The role of environmental risks in the prudential framework

EBA- Discussion Paper on initial assessment

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1 Executive summary

The role of environmental risks in the prudential framework

The EBA has developed an initial assessment of how the prudential framework interacts with environmental risks and poses questions on whether adaptations are required to effectively address such risks

1-Objective

In **May 2022** the EBA published a DP which provides an overview of the **existing elements of the prudential framework** and how they interact with environmental risk. The analysis covers[1]:

- Relevant elements of the **prudential framework** and how they interact with environmental risks[2].
- Specificities for **investment firms**.

2-Regulatory context

CRR (Art. 501c) and IFR (Article 34) mandate EBA to issue a report on this topic.

3-Next steps

Stakeholders to provide their **feedback** by **2 August 2022**.

Main conclusions of the analysis

Credit risk

- **SA approach.** External credit assessments are likely over time to incorporate environmental aspects into their **underlying methodologies**.
- **IRB approach**: Need to **improve forward-looking modelling**. Consideration of the possibility of introduction of an environment-related adjustment factor with **preference given** to consideration of **enhancements** within the **existing Pillar 1** framework.

As per the collateralized exposures, environmental risks may already be indirectly embedded through the valuation and re-evaluation of collateral.

Market risk

- **FRTB SA**: Some approaches are described to incorporate environmental risks into the existing components of the FRTB framework Inclusion of an **ESG component in the identification of the appropriate bucket for risk-weighting** seems to be more suitable in order to better reflect environmental risks in the sensitivity-based method (SbM). Also, the residual risk add – on (RRAO) framework could be used to capitalise environmental or broader ESG risk
- **Internal Model Approach**: It is considered more pragmatic **modelling** environmental risks **outside the internal model**.

Operational risk

Need to **incorporate forward-looking** information**.**

Concentration risk

Possibility of introducing a **new monitoring and reporting standard** to improve the understanding of the size of exposures subject to environmental risks.

Conclusions for Investment Firms

K-factors	Risk types in the CRR	Same Treatment?
K-NPR	Market risk	Yes ✓
K-CMG	Market risk	Some specific features
K-TCD	Counterparty credit risk	Yes ✓
K-DTF	Operational risk	Some specific features
K-CON	Concentration risk	Some specific features

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(1) In the analysis presented in this paper both dimensions of 'double materiality' (financial materiality and environmental materiality) of the counterparty or invested asset are taken into account to the extent that they affect the credit, market and operational risks of the institutions. A **question have been raised** on these matter (Question number 4). See Annex II

(2) Some aspects of the prudential framework are not covered in depth in this DP: i) the securitisation framework, although the considerations presented for credit risks by construction also indirectly apply to its treatment.; ii) liquidity ratios, since these are expected to remain mostly unafected by environmental risks and have a limited role in addressing such risks; iii) exposures associated with social objectives and iv) the leverage ratio, since it is a non-risk-based measure which functions as a backstop. Thus, does not interact with environmental risks. Even though, **questions have been raised** on these issues (Questions number 1 and 2) . See Annex II .

2 Credit risk (1/2)
SA approach

Environmental risks should be better reflected in the framework, while avoiding excessive complexity which may be achieved through different tools which EBA has identified

EBA preliminary conclusions	Approach, tools and gaps	
External credit assessments: **Possibility to integrate environmental risks** over time.	• External credit assessments are likely over time to incorporate environmental aspects into their **underlying methodologies**, but there are **challenges** (e.g what constitutes an environmental factor and its relevance for a credit assessment). • **Further assessment needed** on the robustness of the methodologies used and the level of transparency of the ECAIs. • **Explicit adjustments to the qualitative analysis** should be explored by the ECAIs to account for varying degrees of integration of environmental risks across rating agencies.	10
Due Diligence: Requirements may be broadened to **explicitly integrate environmental risks**.	• This should **not replace the role of ECAIs** in appropriately considering environmental risks in their credit assessment. • Due diligence assessments will be **further facilitated by improvement in market disclosure** of environmental considerations (e.g CSRD or Pillar 3 disclosures on ESG risks). • For smaller credit institutions, the **proportionality principle** should also be considered.	11
CRM techniques: Environmental risks may **already be indirectly embedded in CRM** through the valuation and re-evaluation of collateral.	• Where the collateral valuations do not yet fully reflect environmental risks, it is expected that they will **improve over time** with the **development of data, standards, tools and methodologies.** • **Modifications to the prudential framework** at this stage are therefore **not deemed appropriate.**	12
Exposures secured by immovable property: A **more risk-sensitive capital treatment** may be supported by the energy-efficient mortgages.	• The CRR3 proposal does not consider the **potential negative correlation between energy efficiency and the PD of borrowers.** Hence, is not clear this proposal brings enough **risk sensitiveness** to the framework, as well as if further **granularity of RWs** could be introduced. • **Further empirical evidence on risk differentials**[1] should be collected.	13
Corporate and retail exposures: Further risk differentiation in the corporate, retail and/or other exposure classes may be justified.	• For retail exposures, any adaptation of the RW would be **particularly challenging,** since it is far less clear to determine which of the **retail exposures** could be considered green or environmentally harmful. • A prudential treatment for **corporate exposures** would need to rely on a risk-based assessment which the **EU Taxonomy is not designed to provide** • **Forward looking assessment** of expected losses may be **already capture by existing exposure values** net of credit risk adjustments (given the exposures treatment under IFRS9). • **Further empirical evidence on risk differentials** should be collected as existing analysis is limited in these areas.	14 15

N # Question. See Annex II.

(2) The focus of the EBA is therefore on exploring whether there are specificities in the risks ('risk differential') of some exposures, e.g. green exposures or exposures to environmentally harmful activities, as such risk differential would be the key element to consider for adjusting the prudential treatment

2 Credit risk (2/2)
IRB approach

EBA considers that any adjustments in the IRB framework should not lead to an undue decrease in the model performance. On the other hand, is key to ensure that the calculation of RWAs is not distorted and to maintain risk-based capital requirements

EBA preliminary conclusions	Approach, challenges and gaps	
Risk drivers. While many environmental risk drivers are currently expected to be already collected, residual data gaps still exist.	• Acknowledging that fully embedding environmental risk drivers in the existing credit risk framework also raises challenges**, alternative approaches should continue to be assessed**. In any case, any policy approach should avoid overlapping and double counting effects. • For instance, current valuations often include certain elements of environmental risks (e.g. factors such as energy efficiency and location in areas affected by floods are taken into account in valuations of immovable properties). It can be expected that **valuation standards will further develop** over time to include more explicitly and comprehensively the environmental risk factors. • The appropriate part to reflect environmental risk drivers is not specified, but rather i**nterest parties are invited to do so**.	17 18
Risk qualification. Many environmental risks may **already be factored** in under the framework.	• Environmental risks are part of the risk differentiation step (RDS) and have led to a materialisation of defaults, realised losses or drawdowns. In addition, the design of the model leaves **some room for expert-based qualitative variables.**	18
Need to improve forward-looking modelling and to **develop potential further guidance.**	• These would allow to capture the unprecedented nature and expected changes in the character of environmental risks. In this context, it is necessary to carefully assess in **which part of the IRB framework such forward-looking perspective would be appropriate**, but some challenges arises. This is not specified, but rather i**nterest parties are invited to do so**. • These should be anchored in available **empirical evidence** on the impact of climate change and environmental degradation.	17 18
Possible introduction of environment-related adjustment factors in prudential rules may be introduced for one, several or across exposure classes.	• Several stakeholders have raised the prospect of introducing environment-related adjustment factors in prudential rules, mostly in the form of 'green supporting' or 'brown penalising' factors (GSF or BPF). • **Challenging conditions** must be met before **adjustment factors could be justified** (e.g acquiring clear evidence that certain assets display distinct risk profiles due to environmental risk drivers or assessing that the framework could not (or should not) capture these risk drivers). Also, some **problems** arises, such as double counting. • To avoid the unintended consequences of underestimation or double counting, the possible amendments within the framework and adjustment factors should be **treated as alternative solutions.**	20 21 22

N # Question. See Annex II.

3 Market risk
FRTB Standardised and Internal Model approach

For the FRTB SA EBA describes possible approaches to incorporating environmental risks. For the internal model EBA considers more pragmatic modelling environmental risks outside the internal model

EBA preliminary conclusions	Approach, tools and gaps	
CCR and CVA risk are not specifically investigated	• CCR and CVA are build on **similar concepts** to those on which the **credit and market risk** prudential frameworks are built. Hence, any potential adjustment to reflect environmental risks in those areas **could be replicated**, so as to fit also in the context of, for example, CVA risk.	23
A- FRTB Standardised approach		
SbM: **Inclusion of an ESG component in the identification of the appropriate bucket for risk-weighting[1]**	• EBA considers that this alternative would be suitable in order to better reflect environmental risks in the SbM. i.e reflecting ESG risks when **defining the buckets into which a risk factor falls** (e.g distinguishing between **equity positions** that are more subject to environmental risks and those that are less).	23
SbM: **RW adjustment**	• The CRR3 proposal contains a provision to introduce a **lower risk weight** for the commodity delta risk factor related to **carbon emissions trading**.	23
SbM: **Creation of a specific risk class or a specific risk factor type**	• If environmental risks be priced to the extent that the pricing function captures them via a specific risk factor, this adjustment to the framework can be potentially envisaged on top of delta, vega and curvature.	23
DRC: **Solutions for credit risk should potentially be replicated when capturing default risk in the trading book.**	• The **nature of the risk captured** when calculating own funds requirements for default risk in the trading book in the form of a jump-to-default, **is that of credit risk**. Hence, the considerations set out for credit risk, especially in relation to internal or external credit ratings assigned to positions, are applicable to the default risk,	23
RRAO: **Usage of the RRAO framework**	• It could be used to **capitalize environmental risks or broader ESG risk** but, as it is not risk-sensitive, it would need to be adjusted. • Its scope would have to be extended to include also **simple trading book instruments**, which can equally be affected by environmental risks.	23
B- Internal model		
Modelling environmental risks directly in the model	• Banks could be required to **adjust their historical data** so as to account for potential future (non-historically observed) dynamics. Modelling techniques have not been specified. Interest parties are invited to describe them. However, **EBA does not support this option**.	24
Modelling environmental risks outside the model	• Considered the **most pragmatic and less distortive** policy. Although in accordance with CRR the event risk is to be captured in the internal model, the approach on which an internal model s built may not allow to do so in full.	24

(1) For example, the RW applicable to capture equity risk depends on the economy (advanced versus emerging) and the sector. An additional dimension distinguishing between equity positions that are more subject to environmental risks and those that are less so could be introduced

N # Question. See Annex II.

4 Operational risk

Environmental risks and the operational risk framework

The EBA considers to incorporate forward-looking information in the operational risk framework as the new BCBS SA for operational risk measurement currently does not include forward-looking elements

EBA preliminary conclusions	Approach	
Requirement for institutions to identify environmental factors as triggers of operational risk losses on top of the existing risk taxonomy.	• Environmental risk factors could function as a **driver of any of the loss type categories of operational risk**. • The current loss event types[1] in the **EBA taxonomy[2] do not map the triggers for the losses**, for example when an environmental event causes losses that would be allocated to different operational risk types.	26
Consideration of ways for incorporating forward-looking information in the prudential framework	• **The CRR 3 proposal introduces the new Standardised Approach (SA).** • **The BI and the ILM** from the SA approach only incorporate historical losses, which may be expected to change significantly with the transition to a sustainable economy and climate change and environmental degradation progressing further. • **Relying on historical data only might not be sufficient if one wanted to capture a risk materializing** in the (near) future. Therefore, ways for incorporating forward-looking information in the operational risk framework could be considered (e.g. leveraging on the current work on climate and broader environmental scenarios, provided they cover events relevant for operational risk).	27
Keeping strategic and reputational risk out of the prudential framework[3].	• Where appropriate, these risks should be **considered by banks' risk management framework**. • Any measure introduced to capture the strategic risks stemming from environmental risk drivers should allow appropriate recognition of institutions' different business models and their specific risks, rather than be subject to a one-size-fits all approach, like the introduction of a capital add-on or dedicated treatment, under Pillar 1. • Reputational risks would also require an appropriate consideration of institution specificities which makes it unfeasible for them to be addressed under the Pillar 1.	28

(1) e.g. Internal fraud; external fraud; employment practices and workplace safety; clients, products, and business practice…
(2) EBA internal risk taxonomy on operational risk (link).
(3) Currently, these two risk types are already addressed under the Pillar 2 framework

N # Question. See Annex II.

5 Concentration risk

Environmental risks and the concentration risk framework

The EBA considers the possibility of an introduction of a new monitoring and reporting standard to improve the understanding of the size of exposures subject to environmental risks

EBA preliminary conclusions	Approach and problems
Possibility of introducing amendments to the LEX regime to address environmental risks explicitly.	• LEX regime captures concentration risk associated with the default of a single client or a group of connected clients. • Environmental risks are not specifically adressed by this regime. • Amending the LEX regime to address (sectorally based or geographically based) environmental risks explicitly would require a reorientation of its objective and design and would therefore **not be warranted**. • The EBA opens debate about the **best ways to address concentration risks** stemming from environmental risk drivers. (e.g. It could be considered whether supervisors could benefit from additional reporting on the largest exposures subject to environmental risks, such as exposures to carbon-intensive firms).

New concentration limit or new reporting and monitoring requirements in Pillar 1 to ensure a minimal level of harmonisation and comparability across the EU.	• Apart from the LEX regime, an alternative option could be the **introduction of new monitoring and reporting requirements** or a **new concentration limit** not for a single client or group of connected clients, but for all clients significantly exposed to environmental risks.
	• A new concentration limit could take **various forms**: i) single limit on all environmental risks; ii) Limited number of environmental risks.
	• **Problems** and **considerations** of a new concentration limit.
	  ◦ If a specific concentration limit was implemented irrespective of the purpose of exposures, **non-financial corporates could be deprived of their ability to receive bank financing for the sustainability transition**.
	  ◦ The relationship between the potential new limit and the Pillar 2 framework would have to be further considered.
	  ◦ Institutions which predominantly operate in specific regions or sectors, and especially smaller institutions, could be disproportionately affected.

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N # Question. See Annex II.

6 Investment firms

Environmental risks and the investment firms framework

The EBA highlights the interrelations between the IFR and CRR frameworks and the importance of taking them into account to ensure consistency and proportionality while addressing environmental risks

EBA preliminary conclusions	Approach and problems	

• Difficult to directly associate the Risk-to-Client K-factors with the risks arising from environmental risk drivers. However, investment firms may face **reputational risk and business model risk** if the composition of assets under management in terms of their environmental profile is not taken into account.
• The **current framework** may need to be **recalibrated** in future.
	• The K-factors under Risk-to-Client are volumetric measures covering those activities where an investment firm may cause harm to clients. The current definitions do not consider environmental risks.
	  • **K-COH**: the client himself decides about the financial instruments, so there are **no environmental risks** evolving from CoH.
	  • **K-CMH**: captures the potential harm to clients that may occur when an investment firm holds client money on its own balance sheet. This **does not seem to be related to environmental risks**.
	  • **K-AUM**: refers to operational errors such as poor execution and legal errors, which is **not related to environmental factors**.
	  • **K-ASA**: ensures that investment firms hold capital proportionately to activities which is **not related to environmental factors**.
	• Parties are invited to consider if existing K-factors should incorporate explicitly risks related to environmental factors.
		32
		33

Risk-to-Market and Risk-to-Firm are closer (conceptually and in methodology) to the existing framework for market risk and counterparty credit risk for credit institutions, **any improvement in the CRR could be reflected in the IFR as well**.	• **K-NPR**: covers the market risk aligned with CRR (same observations). • **K-CMG**: covers the market risk but with different methodology that CRR. It depends on the clearing member's internal models. (intervening directly on the its calculation is hard to envisage[1]) • **K-TCD**: equivalent to the counterparty credit risk module for credit institutions. This type of risk should be treated under SREP, Pillar 2. • **K-DTF**: covers operational risk related to trading activities. Environmental risk factor seem less relevant • **K-CON**: captures concentration risk (similar to CRR framework). Additional limits can be set because of environmental risks.	32 33
Commodity and emission allowance dealers may need further analysis and special consideration	• It might be appropriate to investigate whether environmental risks could justify a **dedicated treatment** of commodity dealers under the IFR because of the **high specialisation** of these investment firms.	34

For the purpose of this analysis, the term 'investment firms' refers to the investment firms applying the K-factor and not to the large and systemically important ones or to the small and non-interconnected investment firms.

(1) This could only be possible via either: (a) an external add-on to the K-CMG, or (b) limiting further the use of the K-CMG. Intervening directly on the calculation of the K-CMG is hard to envisage.

7 Why Management Solutions
Differential aspects

Management Solutions has extensive knowledge and experience in the field of sustainability

1. **Member of the Chair of Sustainability and Social Impact at ICADE**
MS is a member of the Coordinating Council of the ICADE Social Impact Chair to promote training and development of social impact measurement methodologies.

2. **Detailed knowledge of the implications of Sustainability in industries and businesses** with a fundamental focus on diagnosis and development of strategic Sustainability plans, ESG risk measurement, ESG Risk Management - with a fundamental focus on integration in credit risk management and ESG reporting models, both in Spain and abroad. In addition, we have extensive experience in regulatory adaptation in Sustainability.

3. **Specialist ESG modelling capabilities (and proprietary tools)**
MS has an R&D team specialised in defining and implementing methodologies for measuring climate risk and analysing physical and transition risk scenarios, as well as benchmarks for sustainability dissemination. In addition, it has produced several specialised publications and has participated as a speaker in different international forums. We also have databases and tools that we make available free of charge to the projects in which we collaborate.

4. **ESG Regulatory Experts**
MS has a Regulatory Observatory that provides in-depth knowledge of the regulatory requirements of financial and non financial entities at the European level and, in particular, those specific to sustainability and climate change risks.

5. **Highly qualified service provider of the ECB**
Management Soltuions is member of the “highly qualified external services providers” of the ECB in internal models, Asset Quality Review, PMO and operational risk.

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7 Why Management Solutions
Areas of collaboration

MS has an expert working group that supports its clients in the development and implementation of the sustainability and climate risk management framework, with a top-down approach in each of the 6 defined lines of action

Areas of collaboration in the field of sustainability and climate change

1 Strategy, Governance and Culture

- Diagnosis, strategic framework and general action plan
- Change management
  - Governance (PMO)
  - Observatory (Regulation / Market)
  - Training
  - Communication with stakeholders

2 Self-assessment of sustainability

- Adaptation and gap analysis to regulatory requirements.
- Definition of regulatory and internal taxonomy: eligibility criteria and definition of certification processes.
- Taxonomy implementation: inputs, drivers and outputs.
- Equator Principles v4 implementation.

3 Sustainable business development

- Market diagnosis and analysis (depending on the business, including market research, SWOT analysis, etc.).
- Product/service definition (*sprints*)
- Launch and implementation

4 Risk Management

- Risk policies and frameworks
- Measurement methodologies (portfolio screening, impact assessment - transitional and physical scenarios-) and alignment
- Integration of ESG principles in admission model
- Integration in management (Appetite, Rating, Collateral, Pricing).

5 Data & Tecnology

- ESG model definition and requirements (conceptual, logical and physical)
- Model metrics definition and KPIs gap analysis
- Definition of functional and technological architecture
- Alternatives analysis (vendors/in house)
- Implementation

6 Reporting

- Implementation of requirements (NFRD Supplement, SRDR, ECB Guidelines, Taxonomy, EBA Mandates...) + (benchmarking of best practices of peers)
- Definition of contents
- Governance and mechanisms for information quality and consistency

Business

Annex I

Abbreviation	Meaning
AUM	Assets Under Management
ASA	Assets Safeguarding and Administering client assets
BCBS	Basel Committee on Banking
BI	Business Indicator
BPS	Brown Penalising Factors
COH	Client Orders Handled
CCF	Credit Conversion Factor
CMG	Clearing Member Guarantee
CMH	Client Money Held
CON	Concentration
CRM	Credit Risk Mitigation
CRR	Capital Requirements Regulation
CSRD	Corporate Sustainability Reporting Directive
DP	Discussion Paper
DRC	Default Risk Charge
DTF	Daily Trading Flow
EBA	European Banking Authority
ECAI	External Credit Assessment Institution
ESG	Environmental Social and Governance
FOR	Fixed overheads requirement

Abbreviation	Meaning
GSF	Green Supporting Factors
FRTB	Fundamental Review of the Trading Book
IFR	Investment Firms Regulation
IFRS	International Financial Reporting Standards
ILM	Internal Loss Multiplier
IRB	Internal Rating Based
JTD	Jump-to-default
LEX	Large Exposures
LGD	Loss Given Default
NPR	Net Position Risk
PD	Probability of Default
RDS	Risk Differentiation Step
RW	Risk Weighted
RWA	Risk Weighted Asset
RRAO	Residual Risk Add-On
SA	Standardised Approach
SBM	Sensitivity-Based Method
SEM	Small and Medium-sized Enterprises
SREP	Supervisory Review and Evaluation Process
TCD	Trading Counterparty Default

Annex II

EBA questions background and rationale

1. In your view, how could **exposures associated with social objectives** and/or subject to social impacts, which are outside the scope of this DP, be **considered in the prudential framework**? Please provide **available evidence and methodologies** which could inform further assessment in that regard

EBA questions on principles, premises and challenges

2. Do you agree with the EBA's assessment that **liquidity and leverage ratios** will **not be significantly affected by environmental risks**? If not, how should these parts of the framework be included in the analysis?
3. In your view, are **environmental risks** likely to be **predominantly about reallocation** of risk between sectors, or does it imply an increase in overall risk to the system as a whole? What are the implications for optimum levels of bank capital?
4. Should the '**double materiality**' concept be incorporated within the **prudential framework**? If so, how could it be addressed?
5. How can availability of **meaningful and comparable** data be improved? What specific actions are you planning or would you suggest to achieve this improvement?
6. Do you agree with the **risk-based approach adopted by the EBA** for assessing the prudential treatment of exposures associated with environmental objectives / subject to environmental impacts? Please provide a rationale for your view
7. What is your view on the **appropriate time horizon** (s) to be reflected in the Pillar 1 own funds requirements?
8. Do you have concrete suggestions on how the **forward looking nature of environmental risks could be reflected** across the risk categories in the Pillar 1 framework?

Annex II

EBA questions on credit risk

A- Standardised approach

9 Have you performed any **further studies** or are you already using any specific ESG dimensions to differentiate within credit risk? If so, would you be willing to share your results?

10 What are the **main challenges that credit rating agencies face in incorporating environmental considerations** into credit risk assessments? Do you make use of external ratings when performing an assessment of environmental risks?

11 Do you see any **challenge in broadening due diligence** requirements to explicitly integrate environmental risks?

12 Do you see any specific aspects of the **CRM framework** that may warrant a **revision** to further account for environmental risks?

13 Does the **CRR3 proposal's** clarification on energy efficiency improvements **bring enough risk sensitiveness** to the framework for exposures secured by immovable properties? Should further granularity of risk weights be introduced, considering energy-efficient mortgages? Please substantiate your view

14 Do you consider that **high-quality project finance** and **high-quality object finance** exposures introduced in the CRR3 proposal should **potentially consider environmental criteria**? If so, please provide the rationale for this and potential implementation issues.

15 Do you consider that **further risk differentiation in the corporate**, retail and/or other exposure classes **would be justified**? Which criteria could be used for that purpose? In particular, would you support risk differentiation based on forward-looking analytical tools?

16 Do you have any other proposals on **integrating environmental risks within the SA framework**?

Annex II

EBA questions on credit risk (cont.)

B- IRB approach

17 What are your views on the **need for revisions to the IRB framework** or additional guidance to better capture environmental risks? Which part of the IRB framework is, in your view, the most appropriate to reflect environmental risk drivers?

18 Have you incorporated **environmental risks** or broader ESG risk factors in your **IRB models**? If so, can you share your insight on the risk drivers and modelling techniques that you are using?

19 Do you have any **other proposals** on i**ntegrating environmental risks** within the **IRB framework**?

20 What are your views on **potential strengthening of the environmental criterion** for the infrastructure-supporting factor? How could this criterion be strengthened?

21 What would in your view be the most appropriate from a prudential perspective: aiming at **integrating environmental risks into existing Pillar 1 instruments**, or a **dedicated adjustment** factor for one, several or across exposure classes? Please elaborate.

22 If you support the **introduction of adjustment factors** to tackle environmental risks, in your view how can double counting be avoided and how can it be ensured that those adjustment factors remain risk-based over time?

Annex II

EBA questions on market risk

A- FRTB Standardised approach

23 What are your views on **possible approaches** to incorporating environmental risks into the **FRTB Standardised Approach**? In particular, what are your views with respect to the various options presented: increase of the risk weight, inclusion of an ESG component in the identification of the appropriate bucket, a new risk factor, and usage of the RRAO framework?

B- Internal model approach

24 For the **Internal Model Approach**, do you think that environmental risks could be better **captured outside** of the model or **within it**? What would be the challenges of modelling environmental risks directly in the model as compared to modelling it outside of the internal model? Please describe modelling techniques that you think could be used to model ESG risk either within or outside of the model.

25 Do you have **any other proposals** on integrating environmental risks within the market risk framework?

EBA questions on operational risk

26 What **additional information** would need to be collected in order to **understand how environmental risks impact banks' operational risk**? What are the practical challenges to identifying environmental risk losses on top of the existing loss event type classification?

27 What is your view on potential integration of a **forward-looking perspective** into the **operational risk framework** to account for the increasing severity and frequency of physical environmental events? What are the theoretical and practical challenges of introducing such a perspective in the Standardised Approach?

28 Do you agree that the impact of environmental risk factors on **strategic** and **reputational risk** should remain under the scope of the **Pillar 2 framework**?

29 Do you have any **other proposals** on integrating environmental risks within the market risk framework?

Annex II

EBA questions on concentration risk

30 What, in your view, are the **best ways to address concentration risks** stemming from environmental risk drivers?

31 What is your view on the **potential new concentration limit**? Do you identify other considerations related to such a limit? How should such a limit be designed to avoid the risk of disincentivising the transition?

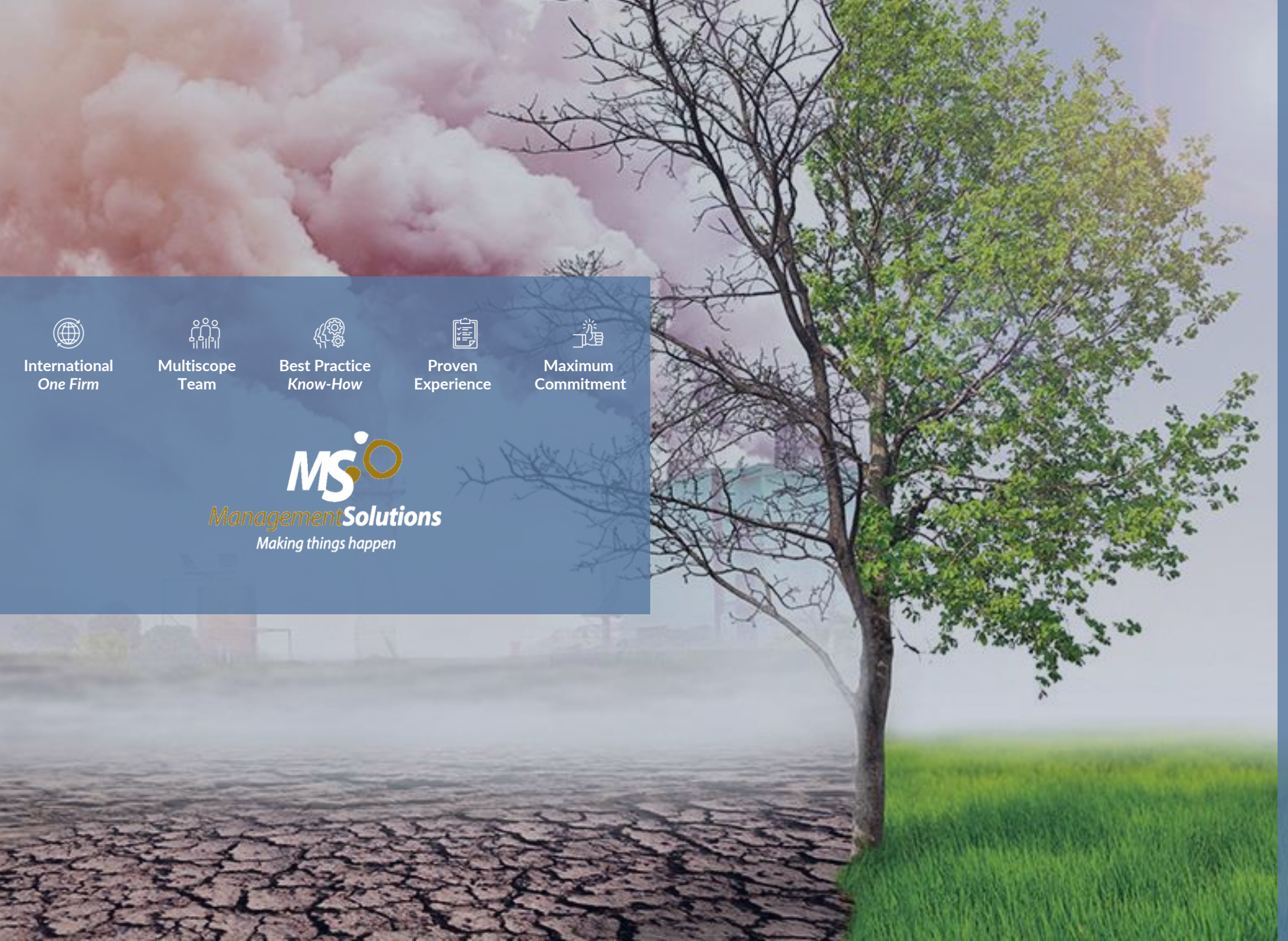
EBA questions on investment firms

32 With reference to the **three risk categories** the IFR is based on (Risk-to-Client, Risk-to-Market and Risk-to-Firm), which of these could be related to environmental risks, and to what extent?

33 Should any of the existing **K-factors incorporate explicitly risks related to environmental factors**?

34 What elements should be considered concerning the risk from environmental factors for **commodity and emission allowance dealers**? Are there any other specific business models for which incorporation of environmental factors into the Pillar 1 requirements of the IFR would be particularly important?

35 Do you have any **other suggestions** as to how the prudential framework for investment firms could be adjusted to account for environmental risk factors?



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Multiscope Team

Best Practice *Know-How*

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Making things happen

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