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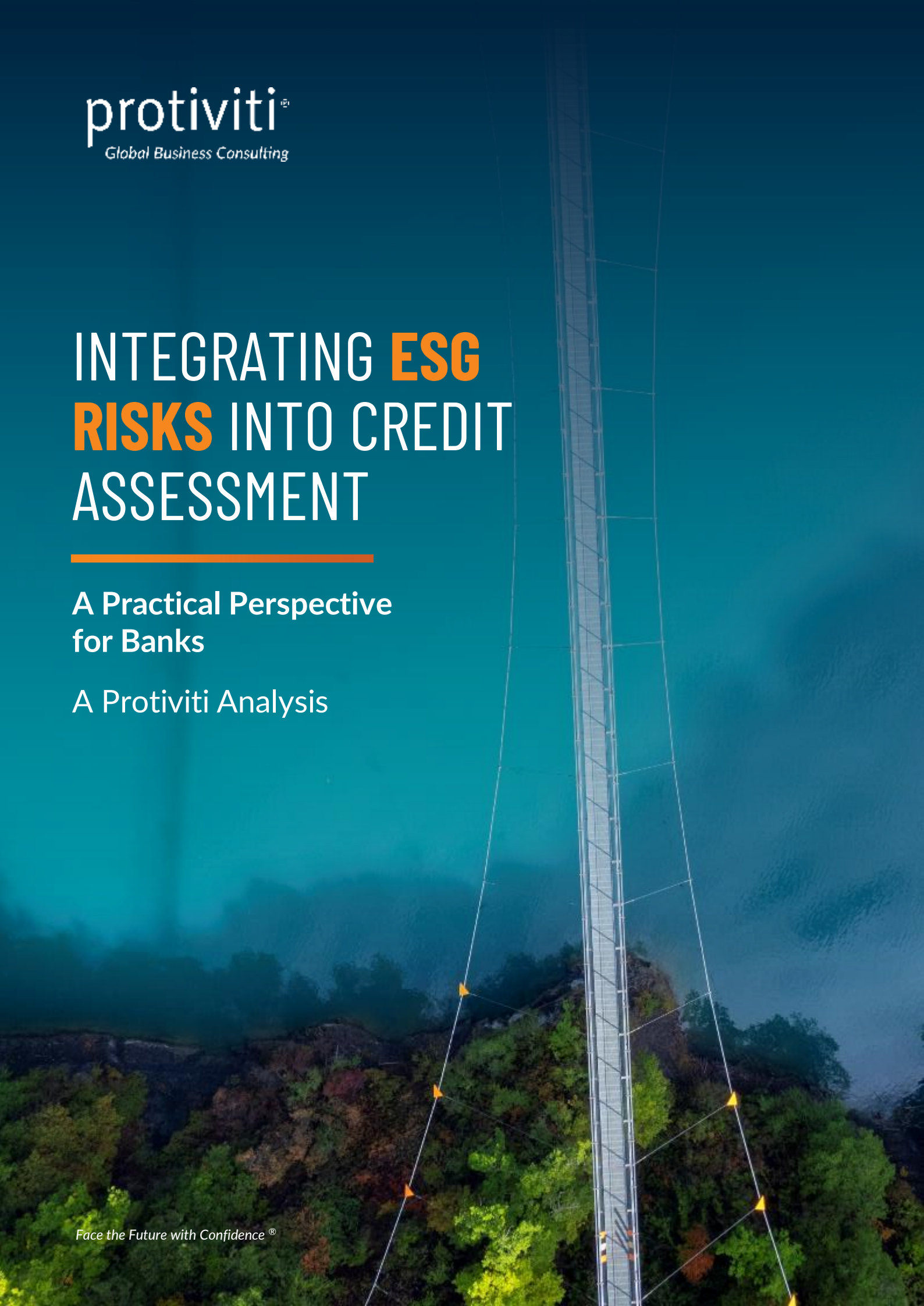
Global Business Consulting

INTEGRATING **ESG RISKS** INTO CREDIT ASSESSMENT

A Practical Perspective for Banks

A Protiviti Analysis



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01. Executive Summary

Banks and financial institutions have long established the practice of using rating models and scorecards for assessing the creditworthiness of their borrowers. These models are tuned to evaluate the borrowers' ability to repay their debt obligations by focusing on traditional drivers of credit performance, such as industry risk, business risk, financial risk, and management risk.

Banks also periodically validate and update these models to ensure their relevance based on both systemic and idiosyncratic changes. One of the principal recent shifts impacting the banking sector is the increasing focus on ESG (environmental, social, and governance-related factors) and sustainable financing. This focus has been driven by a push from investors, lenders, customers, regulators, and the larger social community. Simultaneously, there is also an internal drive originating from employees, suppliers, and management. Stakeholders across-the-board are increasingly calling for consideration of ESG ramifications of business decisions. Such an ESG focus implies that banks must now finetune their methodology for assessing potential borrowers and monitoring existing borrowers to include parameters related to ESG performance and disclosures.

The paper focuses on the banks' wholesale banking portfolios and explores how banks can meaningfully integrate the borrowing organization's ESG performance into the assessment of the creditworthiness of the borrowers. We have made this exploration in the context of the practical challenges associated with these integrations:

- Absence of historical ESG-related data of borrowers for any meaningful statistical analysis
- Presence of multiple reporting frameworks, and the lack of comparability across disclosures by different companies and sectors
- Data integrity issues of reported disclosures
- Need to integrate new ESG parameters without affecting the stability of currently approved and accepted credit models

02. Understanding ESG: An Organization's Perspective

ESG, represents a set of factors that measure an organization's impact on the environment and society, and how transparent and accountable the organization is regarding the same. As per the World Bank's ESG Investing Report, 'the term ESG, is often used interchangeably with sustainable investing, denotes an investment approach in which analysis goes beyond purely financial factors.

Figure 1 highlights examples of ESG parameters relevant to a typical organization.

Figure 1: ESG Parameters

Examples of ESG parameters relevant to a typical organization.

ESG Parameters

ENVIRONMENTAL	SOCIAL	GOVERNANCE
• GHG Emissions • Waste Generation • Water Consumption • Hazardous Material Disposal • Energy Costs • Ongoing Environmental Litigations	• Workplace Injuries • Labour Rights Violations • Procurement Practice • % of Temporary Workers • CEO Pay Ratios • Diversity in Staff • Non-discrimination Policies	• Levels of Disclosures • Trade Records • Adverse History (Fraud/Corruption) • Code of Conduct • Corporate Governance Policies • Board Independence • Auditor Qualification

Sources: Global Reporting Initiative (GRI)
Protiviti Analysis

(Illustration)

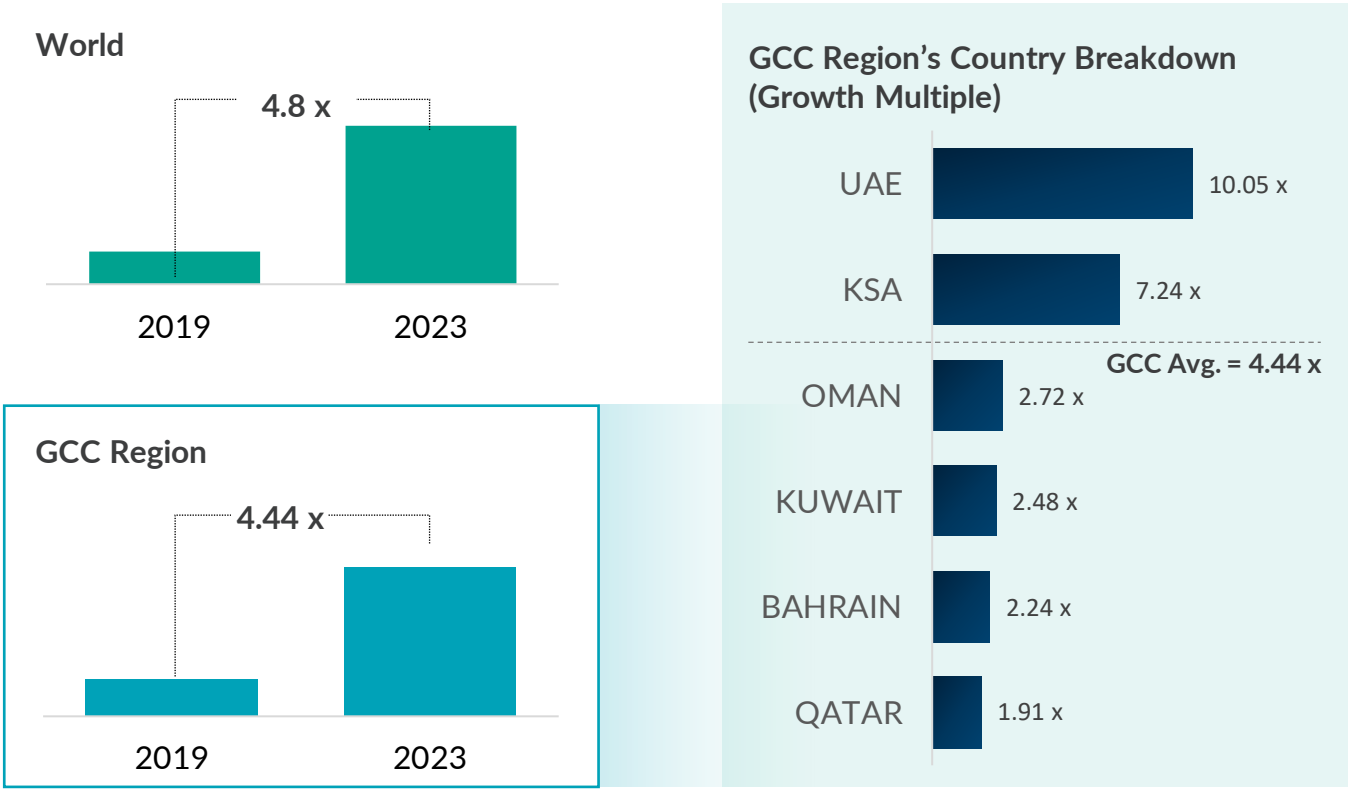
There is an increasing focus by stakeholders towards consideration of ESG factors while evaluating an organization's long-term sustainability and performance. This has been driven by a push from investors, lenders, customers, regulators, and the larger social community as well as by an internal drive from employees, suppliers, and the management.

Figures 2 and 3 highlight the various stakeholders driving the emphasis on ESG performance, and the increase in interest around ESG across the world and GCC region over a 5-year period, respectively.

Figure 2: Stakeholders driving ESG Focus

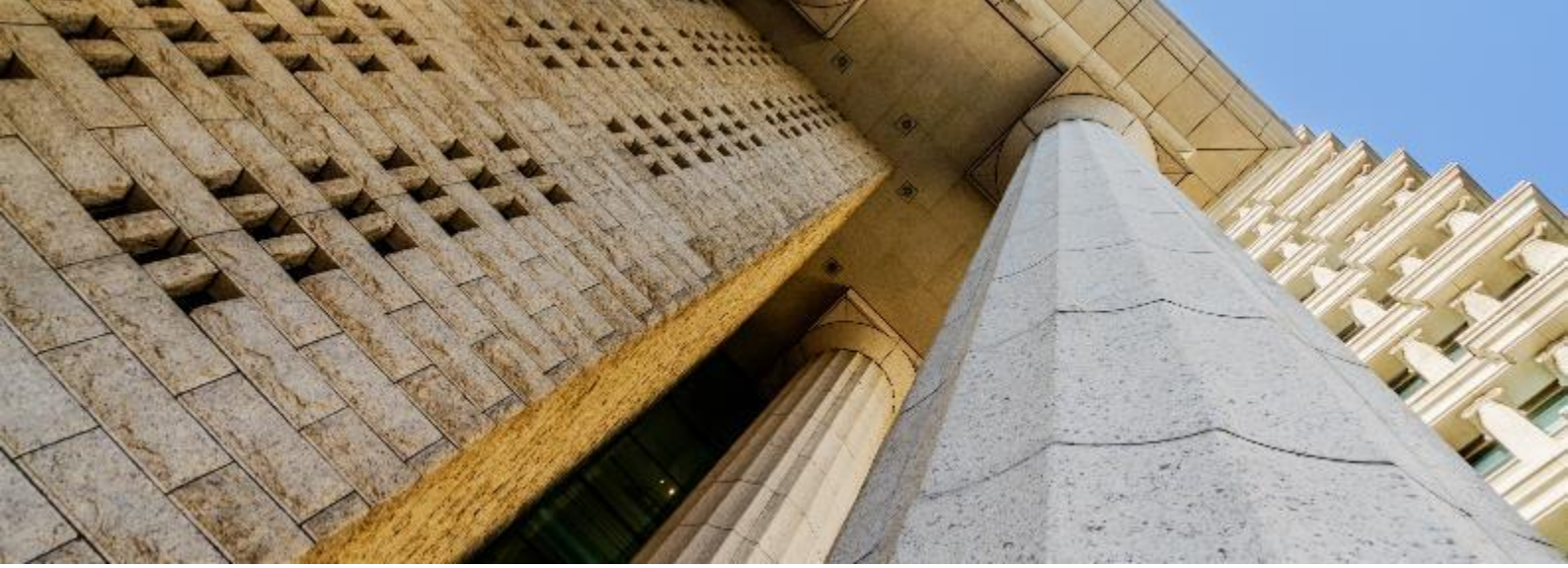
Sources: World Bank
Protiviti Analysis

Figure 3: 5-Year Trend in ESG Interest – World Vs GCC Region



Sources: Google Trends (2019-2023)
Protiviti Analysis

In the following sections, we will look at how banks – as one of the principal stakeholders concerned with an organization's performance and, specifically, creditworthiness – can integrate an assessment of ESG factors into their conventional credit assessment methodology. Before exploring avenues for such integration, however, the next section explains how an organization's ESG performance translates into an impact on its creditworthiness in the first place.



03. Understanding ESG: A Lender's Perspective

Banks and financial institutions have long established the practice of using credit rating models for assessing the creditworthiness of their corporate borrowers. These models are tuned to evaluate the borrowers' ability to repay their debt obligations by focusing on traditional drivers of credit performance. The structure of the credit models used across various banks typically differs based on whether the model is developed using a statistical approach (usually using a bank's internal default data), expert judgment (procured through an external party such as a credit rating agency) or a hybrid approach combining the two. Even after accounting for the variance in the structure, most banks' models primarily factor in conventionally established drivers of credit performance across industry risk, business risk, management risk, and financial risk factors.

Figure 4: Conventional Drivers of Credit Performance
illustrates the typical risk factors considered as part of a borrower's credit assessment.

- Regulations
- Supply Chain
- Demand-Supply
- Competition
- Benchmarks & Trends for Financials

- Supplier Concentration
- Buyer Concentration
- Market Share
- Diversification of Income
- Long-term Contracts

- Past Performance
- Governance
- Succession Plan
- Keyman Risk
- Employee Relations

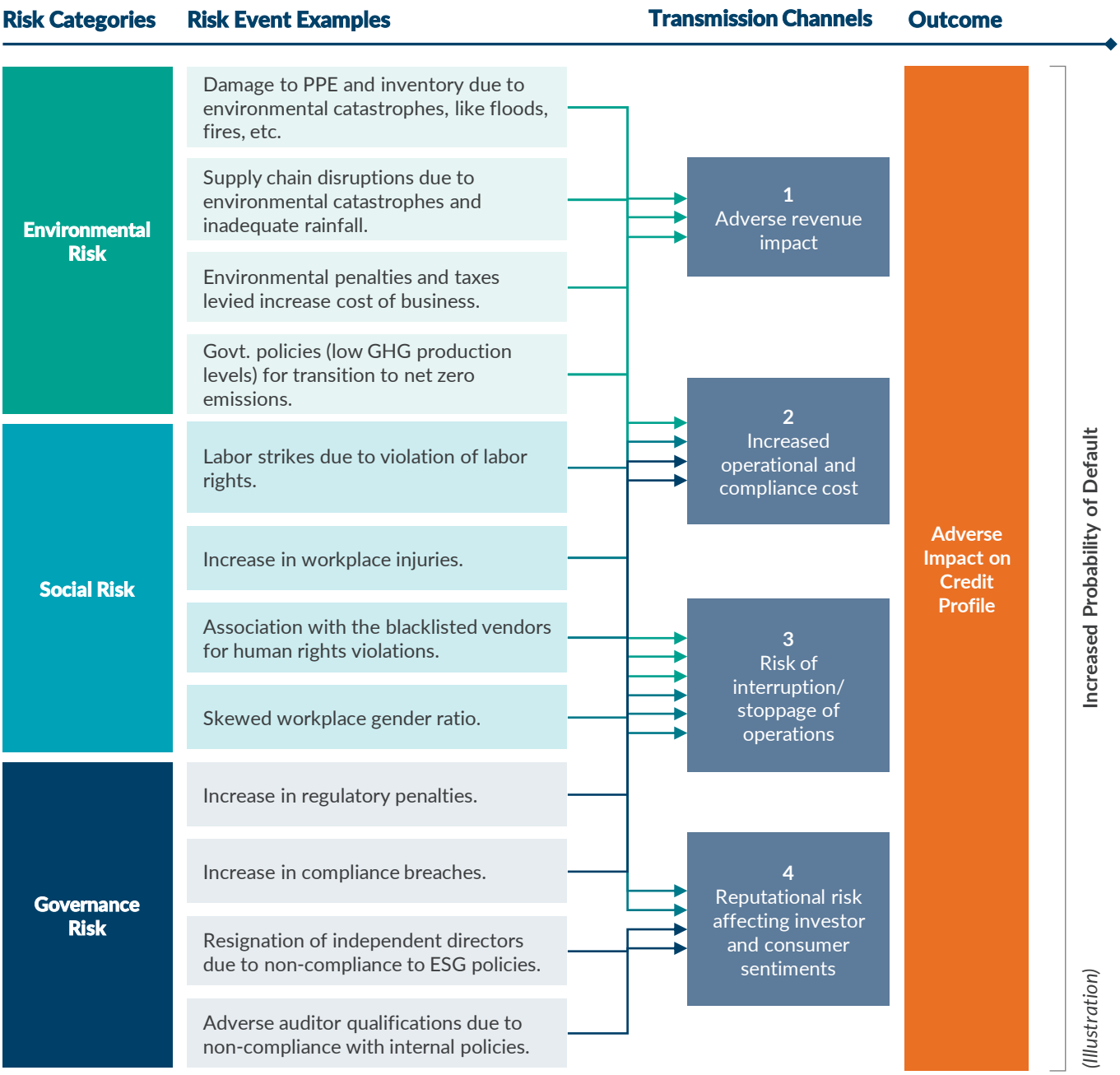
- Leverage
- Liquidity
- Growth & Size
- Capitalization
- Profitability

The focus on the ESG performance of borrowers as highlighted in the previous section brings into the picture additional drivers of credit risk. Such a relationship is predicated on ESG risks translating into actual deterrents to an organization's ability to continue its business operations or grow them as per projections, and consequently service its debt.

Figure 5 highlights examples of ESG risks and the transmission channels through which they can crystalize into an increase in credit risk (represented in terms of a probability of default, or PD).

Figure 5: Transmission channels for ESG risks translating to credit risk

illustrates the typical risk factors considered as part of a borrower's credit assessment.



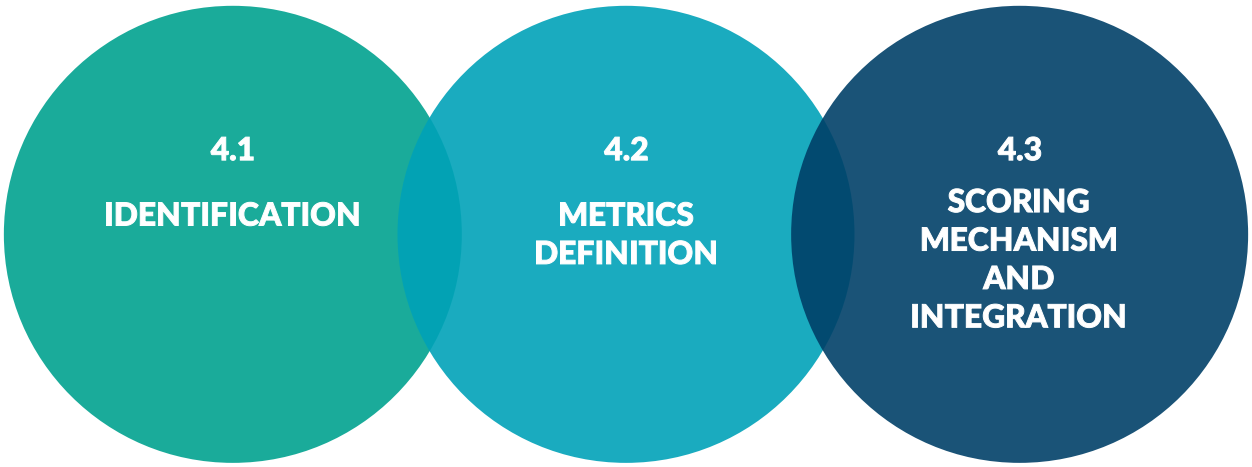
In the presence of such channels of ESG risks translating into real deterrents to an organization's creditworthiness, it is imperative for banks to integrate borrowers' ESG performance with the assessment of their credit risk.

04. Integrating ESG Risks in Credit
A Practical Framework

A structured and practical framework for integrating ESG risks with credit assessment requires the following steps to be addressed by a bank, as highlighted in Figure 6.

Figure 6: Integrating ESG risks in Credit Assessment

Integrating ESG into Credit Assessment



- Identify dimensions for ESG assessment of borrowers based on business context and, if relevant, alignment to credit assessment dimensions

- A. Prepare library of ESG metrics
- B. Assign relative criticalities
- C. Define units, limits and tolerances

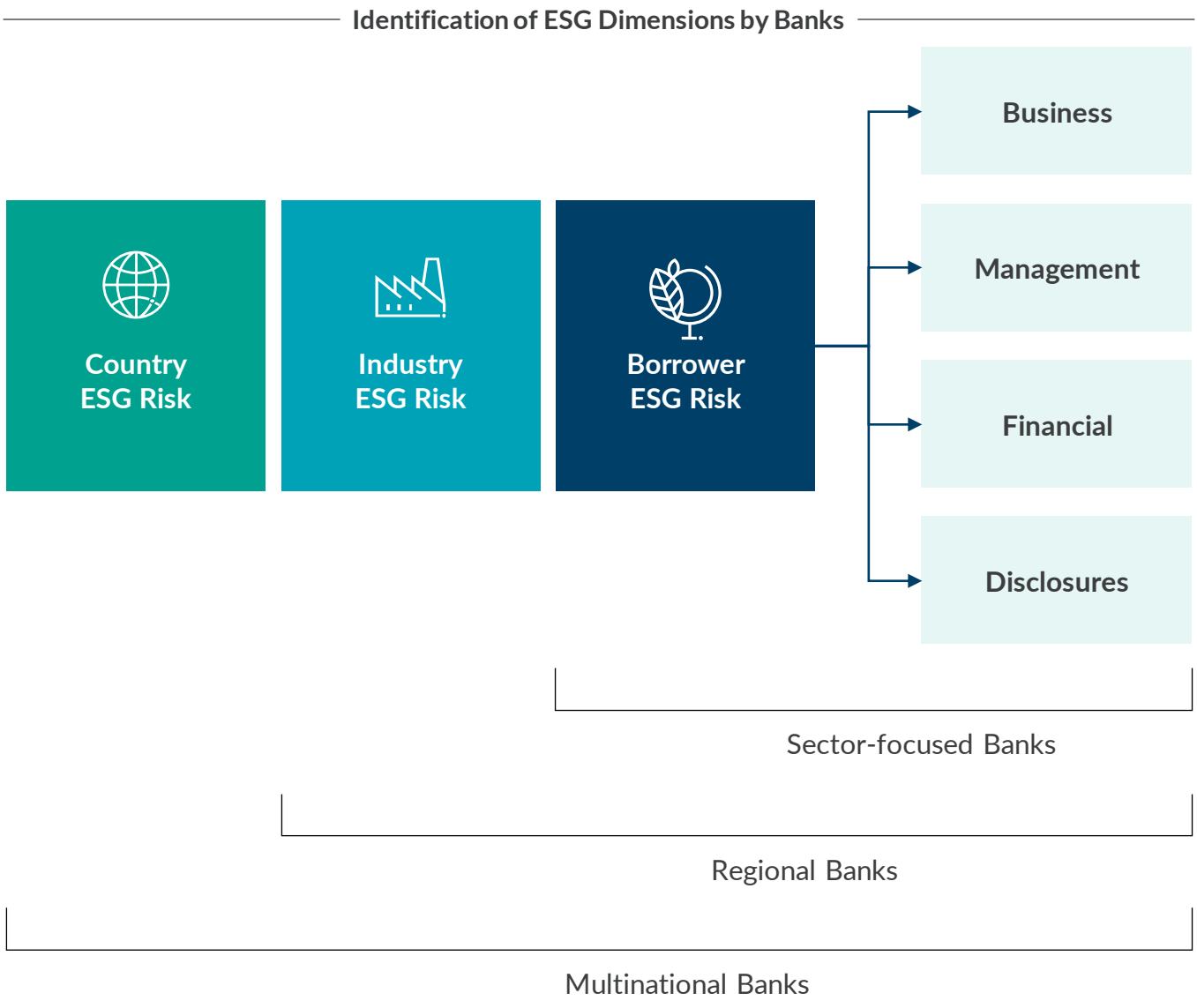
- Define a scoring mechanism to translate & evaluate metrics into decision-making insights
- Define the mechanism for integrating ESG & credit assessment

4.1. Identify ESG dimensions

As a first step towards assessment of ESG risks of borrowers, banks can identify the categories, or 'dimensions', across, which they intend to understand and evaluate their borrowers' ESG performance. Such a step will help establish a structured framework for the evaluation while streamlining banks' focus on dimensions material to their business context (in the absence of historical data for statistical analysis).

For example, regional banks may identify dimensions focused on local nuances in terms of dominant industries and geological characteristics, while multinational banks may identify a larger set of dimensions factoring in country and industry risks (to enable a comparative analysis across a wider set of borrowers). Similarly, a specialized lending institution focused on particular projects or industries may identify more granular dimensions pertaining to the regulatory nature, demand-supply situation, degree of competition, and supply-chain characteristics of the particular industry.

Figure 7: Illustration of ESG dimensions for consideration by banks



4.2. Define ESG metrics across each dimension

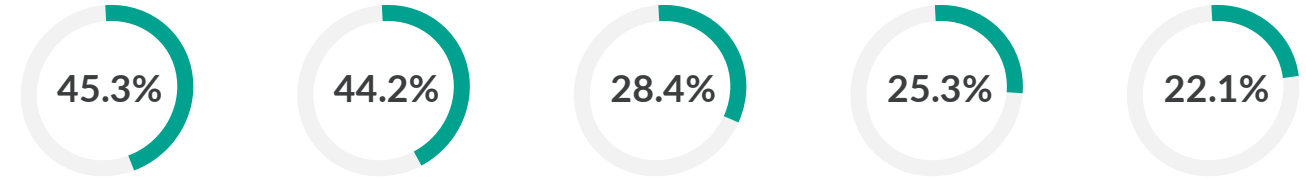
In this step, banks ought to focus on forming an ESG library through identification and definition of specific ESG metrics, and assignment of criticality and limits to the metrics (indicating their relative importance and acceptable levels, respectively).

A. Prepare a library of ESG metrics

Banks should prepare a library of environmental, social, and governance-related metrics for each dimension identified in Step 4.1, that helps assess the performance of the borrower under the said dimension. **Figure 8** highlights the most common ESG metrics based on their reporting frequencies as required by globally accepted reporting standards. Such metrics may form the base of an initial shortlist by the bank for further consideration.

Figure 8: Most common ESG metrics as per global reporting standards and frameworks

Top 5 Global Risks: View of Risk Experts*



Environment Metrics#

GHG Emissions	Freshwater Availability: Water Usage	Energy Efficiency & Mix	Waste: Solid, Water, Hazardous	Air Pollutants
Freq. = 92%	Freq. = 92%	Freq. = 85%	Freq. = 73%	Freq. = 62%

Social Metrics#

Health & Safety: Injury & Fatality	Collective Bargaining Agreements	Workforce Turnover	Workforce Composition	Forced, Compulsory, & Child Labor
Freq. = 100%	Freq. = 69%	Freq. = 69%	Freq. = 69%	Freq. = 54%

Governance Metrics#

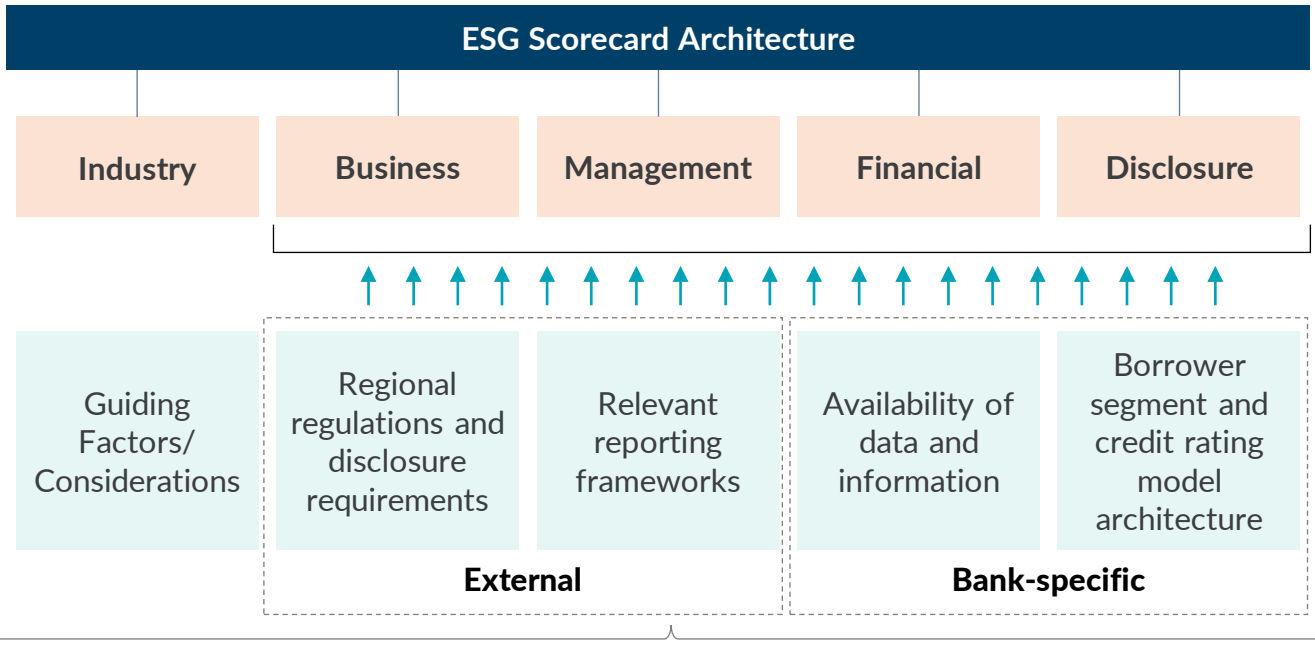
Board Independence	Board Composition: Diversity	Equal Voting Rights	Audit Committee	Executive's Compensation
Freq. = 78%	Freq. = 78%	Freq. = 50%	Freq. = 44%	Freq. = 43%

Sources:
World Economic Forum Global Risks Perception Survey, 2021-2022 | The World Bank Sovereign ESG Data Framework
International Finance Corporation's ESG Guidebook, December 2021 | International Finance Corporation's Climate Governance: Progression Matrix, May 2023 | International Finance Corporation's Toolkit for Disclosure and Transparency, January 2018
WEF Paper on Defining the 'G' in ESG, June 2022 | WEF White Paper on Common Metrics and Consistent Reporting of Sustainable Value Creation, September 2020
Protiviti Analysis

**Based on a total of 1,316 responses captured by GRPS of which 1,249 were used for analysis. The percentage figure indicates the percentage of respondents with a risk management background that considered the risk as one of the top 10 global concerns over the next 5 to 10-year horizon.*
#Metrics listed are illustrative and based on either a common formulation or an amalgamation of different formulations. The right-hand column indicates the frequency of inclusion of the metric in the frameworks and standards analyzed based on an analysis of 12 widely used E&S disclosure frameworks, standards, and information service providers and widely used corporate governance disclosure frameworks, standards, and information service providers.

Upon identification of the initial shortlist, banks will need to map the ESG metrics to each of the dimensions from Step 4.1. This activity may help banks to prioritize parameters that are required or emphasized by regional regulations (and those with globally accepted definitions) to have a more standardized and comparable assessment across borrowers. **Figure 9** highlights specific considerations for the prioritization or selection of ESG metrics.

Figure 9: Specific considerations for identification of ESG dimensions and metrics



GRI Global Reporting Initiative	**CDP** Carbon Disclosure Project	**IIRC** International Integrated Reporting Council	**SASB** Sustainability Accounting Standards Board	**TCFD** Task Force on Climate-Related Financial Disclosures
An independent, international organization that helps organizations take responsibility for impacts, by providing a global common language for communication	A not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts	An international cross section of leaders from corporate, investment, accounting, securities, regulatory, academic & standard-setting sectors as well as civil society.	A non-profit organization helping businesses & investors develop a common language about the financial impacts of sustainability	Created by the Financial Stability Board (FSB) to develop consistent climate-related financial risk disclosures se by companies, banks, & investors for providing stakeholder information

Based on the initial shortlist and subsequent prioritization, banks can now put in place the base architecture of their borrowers' ESG assessment framework. **Figures 10 and 11** highlight such an illustrative architecture through a set of metrics under the dimensions of industry risk, business risk, management risk, financial risk and disclosures, and their mapping to the relevant reporting standards, respectively.

Figure 10: Illustration of the ESG metrics under various risk dimensions

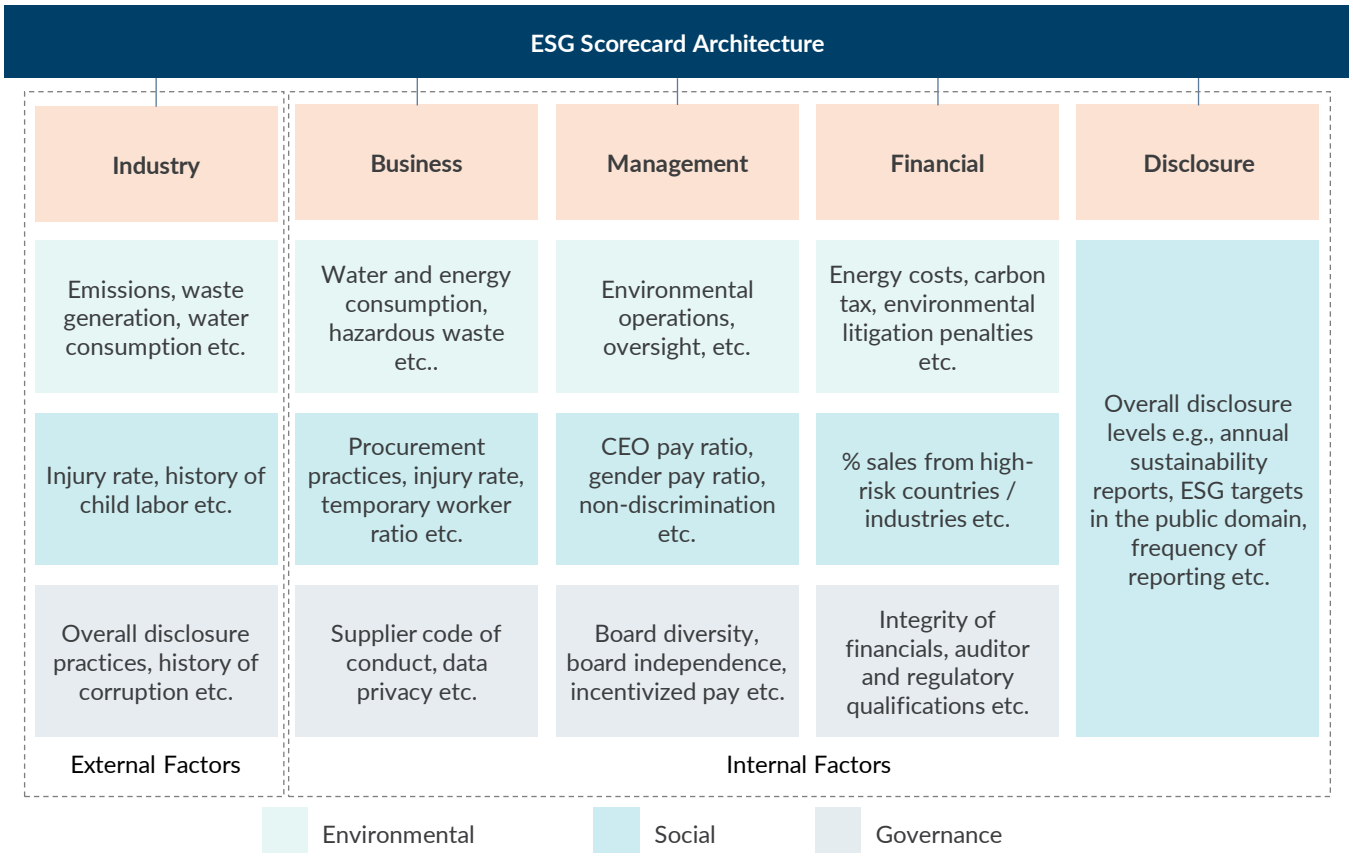
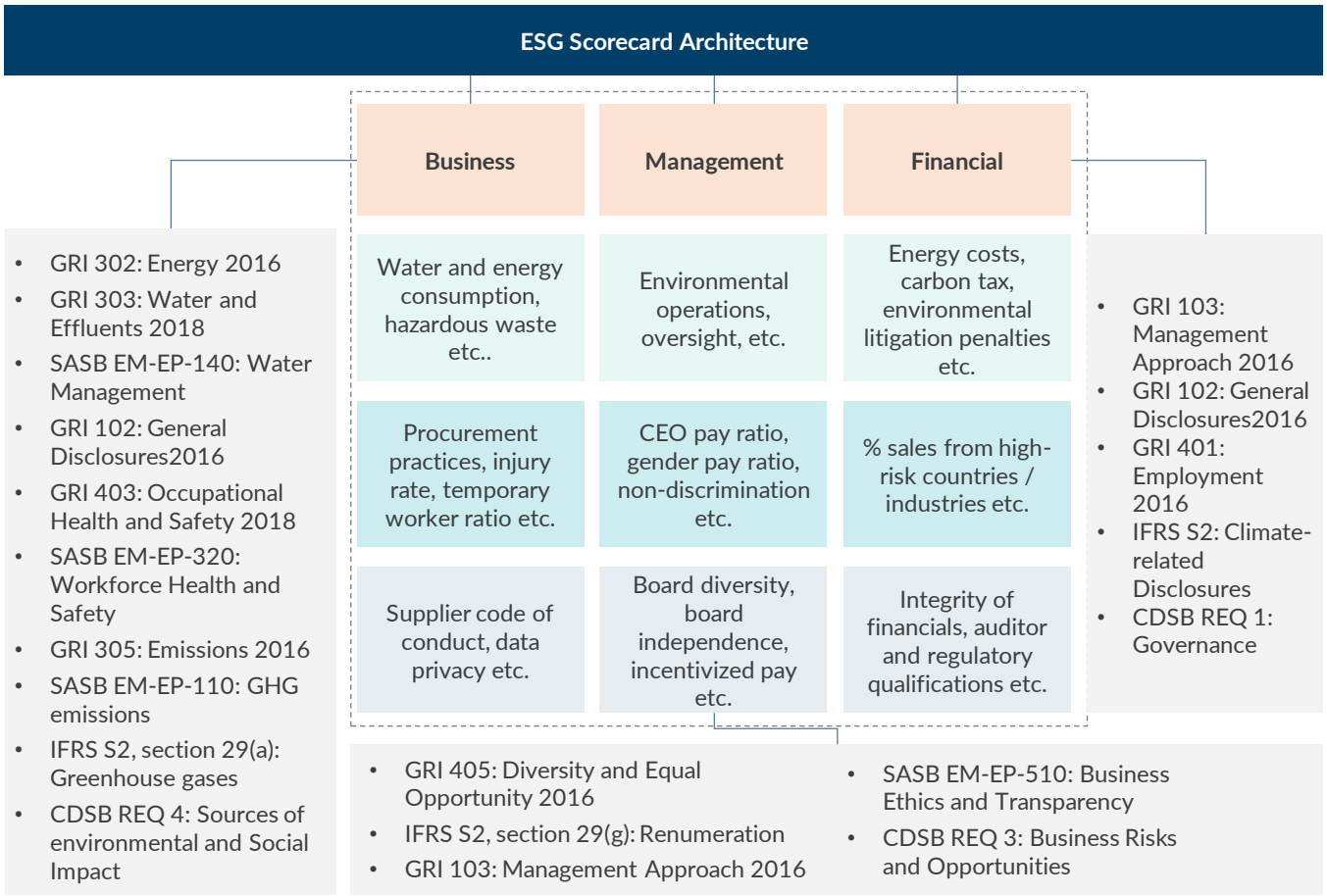


Figure 11: Mapping of ESG metrics to global reporting standards

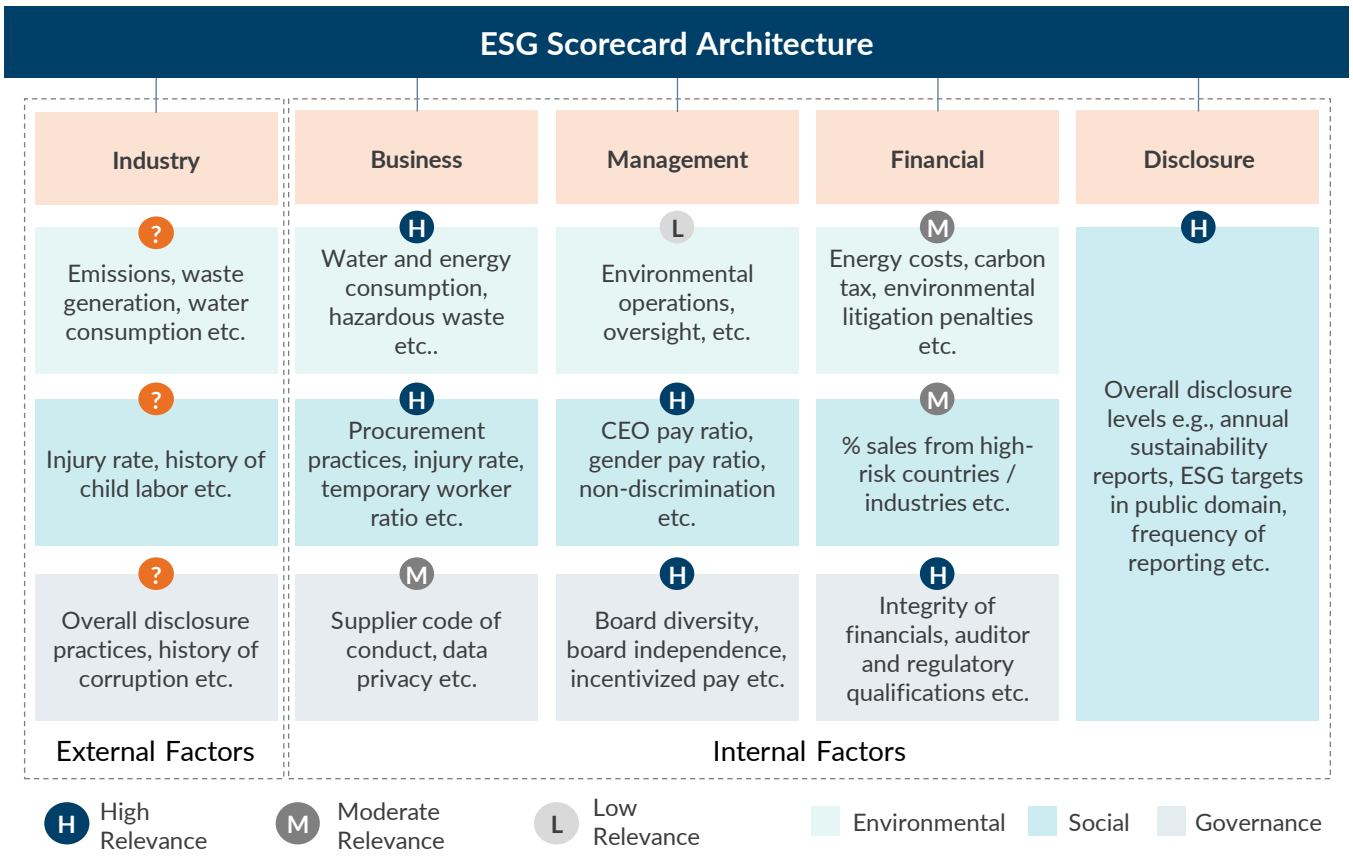


B. Assign relative criticalities (weights) to identified metrics

It may be noticed that the dimensions identified in the previous steps have varying levels of significance across environmental, social, and governance-related factors. For example, an assessment of environmental metrics may highlight concerns about an organization's business risk but may not yield significant insights towards its management risk. Reframing this challenge from the perspective of model design, it may be possible to define the environmental metrics for the dimension of 'business risk' more readily compared to those for 'management risk'. On the other hand, the latter may have more relevant governance-related metrics compared to the former.

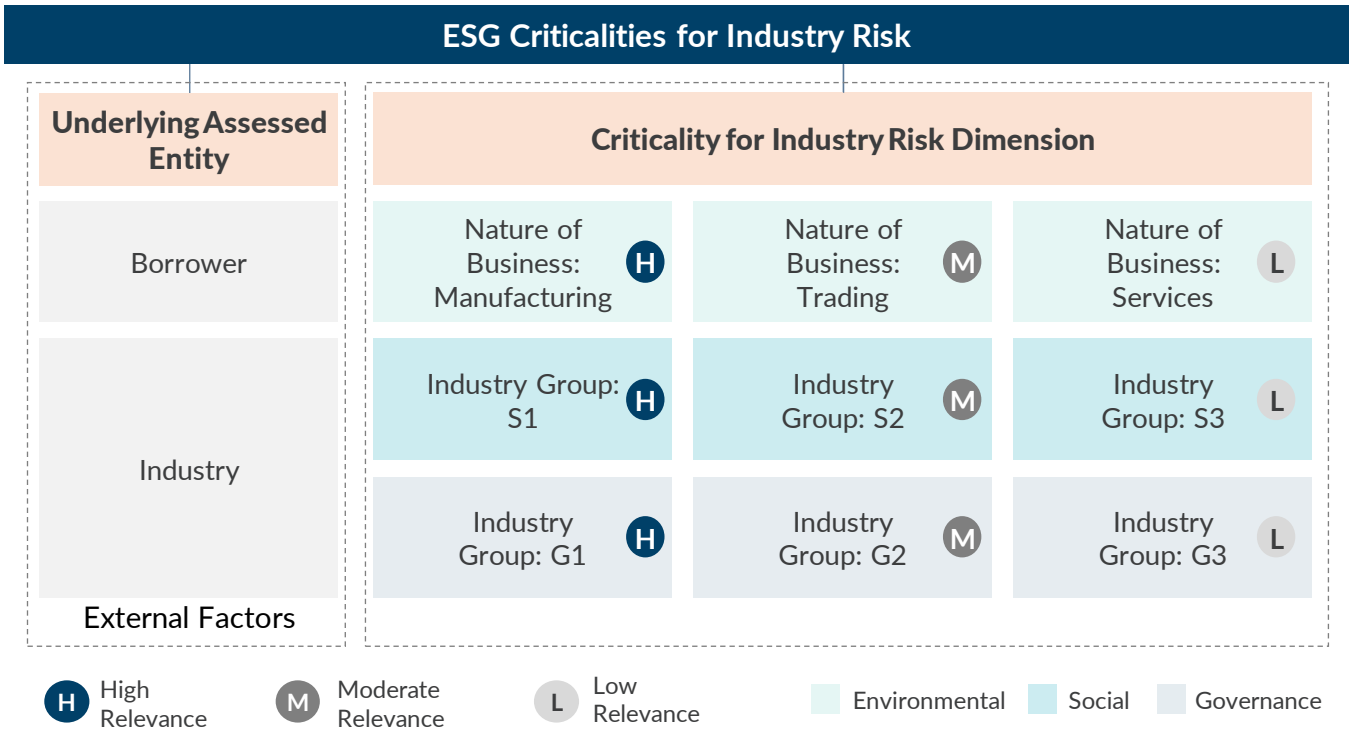
Accordingly, banks can consider accounting for the difference in relative criticality of various metrics in this step through the assignment of weights to each dimension across E, S and G categories. The weights may be of a categorical nature (for example, across a 3-point scale such as 'high', 'medium' and 'low') due to the subjectivity involved in their assignment. **Figure 12** highlights an illustration of relative criticalities applied to the dimensions identified in Steps 4.1 and 4.2.

Figure 12: Illustration of relative criticalities applied to identified ESG dimensions



Another specific challenge that may be observed in the above exercise is that the relative criticality of 'industry risk' across environmental, social, and governance-related factors may vary depending on the nature of the industry (indicated by '?' in Figure 12). To address the same, banks may assign the E, S and G criticalities for 'industry risk' at an industry group level, or, at a minimum, based on whether the nature of business of the borrower relates to manufacturing, services or trading. This approach is illustrated further in Figure 13.

Figure 13: Illustration of ESG criticalities for industry risk
(Illustration)



For grouping industries with respect to the relevance of social and governance-related factors, banks can leverage the industry categorization conducted by external parties such as rating agencies. Alternatively, banks may employ a qualitative approach through an assessment of the industry's fundamentals, further supported by historical data or independent industry research (subject to availability). Some of the qualitative parameters that may be considered for such an assessment are illustrated below.

Social relevance:

- Is the development of the industry part of broader developmental goals such as national vision or UN SDGs?
- What is the percentage of the national workforce employed by the industry?
- Is there a history of adverse human rights records associated with the industry?
- What are the average employee turnover levels in the industry?
- Is there a high prevalence of health and safety incidents associated with the industry?
- Have there been incidents of litigation/payouts related to social factors in the industry?

Governance-related relevance:

- What is the degree of unionization among employees in this industry?
- Is there a high prevalence of whistleblowing incidents in the industry?
- Does the industry have a history of/ high susceptibility towards data privacy breaches?
- Is there a history of greenwashing associated with the industry?
- Have there been incidents of litigation/ payouts related to corruption/ governance breaches in this industry?

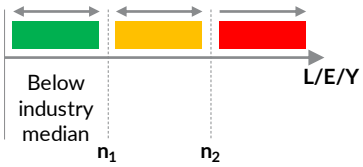
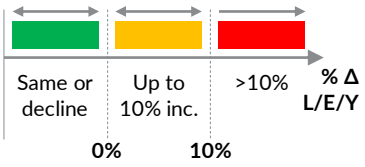
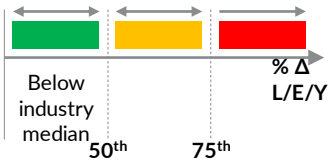
C. Define units, limits and tolerances

In this step, banks can define units and assign specific limits and tolerances to the individual metrics identified in the previous steps, expressed either as qualitative or quantitative measures. Such measures may be defined through a traffic light approach, where the tolerances (amber or alert zones) represent triggers for highlighting potential breaches of limits (red or unacceptable zones) and provide a buffer for the bank to undertake timely corrective action and move back to the acceptable operating levels (green zone). Banks may also define zero-tolerance measures as cultural drivers of acceptable and unacceptable behavior.

Figure 14: Example of defining units, limits, and tolerances for a sample ESG metric

Figure 14 illustrates this step for representative metrics across E, S and G categories. Similar to the approach in Step 4.2.A., banks may leverage units and limits that are required or emphasized by local regulations or global standards for a standardized and comparable assessment across borrowers.

Category	Metric	Guiding Framework
Environment	Water Consumption	GRI 303, CDP Water Security Reporting Guidance 2018

	Option 1	Option 2	Option 3
Description	Standalone – Absolute	Standalone – Trend	Relative to Industry
Definition	Water consumption per employee per year.	YoY change in water consumption per employee per year (avg. for last 3 years)	Water consumption per employee per year w.r.t industry median
Unit	Litres/Employee/Year	% Change in Litres/Employee/Year	% Change in Litres/Employee/ Year w.r.t Industry Median
Limits and Tolerance			
Pros	+ Easy to measure.	+ Easy to measure. + Indicates effectiveness of borrower's measures to reduce E-impact.	+ Factors in industry usage and benchmarks.
Cons	- Does not factor in trends or industry benchmarks.	- Does not factor in trends or industry benchmarks. - Absolute consumption may still be high. Borrower's may not have historical data.	- Requires industry related detailed data.

Potential Road map

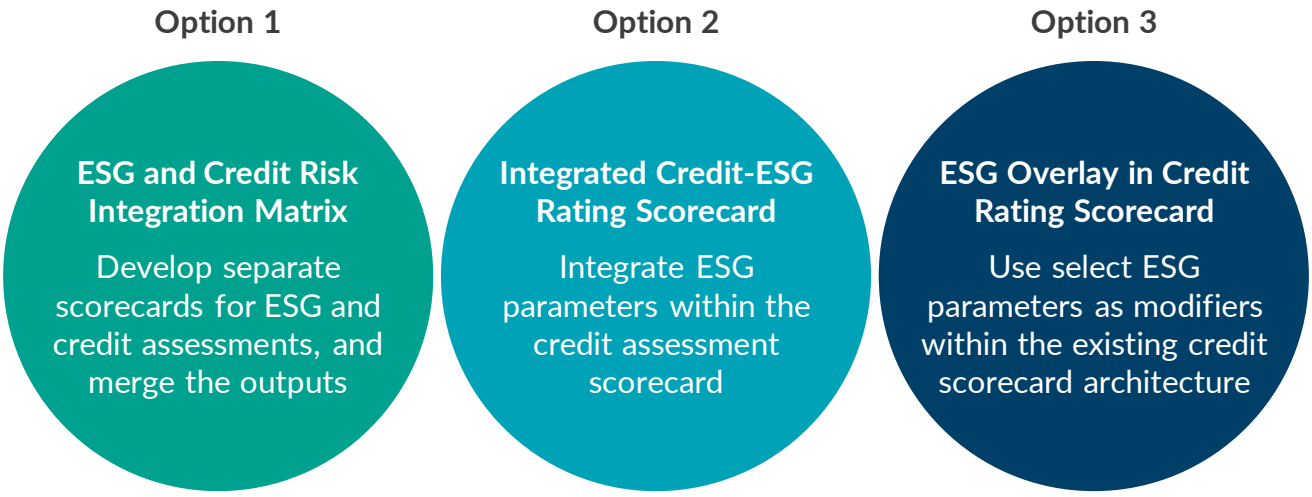
	Short Term	Medium Term	Long Term
Large Corporate Groups	Option 2	Option 3	
Medium Corporates	Option 1	Option 2	Option 3
Small & Medium Enterprises		Option 2	Option 3

4.3. Define the mechanism for scoring and integration with credit decision-making

In the previous steps, we have defined a base architecture of the ESG assessment framework including the library of ESG dimensions, metrics, and their limits. The next step involves combining the evaluation of individual metrics to arrive at a consolidated ESG profile of the borrower, and further integrating the same with the credit assessment to arrive at a holistic risk profile of the borrower.

Figure 15 highlights the various approaches banks may use to integrate the ESG assessment methodology developed above with its traditional credit assessment.

Figure 15: Approach for Integration of ESG Assessment with Traditional Credit Assessment



Option 1: Develop separate scorecards for ESG and credit assessments, and merge the outputs

- In this case, banks will have two outcomes which may be merged to arrive at an adjusted rating
- An illustrative merging approach is highlighted in **Figure 16,** where the values in the cells indicate how many levels the credit-based rating output must be notched down based on the ESG output

Figure 16: Rating adjustment (notch-down) matrix

Rating adjustment (notch-down) matrix		Output of ESG scorecard*				
		ESG1	ESG2	ESG3	ESG4	ESG5
Output of credit risk scorecard*	CR1	0	1	2	3	4
	CR2	0	1	2	3	4
	CR3	0	1	2	3	3
	...	...	...	...	...	...
	CR10	0	0	0	0	0

**On an illustrative 5-point scale, with a higher numerical suffix indicating a higher risk level*

Option 2: Integrate ESG parameters within the credit assessment scorecard

- In this case, there will be a single score/ output linked to a corresponding probability of default
- Examples of this option:
  - The assessment of industry risk may factor in ESG-specific parameters e.g., industries considered inappropriate from an ESG point of view such as tobacco, alcohol, weapons etc.
  - Assessment of business risk may include ESG-specific risks e.g., litigations around environmental or social controversies, labor unrest etc.
  - Assessment of management risk may include factoring in past violations of prudential norms of responsible corporate behavior including environmental, social and governance-related norms related to human rights, working conditions, child labor, anti-corruption etc.

Option 3: Use select ESG parameters as modifiers within the existing credit scorecard architecture

- Similar to Option 2, there is a single score/output, but in this case, ESG parameters may be used as modifiers within the existing scorecard architecture.
- For example, each pillar within a credit scorecard may be notched up/down based on certain ESG criteria (instead of only modifying the end score as in Option 1):
  - Industry risk
  - Business risk
  - Management risk

The selection of the most appropriate option for a particular bank will depend on various considerations such as:

- Complexity of integration methodology
- Impact on the ability to explain model output
- Impact on the stability of existing models
- Operational challenges such as the need for training and impact on systems

Figure 17: Comparison of approaches for integration of ESG and credit assessment

Figure 17 highlights the comparison of the integration approaches based on the considerations highlighted above.

	PROS		CONS
Option 1 **ESG and Credit Risk Integration Matrix** Develop separate scorecards for ESG and credit assessments, and merge the outputs	Provides flexibility if ESG factors do not need to be included in the underwriting decision for certain portfolios / cases	01	The need for alignment with existing credit scorecard imposes limitations when designing the ESG scorecard
	Eliminates need to update / modify the existing credit rating system	02	Introduces more steps and increased complexity on acceptance / rejection threshold decision process
Option 2 **Integrated Credit-ESG Rating Scorecard** Integrate ESG parameters within the credit assessment scorecard	Simplifies the scorecard usage process	01	Restricts ability to bifurcate scorecard output into ESG versus credit concerns
	Provides a foundational structure and does not need development of a separate ESG scorecard from scratch	02	The addition of ESG parameters to existing risk dimensions of the score-card may cause a concern of the model's stability
Option 3 **ESG Overlay in Credit Rating Scorecard** Use select ESG parameters as modifiers within the existing credit scorecard architecture	Simplifies the scorecard usage process	01	Involves more qualitative judgments
	Takes into account the cause/ effect of the ESG with existing risk categories	02	Restricts ability to cover additional risk dimensions beyond the original metrics*

**For example, if the credit scorecard assesses the risk dimensions of management, business and financial risks, then Option 3 would allow modification of the dimension-level scores based on ESG overlays or concerns but cannot incorporate analysis of additional ESG dimensions such as industry risk (as it is not part of the credit scorecard architecture).*

05. Other factors for Operationalization

To ensure success in terms of operationalization and ongoing usage of the developed approach, banks may need to factor in additional initiatives towards building ESG capacity, investing in relevant data architecture and systems, and integrating ESG factors into the larger risk management framework of the bank. **Figure 18** highlights these considerations in greater detail.

Figure 18: Additional considerations for ESG integration

BUILDING ESG CAPACITY

- Training across all three lines of defense
- Hiring people with subject matter expertise who understand the science.

INVESTMENT IN TECHNOLOGY AND DATA

- Bridging the data gap: build or buy, reliance upon 3rd party data sources, internal model development vs. reliance upon 3rd party tools
- Enhancing reporting: KRI/ KPI risk limits, ESG-related policy exception monitoring etc.

RISK MANAGEMENT FRAMEWORK

- Alignment of ESG risks into existing risk taxonomy
- Ensuring the Board of Directors has a line of sight to ESG risk management: regular reporting to Board Risk Committee

In addition to the above considerations, banks will need to ensure that the identified integration framework is aligned with their larger business strategy and risk appetite, expressed in the form of specific and measurable ESG targets. As guided by the Central Bank of Bahrain* in its recent ESG Module, such targets should also be quantitative or directional, and be regularly reviewed and updated to ensure they remain relevant and achievable.

Banks will also need to contextualize their framework to regional nuances to ensure on-the-ground success. For example, given the GCC region's traditional reliance on energy-intensive sectors, banks may have to segment their customers based on their industry and put in place a phased roll-out of limits and tolerances as their customers gradually orient themselves towards more prudent ESG practices.

**Central Bank of Bahrain ESG Requirements Module, released in November 2023*

Regulators will need to ensure a supportive environment that encourages banks' ESG integration efforts. This may involve updating existing regulations to reflect the changing dynamics brought about by investors' ESG focus and publishing consultation papers to address new challenge areas. Some initiatives that can be taken in this space may include standardizing the reporting requirements and metrics' definitions for borrowers, publishing industry-specific and regionally relevant benchmarks for critical ESG parameters and establishing centralized repositories such as those for climate risk data that banks may leverage for a broader use such as stress testing.

Given the critical role of borrowers' ESG performance towards ensuring the overall sustainability of the GCC region's banking sector, banks must leverage prudent and practical measures to assess their borrowers' ESG risks and integrate them effectively as part of the overall credit risk assessment.

About Protiviti

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