrepresentation to facilitating the transition of capital that contributes to the attainment of climate and nature goals. This will necessitate incorporating sustainability oversight into regulatory and conduct frameworks, defining the relationship between entity and product level regulations, and enhancing data reliability throughout the investment chain.



ADVANCEMENTS IN REPORTING STANDARDS FOR LISTED COMPANIES ACROSS JURISDICTIONS, BUT ASSURANCE AND IMPACT DISCLOSURE LAG BEHIND

FIGURE 25: AVERAGE ACHIEVEMENT OF 12 COUNTRIES ON SELECT INDICATORS OF CAPITAL MARKETS



Note: The number displayed on the graph represents the average fulfillment of indicators. Partially met criteria are assigned a 50% fulfillment, while fully met criteria result in 100% fulfillment.

Under the Securities and Exchange Board of India (SEBI)’s Non-Convertible Securities (NCS) regime, a circular was launched in February 2023 to tighten the definition of Green Debt Securities and make pre- and post-issuance disclosures mandatory. This includes use of proceeds, selection process, management of proceeds, ongoing impact reporting, and third-party review. Making India one of the few markets with statutory GSS-bond requirements. In 2025, the International Financial Services Centres Authority (IFSCA) introduced a Transition Bonds framework for listings at Gujarat International Finance Tec-City (GIFT City), moving from consultation to approval for issuance via circular. In most jurisdictions, GSS issuance remains voluntary and guided by the International Capital Markets Association (ICMA) Principles rather than statute.



ISSUER SUPERVISION

Issuer supervision is central to ensuring that sustainability commitments translate into verifiable, decision-useful disclosures. Over the past decade, the regulatory architecture for sustainability reporting has expanded rapidly, with growing convergence toward international standards and an emerging expectation that disclosure must evolve from narrative explanation to assured, quantitative, and impact-oriented reporting.

The robust results in sustainability reporting seen across regions signify this worldwide change. Frameworks like Japan’s Sustainability Standards Board (SSBJ) and Brazil’s CBPS (The Comitê Brasileiro de Pronunciamentos de Sustentabilidade) Standards represent important advancements, both clearly aligned with the International Sustainability Standards Board (ISSB)’s IFRS S1 and S2 frameworks. This alignment indicates the development of domestic reporting systems that enhance local significance while maintaining international compatibility. The path is clear, sustainability reporting has transitioned from a voluntary option to a component of financial disclosure duties, progressively integrated into listing standards and corporate reporting regulations.

The idea of double materiality, although frequently discussed, is still inconsistently implemented. The European Union leads in this area, as the Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS)

specifically mandate organizations to disclose how sustainability matters influence their financial results (outside-in) and how their operations affect society and the environment (inside-out). France, having completely integrated the CSRD into its national legislation, leads in implementing this method.

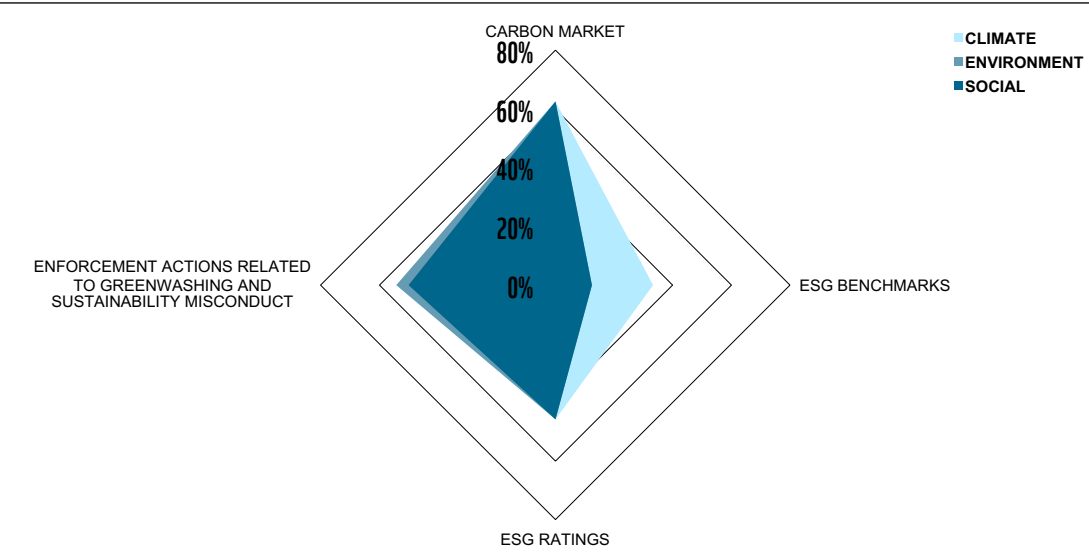
External assurance of sustainability information is another critical but still nascent element of issuer supervision. While financial reporting has long been subject to mandatory audit, the assurance of ESG data poses methodological and capacity challenges, ranging from the definition of suitable criteria to the lack of standardized metrics for social and environmental indicators. The EU (under the CSRD) and Brazil (through CVM Resolution 193) currently lead in mandating external assurance, setting a precedent that others are likely to follow as assurance capacity and methodologies mature.

Impact reporting for sustainable bonds remains an emerging area, as it requires measuring outcomes rather than inputs. South Africa’s JSE Debt Listing Requirements and India’s SEBI rules for green debt have begun to define expectations for climate and environmental impacts, though social impacts are not yet covered. Overall, issuer supervision is progressing from voluntary reporting toward mandatory, assured, and impact-linked disclosure.



CARBON MARKETS ARE ADVANCING, BUT ESG BENCHMARK REGULATION AND GREENWASHING ENFORCEMENT REMAIN UNDERDEVELOPED ACROSS JURISDICTIONS

FIGURE 26: AVERAGE ACHIEVEMENT OF 12 COUNTRIES ON SELECT INDICATORS OF CAPITAL MARKETS



Note: The number displayed on the graph represents the average fulfillment of indicators. Partially met criteria are assigned a 50% fulfillment, while fully met criteria result in 100% fulfillment.

Supervisors and courts have sharpened greenwashing scrutiny in Germany. The Federal Financial Supervisory Authority (BaFin) has made combating greenwashing a medium-term supervisory priority and expects firms to manage and substantiate sustainability claims. Enforcement has followed, in April 2025, Frankfurt prosecutors fined DWS €25 million for misleading ESG marketing (one of Europe’s largest ESG penalties) after a multi-year probe. Courts have also set clear advertising rules, in June 2024, Germany’s Federal Court of Justice held that “climate-neutral” claims are deceptive unless the basis (e.g., offsets vs. real reductions) is explained in detail. Civil society litigation has added pressure, Deutsche Umwelthilfe (DUH) won greenwashing suits against Lufthansa and Adidas in March 2025 over misleading sustainability claims. Overall, Germany couples supervisory focus with high-profile prosecutions and landmark court rulings that require precise, evidence-backed green claims.



MARKET INFRASTRUCTURE

A credible and well-functioning market infrastructure is the foundation of sustainable capital markets. It ensures that sustainability information is not only disclosed, but also priced, benchmarked, and policed with integrity. In our pilot framework, this infrastructure rests on three mutually reinforcing pillars: (i) carbon markets that internalize environmental externalities by putting a price on emissions; (ii) regulatory frameworks for ESG benchmarks and ratings that translate sustainability performance into consistent and investable metrics; and (iii) enforcement measures that safeguard the credibility of the market by deterring greenwashing and misrepresentation.

Carbon markets remain the most advanced component of this infrastructure. They embody the principle that what is measured and priced can be managed. The expansion of carbon pricing mechanisms, through Emissions Trading Systems (ETS), voluntary carbon market, and offset credit system, shows growing policy convergence around market-based decarbonization. The EU, UK, and China ETS rank among the largest and most liquid markets for carbon allowances, whereas frameworks like Australia’s Safeguard Mechanism and Australian Carbon Credit Unit (ACCU) scheme depend on offset credits to encourage compliance and voluntary demand. Nonetheless, there is still variability among jurisdictions concerning design, sectoral coverage, and measurement, reporting, and verification (MRV) components.

The regulation of ESG benchmarks and ratings constitutes the second essential component.

With investors depending more on external evaluations for capital allocation, the regulatory framework has begun to encompass these to guarantee transparency, governance, and the management of conflicts of interest within these services. The European Union’s ESG Ratings Regulation (2024) and India’s Securities and Exchange Board of India (SEBI) framework for ESG Rating Providers represent significant steps toward establishing oversight and uniformity in a previously unclear domain. However, the remaining jurisdictions have not established such a framework yet.

The third pillar, enforcement against greenwashing, is equally essential for sustaining trust and integrity in the capital markets. With the rise of sustainable investment products, concerns regarding inflated or misleading claims from asset managers and corporations have similarly increased. Supervisory bodies in Australia, France, Germany, and the UK have taken leading roles in initiating enforcement actions, issuing guidance, and refining disclosure rules. This signifies a transition from principles-based oversight to proactive deterrence, where credibility is upheld not just via transparency but through the genuine possibility of penalties and legal measures. Nonetheless, enforcement is inconsistent in both breadth and intensity, with cross-border disparities that may encourage regulatory arbitrage. In conclusion, the framework for sustainable market infrastructure is developing, yet advancements are inconsistent across the three pillars in the 12 evaluated jurisdictions.





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