

PRUDENTIAL TREATMENT OF ESG RISK

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In May 2022, the European Banking Authority (EBA) published a Discussion Paper with the aim to evaluate the appropriateness of the current prudential framework to accurately assess the rising risks resulting from environmental issues. A key question the Discussion Paper seeks to address is - do the mechanisms of the current Pillar 1 framework allow to capture new risks such as environmental risk or should these risks be subject to a dedicated treatment?

In this article, we look at the key concepts of environmental risk and examines the EBA's analysis of the interaction between environmental risks and the traditional prudential risk categories – credit, market, operational and concentration.

We further outline the key actions firms need to take to prepare themselves for a potentially binding Pillar 1 treatment, while awaiting further regulatory guidance.

INTEGRATING ENVIRONMENTAL RISKS INTO THE PILLAR 1 PRUDENTIAL FRAMEWORK

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This article discusses the key concepts of environmental risk and examines the EBA's analysis of the interaction between environmental risks and the traditional prudential risk categories – credit, market, operational and concentration.

1. <https://www.eba.europa.eu/regulation-and-policy/credit-risk/discussion-paper-role-environmental-risk-prudential-framework>

Environmental risk – overview and key challenges

Environmental risks are by nature multidimensional, non-linear, uncertain, and forward-looking. Despite the uncertainties, environmental risks can be linked to the classic categories of financial risk through a range of transmission channels (Figure 1), and as such, they should not be considered as a separate category of financial risks.

The main challenges in measuring ESG risks revolve around three major axes:

- **Data availability** The risk classification and analysis are limited by the lack of data that is relevant, consistent, of high quality and sufficiently granular. With time, data will become less of an issue as the EU taxonomy, Corporate Sustainability Reporting Directive (CSRD) and other disclosure requirements are rolled out.
- **Estimation of losses** The prudential framework is calibrated based on historical data which is unlikely to fully reflect environmental risks, given the lack of sufficient or comparable information about losses due to climate-related events or transition trends.

- **Nature of most environmental risks** There is a mismatch between the time horizon of the Pillar 1 framework (designed to capture the possible extent of cyclical economic fluctuations) and the long-term time horizon over which environmental risks are likely to fully materialize.

One of the key messages from the Discussion Paper is that to make the necessary adaptations to capture environmental risks within the structure of the prudential framework, it is important to keep in mind that the only purpose of the framework is to strengthen institutions' resilience to all risks. By no means the purpose of the prudential framework should be to incentivize institutions to redirect capital and lending, as this could negatively impact the framework's efficiency and undermine its credibility.

For that reason, the EBA adopted a risk-based approach to assess whether prudential requirements adequately reflect environmental risks and ultimately support institutions' resilience to such risks. It must also be noted that Pillar 1 is only one component of the prudential framework, which relies on the Pillar 2 entity-specific own-fund requirements, macroprudential capital buffers, and provision requirements from the accounting framework.

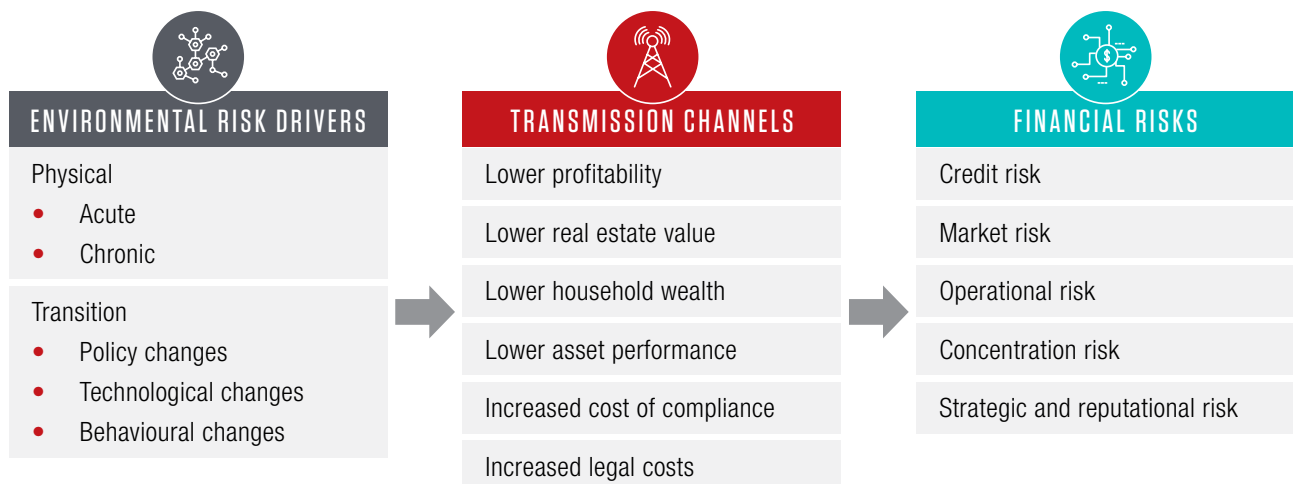


Figure 1: How environmental risks affect financial risk through various (non-exhaustive) transmission channels (source: The role of environmental risks in the prudential framework, EBA Discussion Paper 2022/02)

Relationship between environmental and traditional risks

Focusing on credit and market risks, the EBA Discussion Paper examines the different mechanisms (depending on whether the standard or internal model approach is used) through which the

environmental risk drivers can already be captured and what adjustments to the Pillar 1 framework may be necessary. Below we examine each risk type in turn, summarizing the suitability of tools that form the standardized approach (SA) to integrate environmental risk.

CREDIT RISK

Credit risk is by far the most significant risk-weighted asset (RWA) component of the prudential framework. Mechanisms to integrate environmental risks into the framework depend on whether institutions apply the standardized or internal ratings-based approach.

Standardized approach is prescriptive and more simplified, thus any adjustments to integrate environmental risk drivers should avoid undue complexity. The EBA recognizes that environmental risks should be better reflected in the framework, which may be achieved through the following existing tools - external credit assessment, credit risk mitigation (collateral valuation) and prescribed risk weights (Figure 2).

	TOOL	ACTIONABILITY	LIMITATIONS / POTENTIAL UPSIDE
STANDARDIZED APPROACH	External Credit Assessment (ECA) – ESG factors are one of the criteria taken into consideration for the rating assessment	+	- Ambiguity over the methodology and analysis adopted by Credit Rating Agencies (CRA) to capture environmental factors - Covering environmental aspects is not compulsory under CRA Regulation leading to discrepancies - Ongoing initiatives to enhance environmental disclosure requirements and ensure transparency on ESG rating methodologies
	Credit Risk Mitigation (CRM) techniques - ESG factors to be captured via collaterals' valuation particularly for exposures secured by immovable properties which valuation can be impacted by physical or transition risks	++	- Valuation methodologies and monitoring do not explicitly integrate environmental aspects - CRR3 proposal clarifies that energy efficiency improvements unequivocally increase the property value - Valuations will get better over time with data, standards and methodologies improvements
	Prescribed Risk Weights (focus on corporate and retail exposures) – ESG factors to be captured via a specific sub-exposure class. Any adjustment to the framework should be risk-based	-	- Lack of empirical evidence on risk differentials. - Adaptation of risk weight for retail exposures would be particularly challenging - Collecting further evidence (historical data, empirical research...) on the risk differentials to be applied

■ Very complex and/or long-term perspective
 + Complex and/or mid to long-term perspective
 ++ Not complex and/or short-term perspective

Figure 2: How to integrate environmental risks within the standardized approach of the credit risk framework

The internal ratings-based approach is by nature much more risk sensitive and thus can embed environmental risk, thanks to its capacity to account for multiple risk drivers and its reliance on expert judgment. The main pitfall would be in how to manage the integration of environmental risk drivers without

letting the performance of the current model deteriorate. The EBA highlights four tools in the credit risk modeling path where adjustments can be made, emphasizing the institutions' ability to establish a complete Reference Data Set as a prerequisite to ensure good modeling (Figure 3).

	TOOL	ACTIONABILITY	LIMITATIONS / POTENTIAL UPSIDE
INTERNAL RATINGS BASED APPROACH	Adding additional risk drivers to the risk differentiation step	—	- Model performance could be hindered if environmental risks not materialized yet via historical credit losses are integrated - Future defaults/losses may not be predicted by models entirely based on historical data - Ad-hoc conservatism doesn't easily tackle the uncertainty on risk differentiation as it could impede homogeneity within grades and pools - Model's design allows to capture environmental risks through expert-based qualitative variables as the IRB model is not based exclusively on optimization of quantitative performance metrics
	Adding environmental considerations to the risk quantification step through add-ons or margin of conservatism (due to data/model deficiencies)	+	- Calibration of MoC usually based on existing data - Any adjustment will apply to all exposures in a grade or pool including those not impacted by environmental drivers - Introduction of "calibration segments": separation of risk quantification between exposures impacted by environmental risk drivers and unimpacted exposures.
	Applying further adjustments either as ad-hoc conservatism or as overrides during the rating application step	—	- Overrides are not intended to be a substitute for the model in general - Overrides do not require changes in the risk quantification and could be used as a temporary tool to address specific cases
	Amending the RW formula (change of correlation or systemic risk factors for PD, change of calibration for LGD and CCF in IRB-F approach)	—	- Difficulties defining common and impartial differentiation factors - Difficulties calibrating the adjustments and thus ensuring the framework's robustness - Double counting may arise as a result of potential adjustments and estimates.

— Very complex and/or long-term perspective + Complex and/or mid to long-term perspective ++ Not complex and/or short-term perspective

Figure 3: How to integrate environmental risks within the Internal Rating Based approach of the credit risk framework

MARKET RISK

Market risk is typically characterized by a much shorter time horizon than credit risk and makes the integration of environmental risks even more complicated. To overcome this difficulty and the extent of uncertainty which environmental risks can only increase in the magnitude of shocks observed historically, the EBA proposes the use of add-on tools (Figure 4).

Regarding the default risk charge, in both standardized and internal ratings-based approaches, the EBA considers that, hypothetically, to capture default risk in the trading book, institutions must replicate the relevant/proposed credit risk solutions.

	TOOL	ACTIONABILITY	LIMITATIONS / POTENTIAL UPSIDE
SENSITIVITIES-BASED METHOD	Risk weights adjustment through complementing projections or refined buckets (incorporating environmental risk dimension)	—	- Using projections based on forward-looking scenarios would be a significant divergence from the existing approach - CRR3 proposal introduce a lower risk weight for the commodity delta risk factor related to carbon emissions trading
	Creating a specific risk class or “risk factor type” on top of delta, vega and curvature, or adjust correlations	—	
	Residual Risk Add-On (RRAO) framework could be used to capitalize environmental risk without amending the two main building blocks of the framework (SbM and JTD)	+	RRAO is not risk sensitive and its scope would need to be enlarged to comprise simple trading book instruments (currently addresses complex payoffs or exotic underlying only)
INTERNAL MODEL APPROACH	Adjusting historical data to reflect potential future dynamics	—	Such a solution would be intrinsically difficult. It will likely be at the cost of affecting the accuracy of the traditional risk factors’ measure
	Dedicated add-on outside the existing framework thus avoid adjusting historical data and avoid adapting regulatory tests.	++	- Such a solution will require changes in the regulatory requirements for internal models as they are intended to capture all material risk - Similar existing treatment for the case of capturing unpegging event risk (not historically observed) for material FX exposure
	Integrating environmental risks into capital adequacy stress testing programme which is part of the Internal Model Approach’s qualitative requirements	+	According to stress test results, institutions would have to implement appropriate actions

— Very complex and/or long-term perspective + Complex and/or mid to long-term perspective ++ Not complex and/or short-term perspective

Figure 4: How to integrate environmental risks within the market risk framework

OPERATIONAL AND CONCENTRATION RISKS

Operational risk covers losses of a diverse nature, and all loss types can be triggered by the environmental risks factors (e.g. damage to physical properties, liabilities arising from environmental factors and resulting in legal and conduct risks). The new standard framework for operational risk relies on two components (internal loss multiplier and business indicator component, although the former is likely to be neutralized in the European framework), both based on historical losses, but doesn't include any forward-looking elements. Such elements could be integrated in the framework in the future once clear evidence of the impact of environmental factors on banks' operational risk and robust data become available. In the meantime, the EBA advocates that institutions should identify environmental factors as triggers of operational risk losses on top of the existing risk taxonomy, in order to assess the materiality and the trend of the operational risks linked to environmental factors.

The Pillar 1 framework does not currently explicitly capture concentration risks resulting from environmental factors. Such integration could rely on the large exposure framework (concentration risk resulting from exposures to an individual client or group of connected clients), although it would need to be revamped to include sectorial and/or geographic dimensions. Alternatively, a new concentration limit for clients significantly exposed to environmental risks could be designed (e.g. limiting the exposure to counterparties subject to high transition risk at a percentage of a bank's Tier 1 total RWAs) but in a very careful manner to avoid undesirable side effects (e.g. decrease of financing for transitioning to environmentally sustainable activities).



CONCLUSION

So far, the European regulator is logically focusing on Pillars 2 and 3 (through stress testing exercises) to tackle the integration of environmental factors into the prudential framework. Academic research and preliminary regulatory proposals (highlighted by the EBA discussion paper) - on the appropriateness of the Pillar 1 framework and its potential adjustments - are inconclusive and nothing is set in stone (although the EBA excludes the use of supporting or penalizing factors).

While awaiting further regulatory guidance (as reaffirmed by the ECB in September 2022 at the 9th Banking Union conference), financial institutions should nevertheless prepare themselves for a potentially binding Pillar 1 treatment and initiate the following actions:

- Design a robust environmental data framework and actively work on the data collection and quality, as a necessary (although only partial) prerequisite for any Pillar 1 integration;
- Engage in academic, regulatory and industry discussions to raise awareness and be up to date with the latest developments;

- Begin exploratory work internally on prioritized items (e.g. assessing the relevance of additional risk drivers for credit risk differentiation, defining a methodology for calibrating overrides) to accelerate the learning curve and prepare the organization for a future implementation;
- Identify opportunities for partnership with other market players – from and outside the financial sector (data providers, regtech, fintech, greentech) to benefit from mutual efforts, best practices and solutions.

Capco has a strong and varied track record of supporting clients with their change programs, spanning a wide range of system and process implementations. We have developed a unique integration approach for climate risk which includes integrating climate risk into risk management processes and creating a robust data framework. Contact us to learn more about how we can help your institution on its journey to change, giving you an edge over your competition.

2. <https://www.bankingsupervision.europa.eu/press/speeches/date/2022/html/ssm.sp220922~bb043aa0bd.en.html>



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