

2022 thematic review on climate-related and environmental risks

Results and best practices



Executive summary

Business environment and strategy

Governance and risk appetite

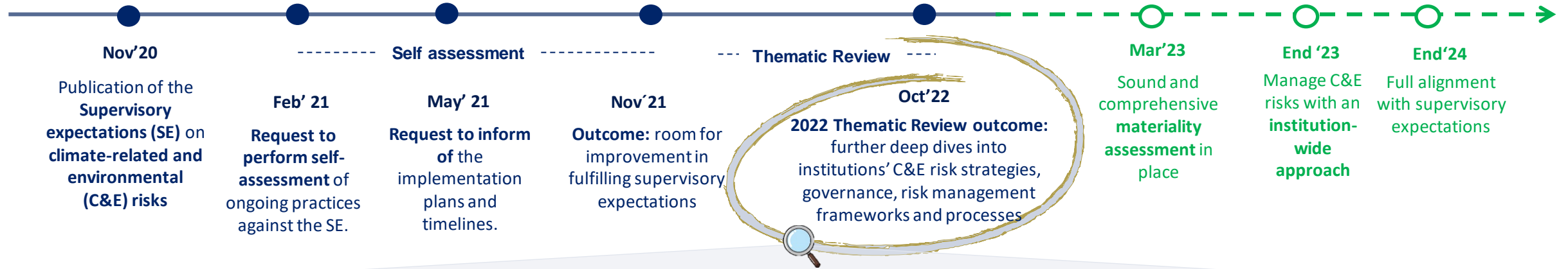
Materiality assesstment

Risk management

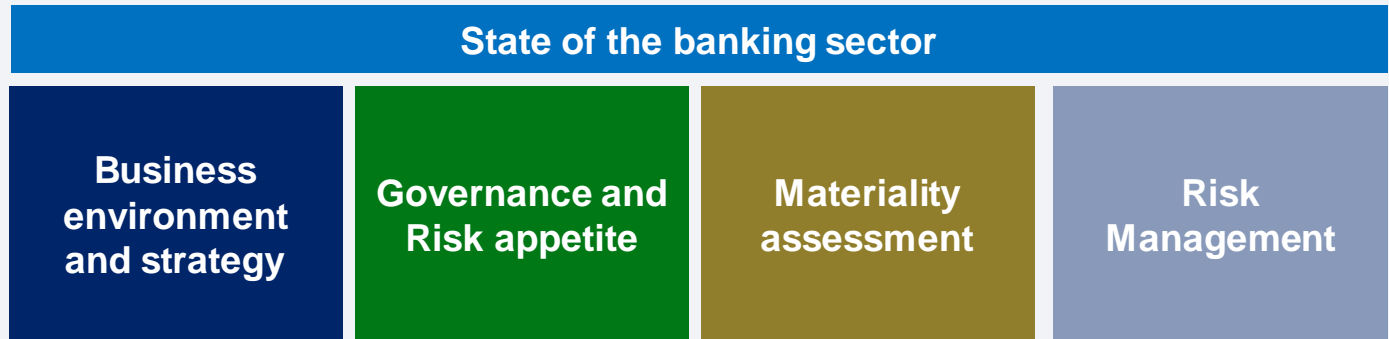
Annex



On October 2022 the ECB published the results of its thematic review on climate-related and environmental risks together with the good practices observed regarding the degree of alignment with its supervisory expectations



This technical note provides a **summary of the conclusions of the TR linked with the best practices observed by the ECB during the assessment**, organized in the following blocks of analysis¹:



Scope

107 SIs & 79 LSIs²

Implications

Outcome incorporated into the 2022 SREP

While banks have overall improved their capabilities since 2021, it is still necessary to implement more sophisticated methodologies and granular information as well as cover all the areas of risks



Working well

>85%

now have **at least basic practices**¹ in place for most of the areas addressed by the expectations, **including** in traditionally more challenging ones, such as **data governance, risk classification and pricing**.

≈93%

have **improved their action plans to steer risk management** since last year's assessment.

>80%

conclude that the risks have a **material impact on their risk profile** and strategy, with **70%** seeing material risk within their business planning horizon of three to five years.

≈80%

have started implementing **exclusion criteria** as part of their client **due diligence and credit-granting** decision-making.



Room for improvement

>85%

Wait-and-see approach is still prevalent. Limited group of institutions have started to use **transition planning tools**, along with **targeted client engagement** to enhance the resilience of their business model over longer time horizons.

>90%

Still do not use sufficiently **forward-looking** and **granular C&E risk information** in their governance and risk management practices².

Not a single institution covered **all the areas of risks** they are or are likely to be materially exposed to:

96%

were identified to have **blind spots** in the identification of C&E risks in key sectors, geographies and risk drivers

60%

of these were considered to be major gaps.

55%

have devised practices but **failed to implement** them effectively.

(1) Initial mapping of risk exposures; allocating responsibilities within the organization; setting initial key performance and risk indicators and developing a qualitative mitigation strategy for at least part of their risk exposures. These approaches nonetheless still lack methodological sophistication, the use of granular risk information and/or active management of the portfolio and risk profile

(2) This typically includes performing a data gap analysis, collecting client data, sourcing data externally, including from third-party providers if relevant. Leading institutions also make their IT infrastructure fit-for-purpose and apply intermediate solutions to allow for immediate use of existing C&E-related data, where appropriate.

KPIs defined and strategy-setting process ongoing but both still in early stage of implementation

KPIs

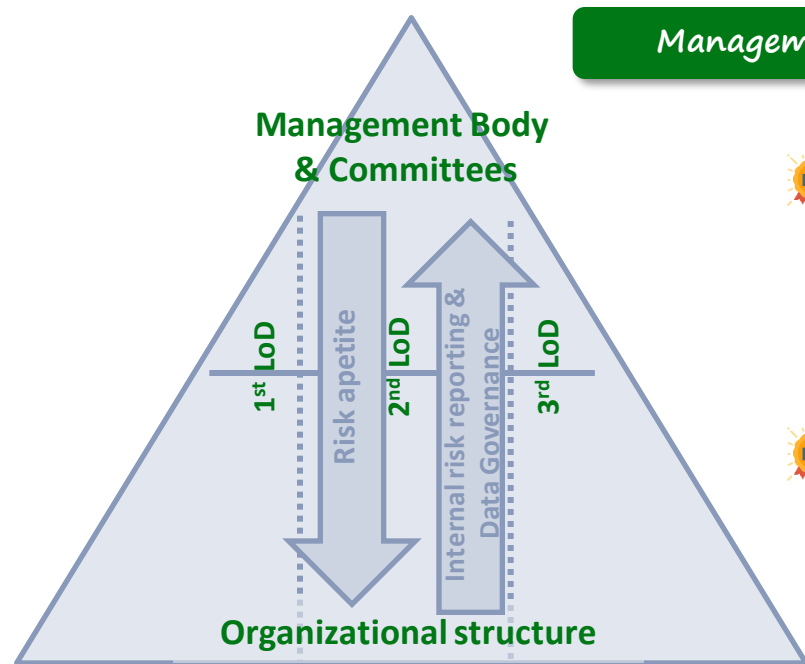
- Most institutions have established an **initial set of KPIs** for their strategic response but still this is an **initial approach at an early stage of development**, not allowing effective implementation and monitoring of progress.
- **Very limited** number of institutions **cascade their KPIs** down to individual business lines and portfolios.
- Integration of **targets and attention** thresholds.
- Reinforce institutions targets via **monitoring mechanisms** and taking action that **has portfolio allocation** implications.
- **≈14%** have processes in place that allow taking **corrective action** when KPIs are missed (i.e. specifying concrete consequences for when clients do not progress as envisaged nor set exit rules).
 - **Large GHG emitting client's assessment** in order to analyse if the relationship can be continued and to support them in establishing or strengthening their **transition plans**.
 - **Structured dialogue** with clients which are subjected to **elevated transition risks** and that may be misaligned with the institution's targeted.
 - **Engagement with clients** that may not yet fully meet the institutions requirements but that they will to. The process of engagement follows the following steps:



Strategy-setting process

- In general, existence of **high-level consideration of climate-related risks** in strategy-setting process.
- **≈14%** use **forward looking** and **scientific pathways** to set concrete intermediate targets, typically using **portfolio alignment** methodologies. These institutions have **adjusted product and advisory services offering** to:
 - support clients in the transition to a low-carbon economy (also for retail clients).
 - achieve targets and established policies and procedures to follow up on misalignments in their portfolios.
- **≈2%** also use **scenario analysis** to test the adequacy of various strategic responses (e.g. by quantifying the impact of climate-related risks on P&L, RWAs and regulatory capital).

Half institutions have already assigned roles and responsibilities to their management body. Adjustment of remuneration policies still in early stages



Management Body

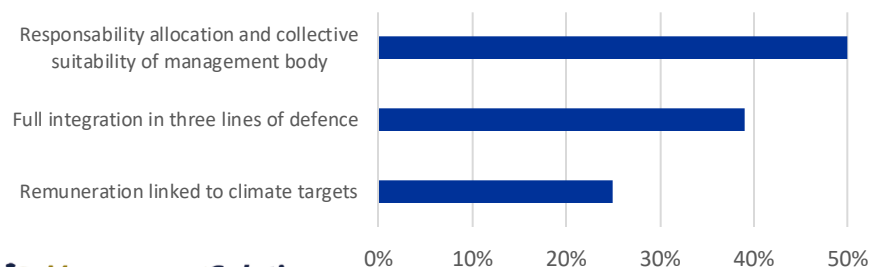
- Improved organisational structure and increased awareness of data gaps, but still in the early stages of tackling climate-related risks in a granular, bank-wide and comprehensive manner.
- ☀️ ≈50% assigned roles and responsibilities for climate-related risks to members of their management body and/or its sub-committees.
 - Dedicated environmental committee
 - Governance arrangements that allow for top-down and bottom-up discussions involving all relevant functions.
 - Consideration of the human and financial resources needed to implement commitments.
 - Specific training to the members of the management body on C&E risks.
- ☀️ Adjustment of remuneration policies still in its early stages.
 - KPIs directly linked to voluntary commitments (e.g net-zero emissions pledges) and the strategic risk management approach.
 - Integration of climate-related KPIs into the remuneration policies (applying to members of the management body and senior management).
 - In some cases, adjustment of the remuneration policies applying to all staff (e.g.by including environmental targets in the variable remuneration component)

Organizational structure

- ☀️ ≈ 90% have at least defined tasks for the management of climate-related risks by their 1st and 2nd LoD.
 - Risk management function: involved with all higher-risk transactions and power to veto these transactions.
 - Compliance function: checks on the institution's product offering and mitigation of the risks associated with greenwashing.
- Few institutions define the tasks and responsibilities of the internal audit function.

☀️ Best practices observed in the assessment

Percentages of institutions that have practices in place



Most of the time, institutions' governance, risk appetite and reporting frameworks do not cover all areas of material risk

Risk Appetite Statement

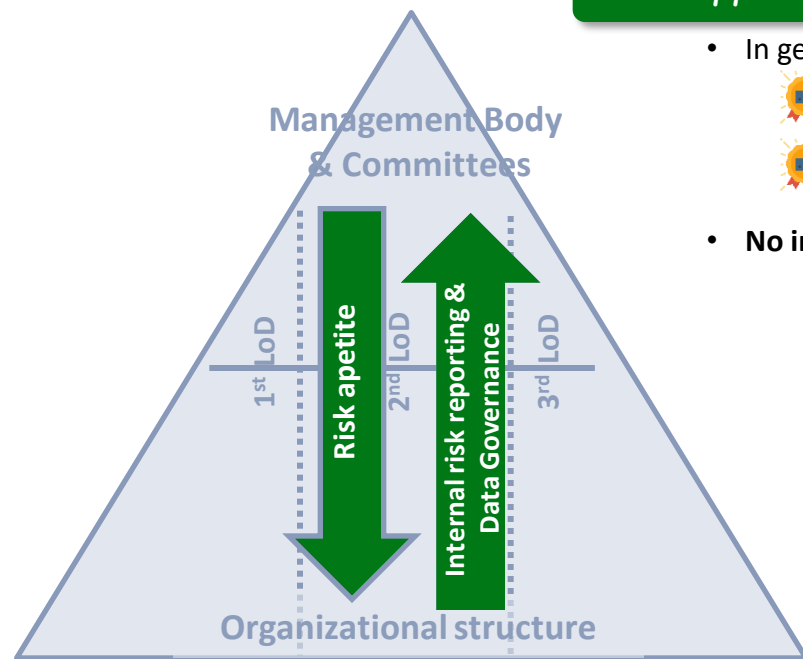
- In general, **including KRIs** albeit not always in a granular manner. Often **no specifying consequences** for indicator breaches.
 - Inclusion of granular and **forward-looking climate-related KRIs** in the risk appetite framework (RAF) and increasingly deployment of **quantitative KRIs** (e.g exposure limits for different sectors and geographies).
 - Clear **escalation arrangements** are defined when limits are breached, generally by embedding climate-related KRIs in the institution's regular monitoring processes.
- No institution** has yet taken a **bank-wide approach to setting KRIs**. Typically set at the highest level of consolidation.

Internal risk reporting

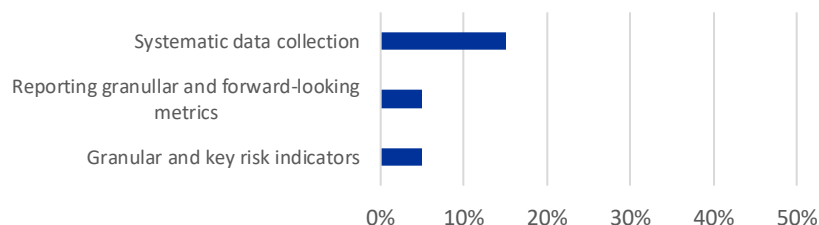
- ≈**2/3** providing information on the **impact** of climate-related risks on their **business model and risk profile**. However, in most cases, institutions only report **proxy-based climate-related risk metrics**.
- Usual **alignment** of the institution's practices for internal reporting on climate-related risks with their: i) **risk appetite frameworks** (e.g. reporting on climate-related KRIs and limits); ii) **risk management tools** (e.g. reporting on the development of risk scores); and iii) **climate-related business strategy** (e.g. reporting on the performance vs. KPIs and targets).
- Integration in the established risk management reports** (typically on a quarterly basis).

Data Governance

- >**80%** performed **gap analyses** on **data availability and IT systems** and set out follow-up actions.
- Small group** of leading institutions **systematically collecting** the data needed for climate-related risk management, but the collection of **granular data** is still **in its early stages**.
- Development of C&E-related data strategies integrated into the established **data governance and quality policies**. Performance of data gap analyses that, in addition to **disclosure requirements**, also take into account the **risk management needs**.
- Collection data from **internal and external sources**, establishing **hierarchies** that favour actual client data.
- Actions to make the IT infrastructure **fit for purpose** and application of **intermediate solutions**



Percentages of institutions that have practices in place

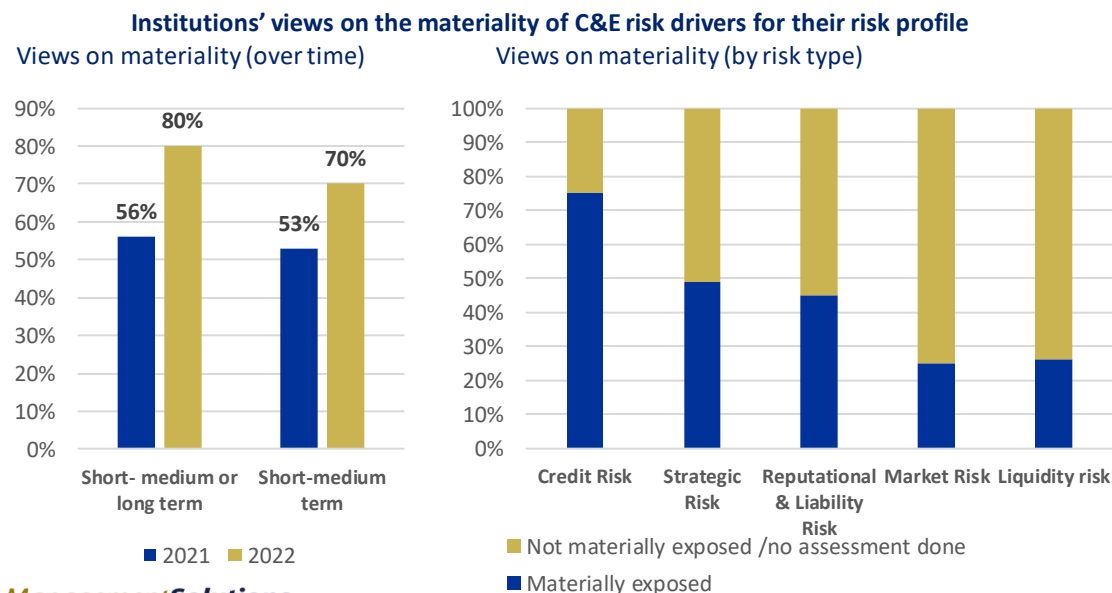


Focus on transition risk and implications in credit risk.

BP: Bottom-up risk identification process and integration into de risk management framework

TR Results

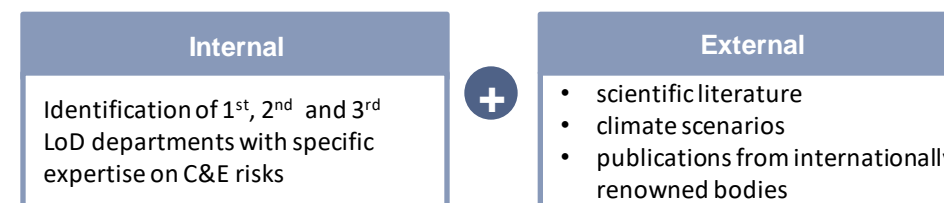
- **90%** assessing how could be impacted by climate change and the **transition** to a low-carbon economy.
- **>80% materially exposed** to C&E risks (up from 50% in 2021), mainly to **credit and strategic risk** and to a lesser degree to reputational and liability risks.
- **96% identified blind spots** around **three main aspects**:
 - **Relevant risk drivers** not comprehensively considered (e.g. only 50% consider possible impacts on their reputation and/or liability risks)
 - Various **time horizons** not comprehensively considered.
 - Main **business lines** and main **geographies** often not consider.



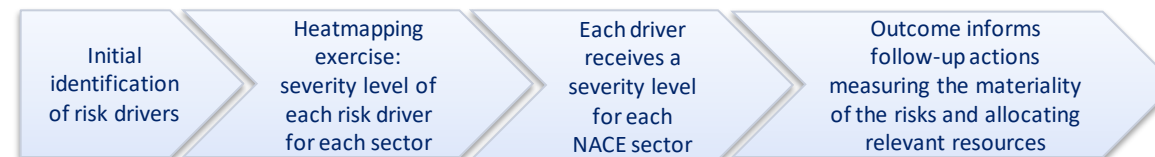
Best practices

Development of a **bottom-up risk identification process** to identify relevant risk drivers:

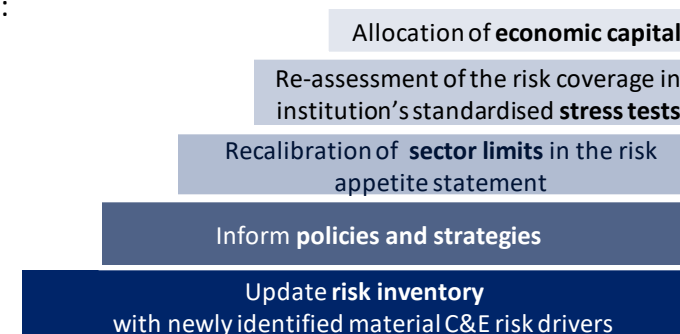
1. **Reliance on internal and external sources** of knowledge.



2. Development of a **process to determine which risk drivers could potentially have a material impact** on their risk profile and operations.



Ensuring that the **risk management framework and processes** effectively address these material risk:

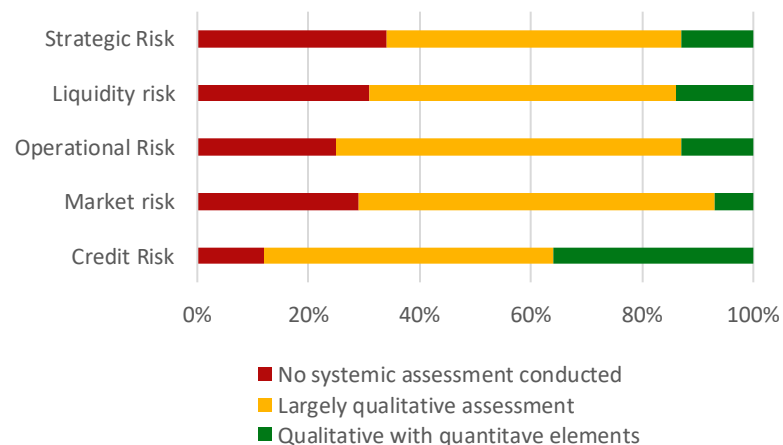


**Credit risk shows the most pronounced progress on quantification and market risk the least.
BP: Using scenario analysis, thresholds definition (quantitative and qualitative)**

TR Results

- Most institutions deploy **largely qualitative approaches** to assess materiality of **C&E risk drivers** on traditional categories of prudential risks.
- **Credit risk shows the** most pronounced progress on quantification and market risk the least.
- Institutions with **higher scores** for soundness and comprehensiveness in the materiality assessment are more likely to have an **affirmative judgement** on materiality.

Qualitative and quantitative materiality assessments by risk type



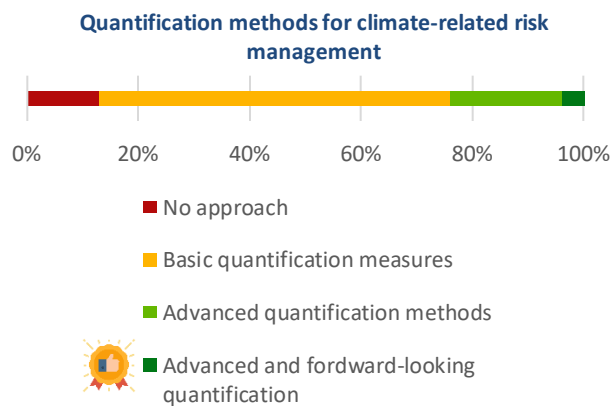
Best practices

- Advanced institutions use **scenario analyses** to assess the impact on either PD or LGD for credit risk or loss estimates for operational risk.
- Development of a **threshold** against which the outcome of the materiality assessment is assessed. These thresholds can be quantitative or qualitative, depending on whether a quantitative assessment of materiality is feasible. Depending on its solvency and liquidity position, the institution sets a maximum threshold for each of the threshold types:
 - **Capital impact** – the level of capital at risk in the normative (e.g. Common Equity Tier 1 ratio) and economic perspective (e.g. economic capital).
 - **Liquidity impact** – the level of net outflows in the normative (e.g. liquidity coverage ratio) and economic perspective.
 - **Qualitative assessment** – the qualitative assessment of the risk event and its expected impact in terms of adverse consequences for the institution’s reputation or ability to be compliant.
 - **Concentrations** – the size of the exposure that is affected by the risk event relative to total exposure.

The supervisory assessment identified significant weaknesses in institutions' practices and their ability to manage C&E risks in a sound and comprehensive manner

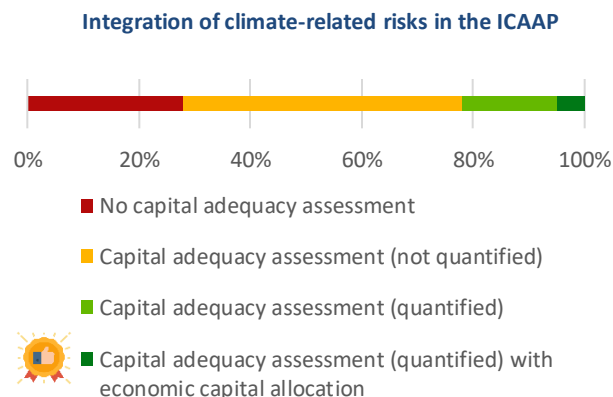
Risk quantification

- >70% use at least **basic quantification methods** to measure climate-related risks, employing proxies and assumptions when data availability is limited.
- Basic methods typically involve using a **limited number of variables** to approximate climate-related risks. The ECB stresses that such insights may **not provide the full picture**.



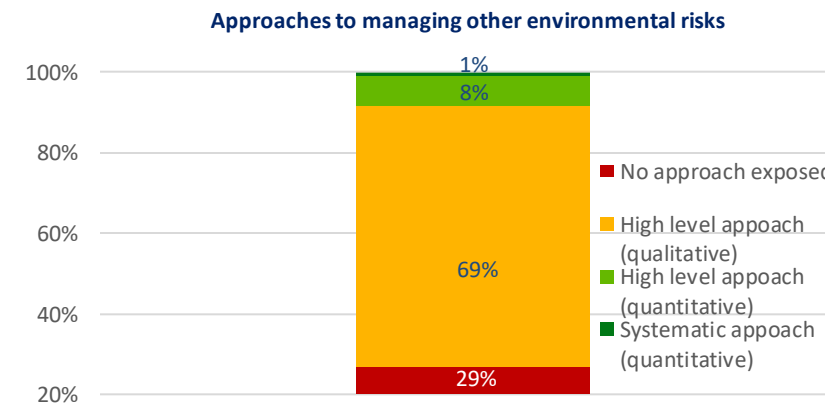
Capital adequacy & Portfolio analysis

- ≈75% have started to **consider climate-related risks** in their assessment of economic capital adequacy. In most cases this remains a **qualitative assessment**.
- ≈25% IRB institutions include of C&E risks in the **internal ratings-based models** (e.g. by using qualitative variables or rating overrides in their PD rating systems.).
- Use of **scenario analyses** in order to take into account **forward-looking** factors over a longer time horizon.
- Reflection of C&E risks as part of the **management buffer**.



Environmental risks

- >50% have at least a **high-level, largely qualitative approach** in place to better understand other environmental risks, such as those associated with **pollution, water stress and biodiversity loss**.
- ≈50% developing **ways of quantifying**—environmental risk drivers other than climate-related risks, but still have to systematically integrate the risks in their **risk management framework**.
- General implementation of an **exclusion-based approach** in dealing with environmental risks (e.g. activity financed only if sustainability certifications available).
- Improving **understanding of the impact of environmental risks** on risk profile and business model.

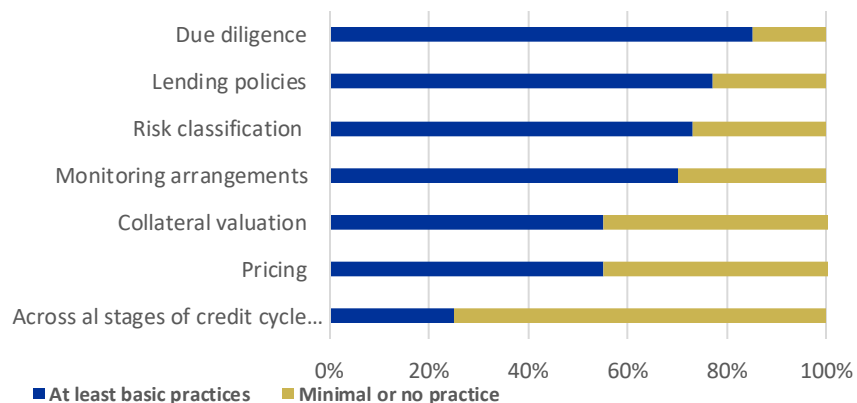


Client questionnaires and scorecards, dedicated questionnaire covering transition and physical risk, emerging integration in collateral valuations and pricing

TR Results

- ≈ 25% have put in place at least **basic climate-related risk practices across all stages** of the credit risk management cycle.
- >80% have integrated climate-related risks into the **credit-granting** and **client on-boarding processes**. **More limited risk integration in the subsequent stages** of the credit management cycle.
- Credit risk management practices often do **not yet** comprehensively **cover all material portfolios** and **risk drivers** (e.g rolling out of climate risk ratings only for large corporates)

Climate-related risk practices across the credit risk management cycle



Best practices

Due diligence & lending policies

- **Client Screening** in relation to exclusion criteria set in lending policies.
- **Collecting** relevant data through **client questionnaire** and subsequent **credit decision** (e.g. on granting credit or intensifying monitoring).
- **Granular approach**, fully integrated into the risk management framework which **also covers existing clients**.
- Use of the **due diligence procedure** to form a view on the level of credit risk the client has **or** taking an **approach from a reputational risk** point of view.

Risk classification

- **Stand-alone client scorecards**, in most cases embedded in the risk classification through **qualitative considerations**.
- Development of **dedicated questionnaires** to gather relevant information. **Qualitative and quantitative** input, which in most cases covers **transition risks** and in some cases aspects of **physical risks**, is used to develop **heatmaps** to classify institutions' portfolios based on the level of C&E risk.


Collateral valuations and pricing

- **Emerging integration**, as it is **usually conditional on the systematic collection of granular and forward-looking client data** (e.g. EPCs of financed buildings to reflect C&E risks in both collateral valuations and pricing, integration of C&E risk metrics in collateral valuations, using qualitative and quantitative methods).

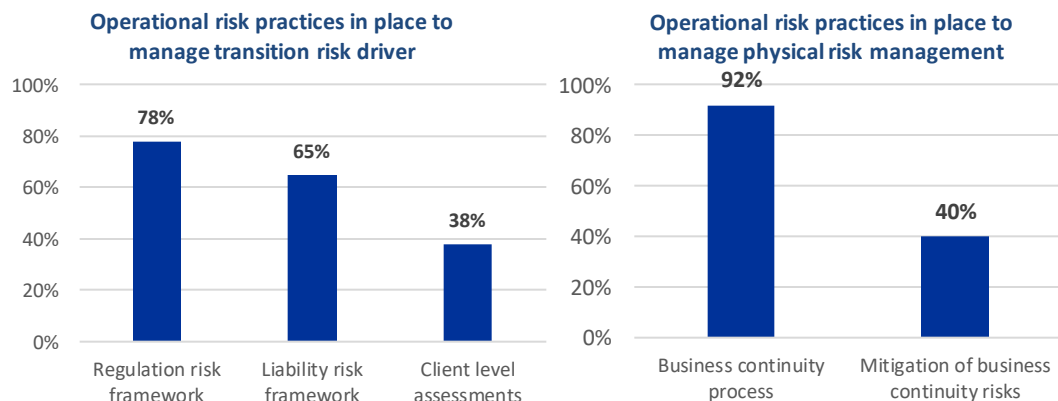
In the area of market risk, institutions are advancing more slowly compared with credit risk or operational risk practices

Operational risk management

- Institutions are starting to account for both **physical and transition risk** drivers in their operational risk management.
 - Almost all institutions have considered the **possibility of floods or natural disasters** affecting their operations.

 Assessing the **impact of physical risks** on the institution's operations within the operational risk framework, using **forward-looking scenario analysis** to quantify the risks from weather hazard.


- Most institutions have integrated the **consideration of climate-related risks** into their framework for **reputational risk**, as well as for **liability and/or litigation risks** in a high-level manner.
- ≈**92%** have performed **impact analysis** on the possible consequences for business continuity. <**50%** have considered implementing **mitigating actions** (relocating buildings and servers or increasing monitoring and control activities).




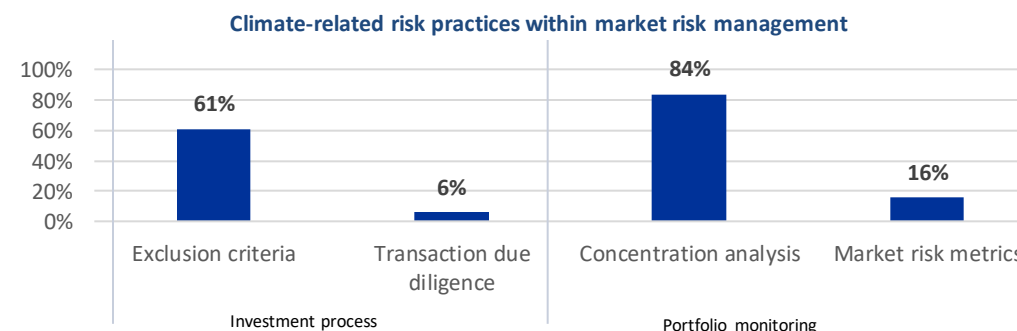
Market risk management

- Most institutions have taken **initial steps** towards integrating climate-related risks in the **investment process and portfolio monitoring**.

- >**50%** have documented **climate-related exclusion criteria** for specific types of investment (e.g. companies with direct exposure to companies producing oil sands, shale gas and shale oil).
- On the basis of aggregated climate-related risk information (e.g. sector/geography/portfolio), institutions have developed qualitative scores or heatmaps to **assess risk concentrations**.

 **Small subset of institutions** has advanced practices in place that assess and monitor climate-related market risks, including compared with other risk types (e.g. metrics such as a climate value-at-risk or changes in climate-induced mark-to-market).

 Classification system to **identify and monitor** which positions or activities in the **trading book** (fixed income and equity portfolios) are the **most exposed to C&E** risks.



In average, lower level of development than in significant institutions in all categories

Business environment and strategy

- **High level integration** of climate-related risk considerations **into business environment scanning** and **strategy-setting** procedures.
- **> 30% have yet to develop KPIs** to support strategic steering capabilities.

Materiality assessment

- **≈50%** have a **basic** and largely **qualitative assessment** of materiality.
 - **>30%** conducted initial assessment on **credit risk**. Market, strategic and operational risk conducted in a lesser degree.
 - **≈18%** supplementing with **quantitative** approaches.
 - **≈50%** cover both **physical and transition** risk.

Governance and risk appetite

- Most LSIs have **assigned responsibilities to the management body** and **≈50%** within the **organisational structure**, with the risks being reflected in remuneration policies in some cases.
- Most LSIs have **yet to devise an effective data governance** framework and reflect the risks in **internal risk reports** and the **risk appetite statement**.

effective integration only in a minority of cases.

Risk management

- **Risk management frameworks and credit risk management processes remain largely underdeveloped.**
 - **≈50%** have **nothing in place** across the board.
- **≈25%** have started **integrating** the risks **into due diligence** processes.

For the purposes of this analysis, the assessment modules, good practices topics and supervisory expectations have been mapped as follows:

Assessment modules	Good practices topics	Supervisory expectations ¹
Business environment and strategy	Strategic steering tools and Strategic approaches	Business model and strategy (exp.1 and 2)
Governance and risk appetite	Management body Remuneration Organisational structure Risk appetite and Reporting	Governance and Risk Appetite (exp.3, 4,5, 6)
Materiality assessment	Identification of risk drivers Identification of exposures Determination of materiality	Risk management (exp. 7.2)
Risk management	Due diligence Risk classification Collateral valuations and pricing Capital adequacy Environmental risks	Governance and risk appetite (exp. 7, 8,9, 10)





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