KPMG

ESG risks in banks

Effective strategies to use opportunities and mitigate risks

KPMG International

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Foreword

Environmental, social, and governance (ESG) issues as well as their associated opportunities and risks are becoming more and more relevant for financial institutions. For banks, sustainability is not just an ethical, but may soon enough also become an economic and existential question — generating a new type of risk: ESG risk. Banks ought to approach ESG risks in a holistic fashion when embedding them into their risk management frameworks. This process includes adjusting business and risk strategies and corresponding risk appetite statements, making sure roles and responsibilities are fully transparent throughout all three lines of defense.

While ESG risk is not a fully stand-alone risk type, it exerts influence on financial and non-financial risks present in a bank to varying degrees. Hence, risk management methods and processes must be amended, considering the complex cause-effect-relationships across risk types. This involves risk measurement/assessment techniques in run-the-bank and in change-the-bank processes as well as in stress testing applications.

Besides embedding ESG into risk frameworks, banks need to consider related issues in product design, pricing and sales decisions. Also, an appropriate consideration of ESG risks in a wide range of change processes is of vital importance for fostering profitability. Several tools developed by KPMG can help banks to master those challenges.

Last but not least, regulators, rating agencies and other parties around the world are taking a keen interest in the topic, leading to increasing requirements and reporting needs. This constant flow of new regulations is bringing extensive compliance challenges for banks.

This white paper explores these issues. It reviews ESG factors and sustainability issues in the banking sector, highlights possibilities to embed these aspects into risk frameworks along the risk management process and shows parallels that can be used to learn from the current COVID-19 crisis. This paper proposes a holistic approach to ESG risks within risk management.

Contents

ESG and sustainability in the **banking sector** — banks need to act

Sustainability has been an overarching goal of global and local organizations together with governing bodies from the mid-2010s. The Paris Climate Protection Agreement, which obliges 195 countries and territories to change the global economy in a climate-friendly manner, marks an important milestone for international climate policy. In December 2015, it was decided to limit global warming to 1.5 or a maximum of 2 degrees celsius compared to pre-industrial times. To the same extent, the United Nations' 2030 Agenda for Sustainable Development, launched in 2015, with the 17 Sustainable Development Goals (SDGs) has a catalytic effect for a global economy geared towards ecological and social goals.

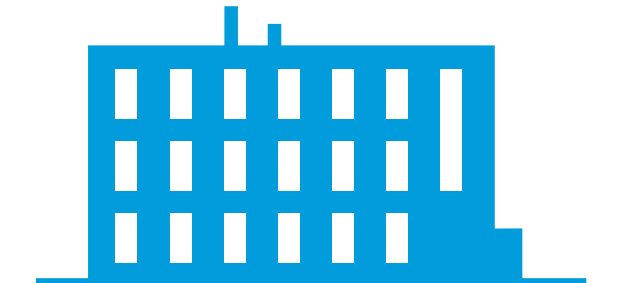
Banks have long been concerned with sustainability in a mostly fragmented fashion. However, due to the confounding flood of information and speculations about future regulatory changes, it is **difficult for most institutions to develop a comprehensive strategy for ESG factors.**

While the Paris Climate Protection Agreement and the United Nations' 2030 Agenda for Sustainable Development are not industry-specific, initiatives have been started to involve the financial services industry specifically, confronting them with the challenge to reconcile sustainability and economy. The stated goals of the EU Sustainable Finance Action Plan — one of the most important publications of our day — are the realignment of capital flows toward sustainable investments, the inclusion of sustainability in risk management as well as the promotion of transparency and longevity. Consequently, a broad range of EU regulations are in the process of significant changes. KPMG professionals are seeing well-established organizations like the Bank for International Settlements (BIS), the European Central Bank (ECB), the European Banking Authority (EBA) as well as relatively new associations like the Network for Greening the Financial System (NGFS) publishing an ever-growing stock of papers.

It is to be expected that ground-breaking regulations in the context of sustainability — like the EBA Action Plan on Sustainable Finance — will come into force during the next 2 years. Banks have long been concerned with sustainability in a mostly fragmented fashion. However, due to the confounding flood of information and speculations about future regulatory changes, it is difficult for most institutions to develop a comprehensive strategy for ESG factors.

Furthermore, sustainability is rapidly gaining importance in society and increasing awareness for issues such as climate change, social inequality or corporate misconduct and is changing the market environment rapidly. Investors across the globe are showing a greatly increased demand for sustainable financial products. Sustainability and corporate conduct are influencing the reputation and business success of financial institutions. Thus, the trend toward sustainability has the potential to drastically transform the global banking sector.

Doing nothing and waiting is not an option. Banks that do not act now will hardly have the chance to integrate regulatory requirements regarding sustainability into their frameworks in good time, let alone adapt to the changed market requirements. Furthermore, simple solutions are rare: abandoning a long-term relationship with an automotive supplier, for example, who presumably will not adequately (quickly enough) manage the conversion to alternative drive components, can lead to a loss of the bank's reputation among this customer group. The continuation of such business, in turn, can upset other stakeholders (such as NGOs) who may accuse the bank of unwillingness to support the transformation process to a sustainable economy.

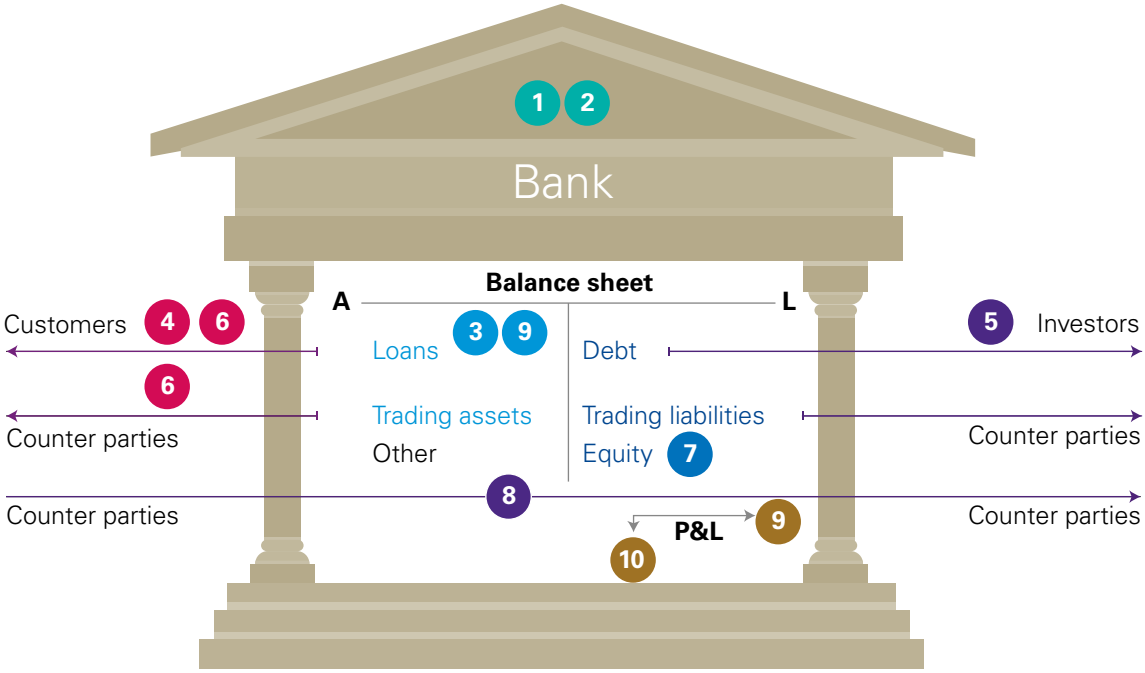


Banks need to respond to this with the following actions:

01 Revision of their business strategies in relation to their target customers, new products, etc.

02 Sharpening of brands and creation of sustainability strategies.

03 Implementation of updated regulatory frameworks along their entire value chains.



1 Consideration of sustainability in the **business strategy** and the organizational setup/**governance**

2 Adjustment of **product and customer portfolio**

3 Identification/classification of sustainable **assets**

4 Offering of sustainable **financing to customers**

5 **Refinancing** with sustainable instruments

6 Consideration of ESG (risk) in **pricing & risk management**

7 Consideration of ESG risks within the **capital charge**

8 Inclusion of ESG criteria in the **distribution process** (including MiFID)

9 **Reporting** of own ESG risks and their impact to supervising authorities and stakeholders

10 ESG **Data Management**

Figure 1: Sustainability is expected to affect banks along their entire value chains both from strategic and operational perspectives — and create new opportunities.

Source: ESG risks in banks, KPMG International, 2021

Despite all the challenges posed by upcoming regulatory and market changes, there also is an opportunity for banks here: Apt anticipation can be used for active positioning. For instance, the EBA Action Plan on Sustainable Finance encourages institutions to proactively incorporate considerations concerning ESG factors into their business strategy and risk management as well as to integrate ESG risks into their business plans, internal control frameworks, and decision-making processes. With these suggestions, the consideration of ESG risks are foregrounded.

Focusing on ESG risks

Since the concept of sustainability was introduced into the financial sector, a new type of risk has been emerging: sustainability risks, also referred to as environmental, social or governance (ESG) risks. These focus on the potential effect an organization's stakeholders (such as customers, outsourcing suppliers, employees, or the environment) may exert and in reverse, the impact that the organization may have on its stakeholders and the environment due to its activities. When occurring, ESG risks will have or may have negative impacts on assets, the financial and earnings situation, or the reputation of a bank.

ESG risks include environmental risk, social risk and governance risk and the resulting impact on banks' P&L and liquidity. The specialty of the topic concerning banks/the banking sector is that ESG risks can affect the bank directly (e.g. storm damage to bank buildings), but also affect customers (change in sales opportunities, production disruptions, etc.) leading to, for example, higher loan defaults.

Due to the current political debates, presumably also due to materiality considerations, the focus is currently on the environmental risks and the sub-topic of climate change. For their part, environmental risks are divided into physical risks and transition risks:

— Physical risks arise if economic activities or their value are threatened directly by failure to achieve climate-related objectives (e.g. the direct effects of climate change on the water supply of industrial companies). They can materialize as acute risks (i.e. individual, non-regular physical risk events) or as chronic risks (i.e. permanent deterioration in ESG target achievement with lasting adverse effects on own economic activities).

— Transition risks arise if the business model that economic activities are based on is permanently endangered by systemic changes and its own negative ESG impact (e.g. the effects of political measures to combat climate change and their impact on manufacturers of combustion engines).

Environmental risks

Physical risks

— Supply chain collapse
— Sea level rise
— Droughts

Transition risk

— Reactions of legislator/regulator to promote sustainability or bans on unsustainable activities (e.g. CO_2 tax)
— Structural changes in demand and supply for products, services and commodities

Social risks

— Noncompliance with labor standards
— Inadequate payment of labor
— Lack of assurance of industrial safety standards and health protection for employees
— Lack of assurance of product safety

Governance risk

— Compliance with tax law
— Corruption or attempted bribery
— Inappropriate senior management compensation
— Lack of proper assurance of data protection

Figure 2a: Examples of ESG risks

Source: ESG risks in banks, KPMG International, 2021

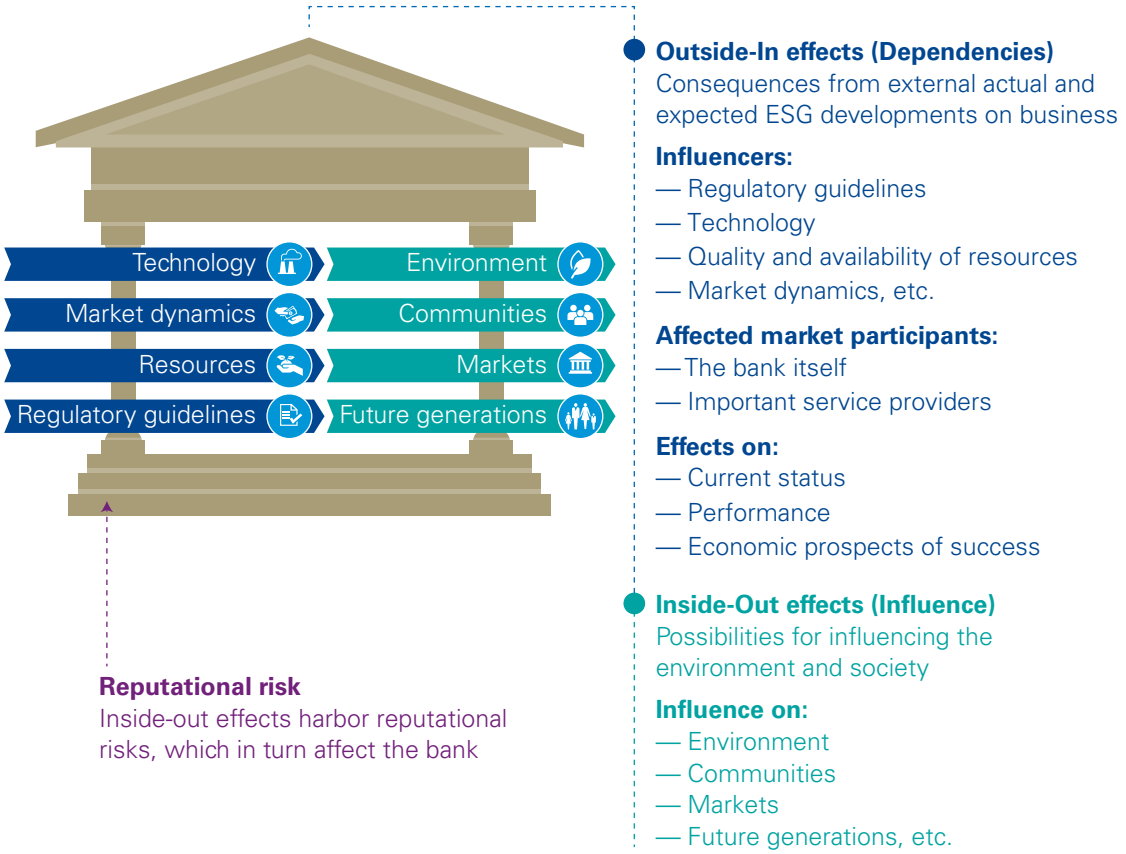


Figure 2b: Dependencies & Influences of ESG Developments

Source: ESG risks in banks, KPMG International, 2021

In addition to their different characteristics described above, two dimensions can be distinguished regarding ESG risks, a **financial** as well as an **extra-financial** dimension.

— With regard to the financial dimension, the key question banks must ask themselves is: "What ESG risks and opportunities does the business model of our customers and investments hold and what does this mean for our business model?"

  This dimension is closely linked with the outside-in effects of ESG, i.e. the consequences from external current and expected ESG developments on businesses.

— In contrast, the extra-financial dimension considers the impact a bank has on the environment and society. The key question reads: "What opportunities will arise from sustainable products and sustainable trading, and how can reputational risks be avoided?"

  This addresses the inside-out effect, i.e. the results of a bank's actions on environmental or societal issues.

However, once outside-in and inside-out effects have arisen and triggered further reactions, they are no longer easily distinguishable, at the latest after the occurrence of second-round effects.

Reputational risks in particular act as transmitters between customers and the bank. Inside-out effects harbor reputational risks, which in turn is expected to affect the bank. After a series of rounds of cause-an-effect relationships, it is no longer possible to distinguish when and where original effects were caused.

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Excursion: Similarities between COVID-19 and ESG risks

The current COVID-19 crisis and its impact on banks has a lot in common with ESG risks. Thus, an unexpected opportunity opens up in observing the current crisis: Banks can leverage the (unfortunate) experience with COVID-19 to better cope with future ESG risk challenges.

Similar to ESG risks, COVID-19 creates various effects and risks that affect banks at different levels.

To begin with, banks are directly affected (akin to physical ESG risks) by COVID-19 via the following factors (among others):

- Higher sickness rates leading to a reduction in workforce
- Shutdowns in various countries, territories and states, which largely requires homeworking, leading to frictions
- Travel bans hindering international business
- Issues with network capacity, cyber risk, and IT security.

These developments are particularly effective in the operational risk area much alike ESG risks. They can also exert additional impact on reputation, in case stakeholders' expectations are not fully met, even after discounting for some crisis-induced goodwill. Subsequently, business and liquidity risks are likely to surface while demand for some banking services can decrease and customers can withdraw their deposits.

Just as with ESG risks, the strength of the impact of the changes depends heavily on the industry in which companies operate. That means banks' clients are often hit even harder by the crisis, depending on the industry segment they operate in. In addition to the points above, issues clients are facing include:

- Government orders to shut down various businesses for an undefined period (e.g. restaurants)
- Breakdown of supply chains (hitting global suppliers particularly hard)
- Massive decrease in demand (domestic and abroad).

Outside-in effects, which in turn affect banks due to the issues mentioned, can be noticeable through an increase in defaults. These are expected to occur both in commercial as well as in retail banking, e.g. due to clients becoming unemployed. Also, an impairment of assets (including collaterals) must be expected because, for example, commercial real estate is difficult to rent in times of crisis.

Not only clients are negatively affected by COVID-19 however; the same can happen to outsourcing partners and suppliers of banks. In this case services are expected to be of reduced quality or fail completely.

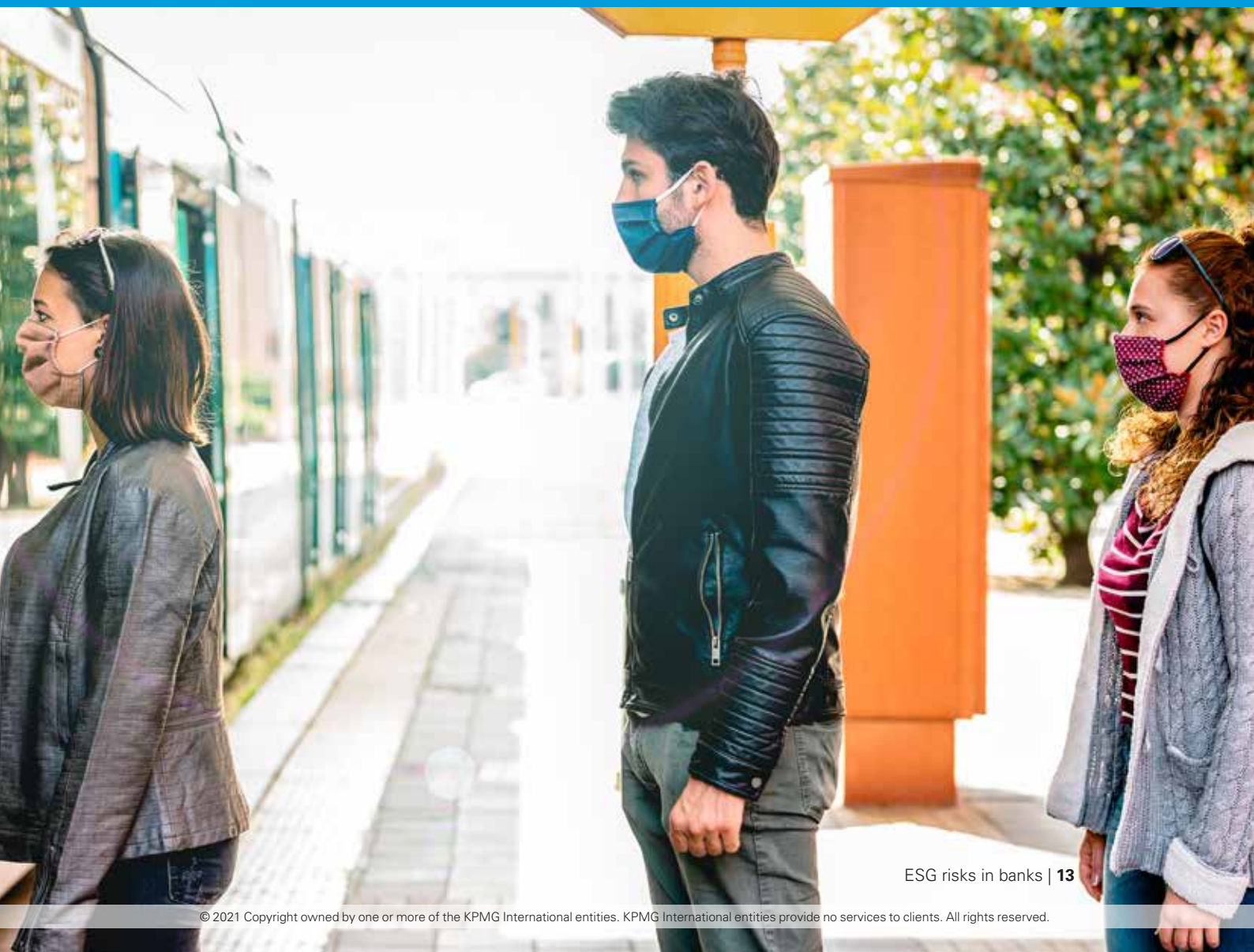
Finally, similar to the transition risks that are described in connection with ESG risks, governments are exerting extensive influence on people and business. This again both is expected to affect banks directly (e.g. if employees are put in quarantine) as well as their clients and suppliers (e.g. if additional business segments are forced to close).

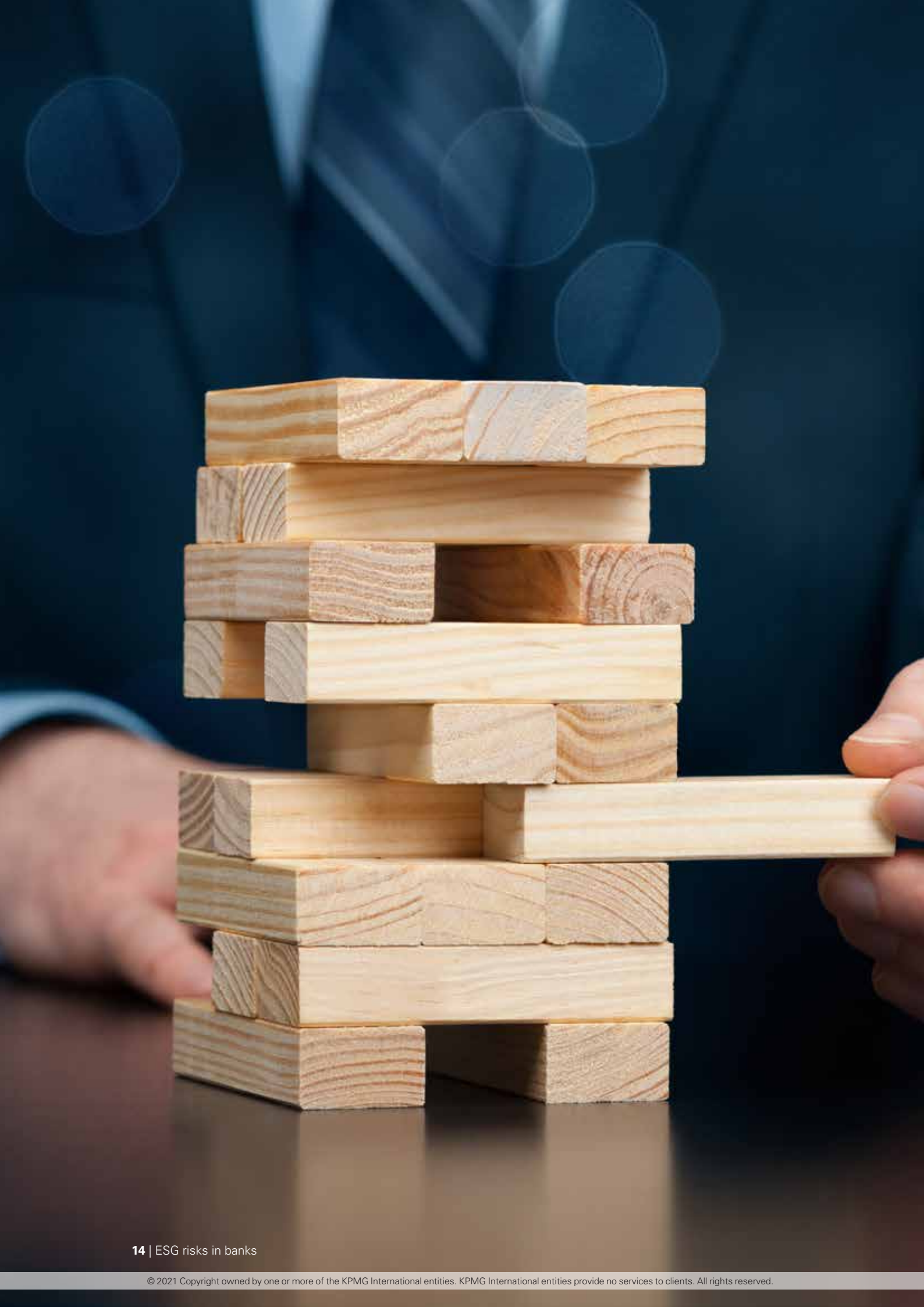
The main difference between the COVID-19 crisis and ESG risks is in the relevant time frames. While ESG risks are subject to a multi-year, largely transparently planned transition, interventions in the COVID-19 crisis are changing almost daily, with little predictability, forcing banks to adapt quickly to changing, unpredictable environments.

In the current pandemic, banks only have the option to react quickly, mostly in an ad-hoc manner. However, if they also use the crisis to investigate direct and indirect effects of external triggers, they can plan for similar transmission channels for future ESG risks.

Banks' ability to cope with COVID-19 as well as with ESG risks largely depends on their level of maturity in terms of operational resilience. Frameworks for operational resilience are designed not only to preserve business continuity, but also to enable organizations to permanently adjust to changing conditions. Investing in those frameworks can pay off in multiple ways.

Banks can leverage the (unfortunate) experience with **COVID-19** to better cope with future ESG risk challenges.





Risk Management Framework

for dealing with **ESG risks**

Naturally, dealing with risks is an inevitable and essential element in most financial institutions and banks cannot avoid the risk inherent in their businesses. Therefore, risk management is a key priority for the industry and its own sustainability. The common thread running through risk categories banks are used to dealing with (i.e. credit and counterparty risks, market risks, liquidity risks, operational risks, etc.) is that they all concern the impacts of the risk on the institution itself. However, with ESG risks, risk management must consider new perspectives, for example, not only the impact ESG risks have on the organization, but also the potential impact of stakeholders on the bank and vice versa the risks to which the bank is exposing its stakeholders and the environment due to its business activities.

ESG risks must be met on all the above — mentioned perspectives. This requests a holistic approach when embedding them into the risk management framework of a bank, starting with a sound risk governance and a sensible risk strategy before implementing these risks into the risk management cycle.

Governance

A sound governance structure is a key element of effective risk management processes. ESG risks can affect all divisions and departments of a bank and the various parts of the three lines of defense model, including profit and cost centers. While the establishment of a central coordination unit for ESG risks can be beneficial, enhancing the roles and responsibilities of existing units is key.

Profit centers in the first line of defense affected by ESG risks include credit and trading business divisions. They have to consider ESG risk factors in their product development as well as their pricing and sales processes. This consideration should especially focus on the impact of ESG risk factors on financial risks and reputational risks. Dealing with ESG risks needs to become an embedded activity in all relevant processes. For instance, clear decision criteria and control mechanisms must be anchored in the lending process: ESG factors have to be checked and assessed in the course of lending, similar to the examination of reputational risks in the KYC (know-your-customer) process. This means that assessments must not only be implemented initially when granting loans, but also recurring regularly, surveying all corporate customers.

Dealing with **ESG risks needs to become an embedded activity in all relevant processes**. For instance, clear decision criteria and control mechanisms must be anchored in the lending process: ESG factors have to be checked and assessed in the course of lending, similar to the examination of reputational risks in the KYC process.

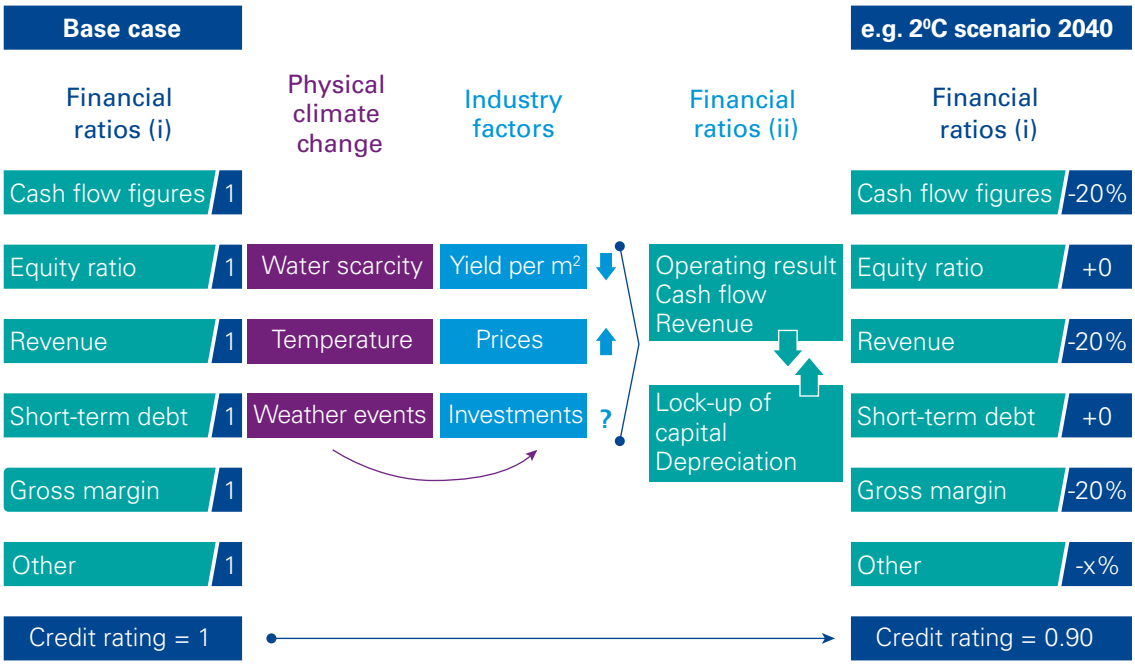


Figure 3: Example: Physical climate change and credit rating in a PD model

Source: ESG risks in banks, KPMG International, 2021

Cost centers assuming a first line of defense role typically already consider a broad range of non-financial risks in a specialized manner. Still, they will have to amend their risk management processes accordingly. This includes the enhancement of (qualitative) risk assessment methods and tools by including ESG risk-related aspects and questions. The connection to non-financial risks (operational risk and reputational risk in particular) has to be made.

The second line of defense includes, but is not limited to, Risk Controlling, Compliance, and Business Continuity Management (BCM) functions. Risk Controlling must develop the methods, processes and tools for dealing with ESG risks (starting with an amended risk inventory) and include results in risk reporting. Compliance in turn has to examine if the entity meets legal or voluntarily introduced ESG guidelines. After all, BCM must regard ESG risks as a trigger for business disruptions and provide for continuity.

Internal audit as the third line of defense has to make sure that all relevant processes include aspects of ESG risks in an adequate manner and that they are being met consistently.

Risk strategy

In order to achieve sustainable development, financial institutions are required to define and implement a sensible business strategy. Doing so, the discussion of motivation behind incorporating sustainability can serve as a starting point to the examination of upcoming challenges and necessary courses of action in the development and implementation of a business strategy. The motivation for considering the topic can range from purely economic, regulatory and/or legal reasons to intrinsically driven social and/or ecological motives. Depending on the respective motivational goals, external sustainable projects can be supported through purely financial support up to support by content engagement. As business strategies move along a maturity ladder based on motivation, the degree of integration into the business model varies from little more than some corporate social responsibility (CSR) activities to embracing ESG as a core part of the business model. The closer ESG aspects are to the core part of a bank's business model, the closer the activities have to be aligned and the more senior the managers in charge of ESG topics need to be.

The risk strategy on ESG risks has to be aligned closely with the business strategy and constantly updated. One key issue definitely to be included is concentration risk: Concentration risk from ESG factors arise because on the one hand ESG risks are in complex cause-effect-relationships across risk types within a bank. On the other hand, especially due to transition risk, companies within the same or related industries are simultaneously affected — as well as the banking sector doing business with them. These possible developments must be anticipated by the risk strategy.

The risk strategy then needs to be operationalized through a corresponding system of Risk Appetite Statements. Starting with an inspection of ESG risk factors across all risk types, quantitative and/or qualitative limits can be assigned on an aggregate level and finally be broken down into individual risk types.

When taking ESG risks into account in their strategies, banks must keep in mind that ESG risks' planning horizons, are usually much longer than the 3–5 years traditionally considered in business and risk strategy design. This especially applies to the climate-change aspects of ESG risks. Furthermore, the characteristics of business relationships and products (duration of contracts, maturities of financial instruments, etc.) should be acknowledged.

Risk management cycle

One of the greatest challenges is to break down the topic of sustainability risks to individual or partial aspects, but not to treat them completely distinctly. Sustainability risks are in complex cause-effect relationships: on the one hand between customers, service providers and the bank, and on the other hand between the individual types of financial and non-financial risks. These need to be made transparent and appropriately considered in the risk management process.

Identification

The identification of ESG risks highly depends on location. The physical dangers that banks and their customers see themselves exposed to (e.g. weather damages to assets, danger to employees due to political unrest, or the effects of persistent droughts) are of course determined by which locations are particularly important for maintaining the respective businesses. Physical risks are also dependent on the respective business model.

Transition risks, however, are not only dependent on the business model, but also on behavior. A bank's own non-ESG-compliant behavior can cause reputational risks. This in turn, can — together with a stronger ESG awareness of stakeholders — lead to legal disputes, i.e. legal risks are increased.

Identification could start by considering ESG risk factors in the risk inventory, thus expanding the risk landscape. Due to the broad range of dependencies across financial and non-financial risks, ESG risks cannot be assessed in a linear fashion. Instead, ESG risks have to be identified by investigating cause-effect relationships and/or common triggers. ESG risks must be considered for every risk type, i.e. within each risk type an examination must be made of the extent ESG risks are apt to change the assessment of the respective risk type, ideally considering second-round effects. To run those identification steps, highly qualified personnel are required. Special training will be inevitable.

Results from this amended risk inventory process can be used as a basis for the construction of a consistent taxonomy. The design and derivation of possible scenarios as part of capital planning and stress testing also are based on these results.

Measurement and evaluation

ESG risks materialize in known risk types. For example, extreme weather conditions can manifest through credit defaults and changes in market sentiment in impairments; the coverage of climate damages can be felt through the deduction of savings and outsourced services may no longer be used.

ESG risks therefore can affect counterparty, market price, liquidity and operational risks. However, the cause-effect mechanisms require a wide range of expert knowledge along the process (e.g. on transforming climate scenarios and models into business impacts throughout the value chain).

A crucial process step in measuring and evaluating ESG risks is the assessment of the current ESG exposure. This includes the consideration of ESG risks while evaluating capital adequacy as well as calculating regulatory and economic capital.

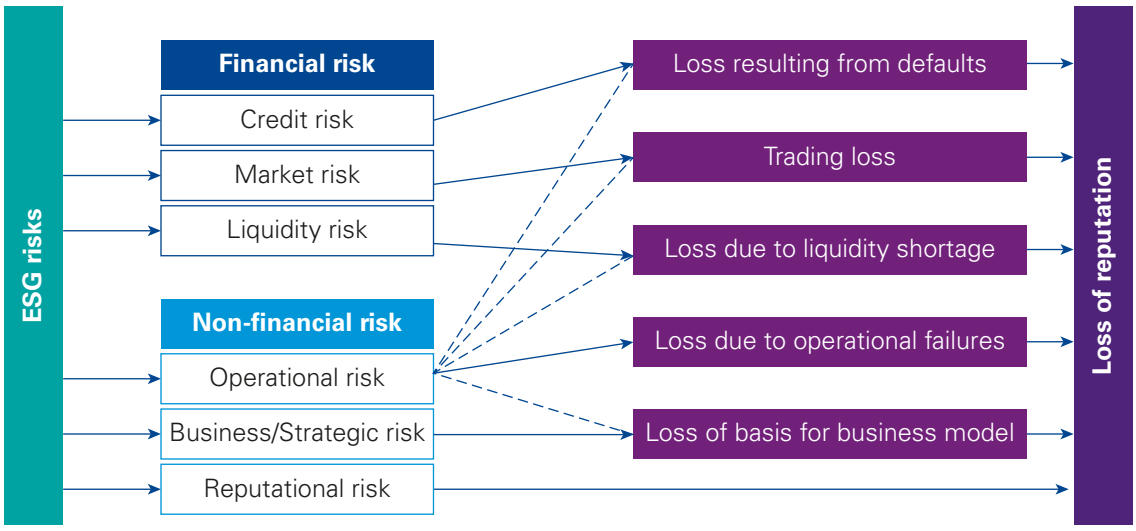


Figure 4: Identification and materialization of ESG risks

Source: ESG risks in banks, KPMG International, 2021

A crucial process step in measuring and evaluating **ESG risks is the assessment of the current ESG exposure.**

Concrete next steps for banks must include the quick and early probing of available data sources and tools for first climate stress tests. This is particularly important as supervisors such as the Prudential Regulation Authority (PRA) and the ECB are about to launch climate risk stress tests for supervised banks (see page 20). As with any prototype solution, KPMG's available tools are being continuously tested, improved and enriched with actual portfolio and ESG data.

Among the current range of tools are the following:

a. ESG risk tool for stressing credit portfolios qualitatively — A qualitative credit portfolio analysis tool that is designed to provide clarity on ESG risks and opportunities in a bank's loan portfolio and can function as the basis for further analysis, risk mitigation and implementation. The tool utilizes two scenarios as per UN SDGs — goals achieved and goals not achieved — to map the exposures of the client's credit portfolio to assessed impacts. Data regarding the client's internal portfolio structure and counterparties feed into this solution.

b. Climate IQ — A comprehensive multi-industry risk management tool that evaluates key KPIs to address the questions around a stand-alone company's exposure to climate change (both physical and transition risks) and in doing so helps formulate strategic decisions in line with business needs and regulatory requirements. The company's insight knowledge on the different value chains and properties as well as further financial company data and industry-leading climate science data feed into the tool.

c. ESG Stress Testing solution — A stress testing solution for banking portfolios that covers multiple parts of ESG and broadly covers physical and transition risk in the context of climate change. The macro-economic model and expert-driven implementation reveals impacts on the corporate loan portfolio of banks. Only few client data is needed.

d. Transition Risk prototype — Performs a transition scenario analysis of a bank's corporate loan portfolio — with a focus on the effects of carbon price changes. Compared to the previous solution this prototype is firstly principle-based (uses modeling assumptions in terms of principles) and secondly, combines borrower-specific information on financial strength and capitalization with sector-level carbon price sensitivities to evaluate the impact on scenario-expected credit losses.

One example, the Transition Risk Prototype, is described in more detail above: A deep dive into a simplified transition risk scenario analysis, recently applied to portfolios of a major European client.

These kinds of prototype solutions for top-down approaches, in combination with portfolio or exposure-level bottom analyses, can be key for banks to gradually and iteratively integrate ESG risks in their existing risk management frameworks.

A further component in this process is stress testing. Also, the assessment of effects of change the bank (CTB) projects such as the development and launch of new products, the search for new outsourcing partners, mergers and acquisition activities, and so forth is of very high importance.

There is no universal method for assessing ESG risks. For some risk types such as credit risk, adjusting parameters of existing risk models might be the solution. Quantitative models estimating how ESG factors could affect the underlying financial performance of loans may need to be developed. For other risk types (especially in the non-financial risk domain), scenario analysis can be the preferred method.

Still, consistency in approaches is key. While possibly using different methods for individual risk types, the same set of assumptions about ESG risks have to be used for all risk types.

Supervisory climate risk stress tests

Many supervisory bodies do not only push banks to develop internal climate risk stress testing and risk management capabilities, but also run or intend to run respective supervisory stress test. For example:

— The French supervisor ACPR[1] ran the first phase of its climate risk stress test for French banks and insurance companies on a voluntary basis in Q4/2020.

— The Bank of England intends to conduct a climate risk stress test for the seven largest UK firms as a Biennial Exploratory Scenario[2] in the second half of 2021.

— ECB[3] plans to run a climate risk stress test for all significant institutions in 2022.

The methodology used by the French and English authorities both push participating banks to develop new stress testing methodologies for climate risk — be it through scenario expansion to estimate PD migrations due to transition risks, or by requiring banks to analyze the clients and respective exposures one by one.

For the ECB stress test little is known in April 2021 — what is clear is that it will be the stress test with the biggest sample of participating banks so far. Given that a system-wide stress test analysis[3] conducted by the ECB has found that physical risks for many corporate loan exposures are much more severe than transition risks over a 30-year horizon, it is fair to assume that ECB's stress tests will cover both transition risks and physical risks.

For significant institutions in the Euro zone that will be required to run the ECB stress test, this means their preparation will need to cover many different areas, such as:

— Identify sources of client-specific location data (e.g. buildings for real estate financing, production sites for corporates) as basis to simulate impact from physical climate risks.

— Analyze how increased physical climate risks will impact asset valuations and the credit rating of customers.

— Expand scenario translation tools (sometimes also called satellite models), in particular to allow for sector-specific modeling of PD shifts as basis to simulate impacts from transition climate risks (see for example the methodology of the ACPR stress test).

— Analyze an initial sample of material loan exposures to better understand transmission channels of physical and transition risks impacting asset valuations and credit rating of customers.

It is expected that the ECB will publish a first methodology draft in summer 2021 — it will be beneficial for firms, though, not to wait until then but rather to start building their climate risk stress testing capabilities now.

[1] Cf. ACPR's website for climate risk stress test (limited information also available in English): https://acpr.banque-france.fr/scenarios-et-hypotheses-principales-de-lexercice-pilote-climatique

[2] Cf. Bank of England's website: https://www.bankofengland.co.uk/stress-testing

[3] Cf. "Shining a light on climate risks: the ECB's economy-wide climate stress test", Blog post by Luis de Guindos, Vice-President of the ECB, published at https://www.ecb.europa.eu/press/blog/date/2021/html/ecb.blog210318~3bbc68ffc5.en.html

Steering

The definition of objectives and clear initiatives for ESG, that are laid out in the business strategy, their inclusion in the risk strategy together with their operationalization through the risk appetite framework are the basis for managing ESG risks.

As with all risk types, development of preventive and reactive control measures is at the heart of steering.

The options available to a bank for steering ESG risks are varied and must be selected individually. They range from setting limits or defining exclusion and/or inclusion criteria, e.g. for portfolios with ESG relevance up to divestments in companies that do not meet the desired ESG goals.

Preventative measures include:

Mandatory consideration of ESG risks in all **CTB processes,** e.g. when designing of products or processes

Implementation of **preventive steering measures** for all risk types via detailed specifications, e.g. rejection of a loan if the ESG exposure of the loan applicant > x.

Reactive measures include:

Treatment of materialized **ESG risks of the bank** (Operational Risk, Compliance, Reputational Risk, etc.)

Revaluation of portfolios, new ratings, rejection of prolongations, etc. in response to transition risks (e.g. due to new legal situation).

Monitoring

In order to continually monitor the ESG risk profile, the identification and monitoring of indicators related to ESG risk is key. The usage of existing tools for the creation of an ESG risk dashboard is possible. Information should be provided to all relevant actors and considered throughout the decision-making process.

Furthermore, the effectiveness of control measures has to be critically assessed. As the effectiveness of measures in such a new area as ESG risk could not be taken for granted, it is important to regularly check whether actions could be deemed successful or whether additional measures are needed.

Reporting

Transparency on ESG risk exposure and control measures throughout the bank is needed, so comprehensive, action-oriented internal reporting is vital.

Information on ESG risks can be included in existing risk-reporting frameworks and existing risk types. However, it can be useful to create a specific system for ESG risk reporting with a medium to long-term outlook since the effects of ESG issues can materialize much later than those of other risk types.

Disclosure and external reporting

Since 2017, the publication of a non-financial statement is mandatory for companies of public interest. Aspects to be published cover:

- Environmental, social and employee concerns
- Human rights
- Endeavors to combat corruption and bribery.

The statement has to shed light on approaches chosen, the main risks and how they are managed. Further, the non-financial performance indicators most relevant for the business have to be outlined.

Additional disclosure requirements and standards are being developed and will expectedly ask for more detailed information on ESG factors.

The definition of objectives and clear initiatives for ESG, that are laid out in the business strategy, their inclusion in the risk strategy **together with their operationalization through the risk appetite framework are the basis for managing ESG risks.**

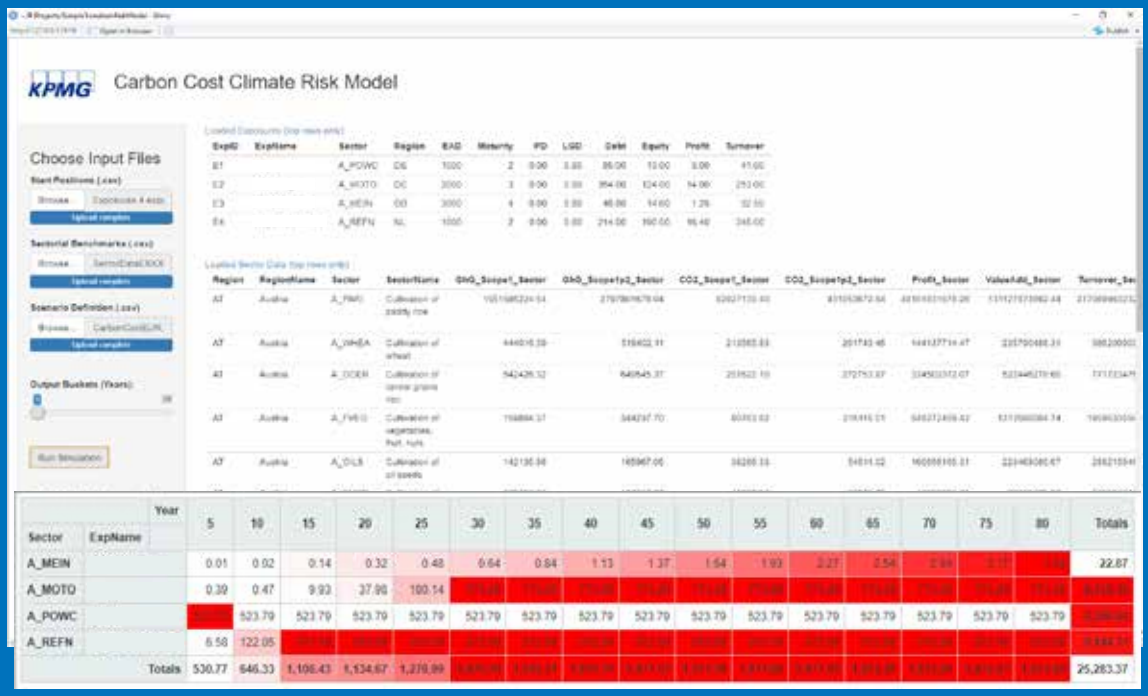
Simplified transition risk scenario analysis — focusing on impact of carbon cost on credit losses

The early prototype consists of a simple transition risk model. In the first step, **financial impact at borrower level** is determined via linking carbon footprint and evolution of carbon cost. Secondly, **stressed PDs** are generated and integrated based on simulated financials. Here, Merton-style CPM relationships are being assumed. In the third step, additional **credit losses** are being calculated from transition risk assuming prolongations are adequately priced at time of prolongation.

As a result, the prototype indicates the impact on corporates portfolio by presenting the evolution of the expected loss per industry, and exemplary calculation can be found in the graph on the following page. Also, static balance sheet assumptions can be switched off, which is displayed on the right-hand side of the figure.

Testing and validating such top-down assumptions with bottom-up analyses of key portfolios is key to arrive at meaningful stress results.

'Minimum Viable Prototype'



Model implemented as R code; runs 10K exposures in a minute.

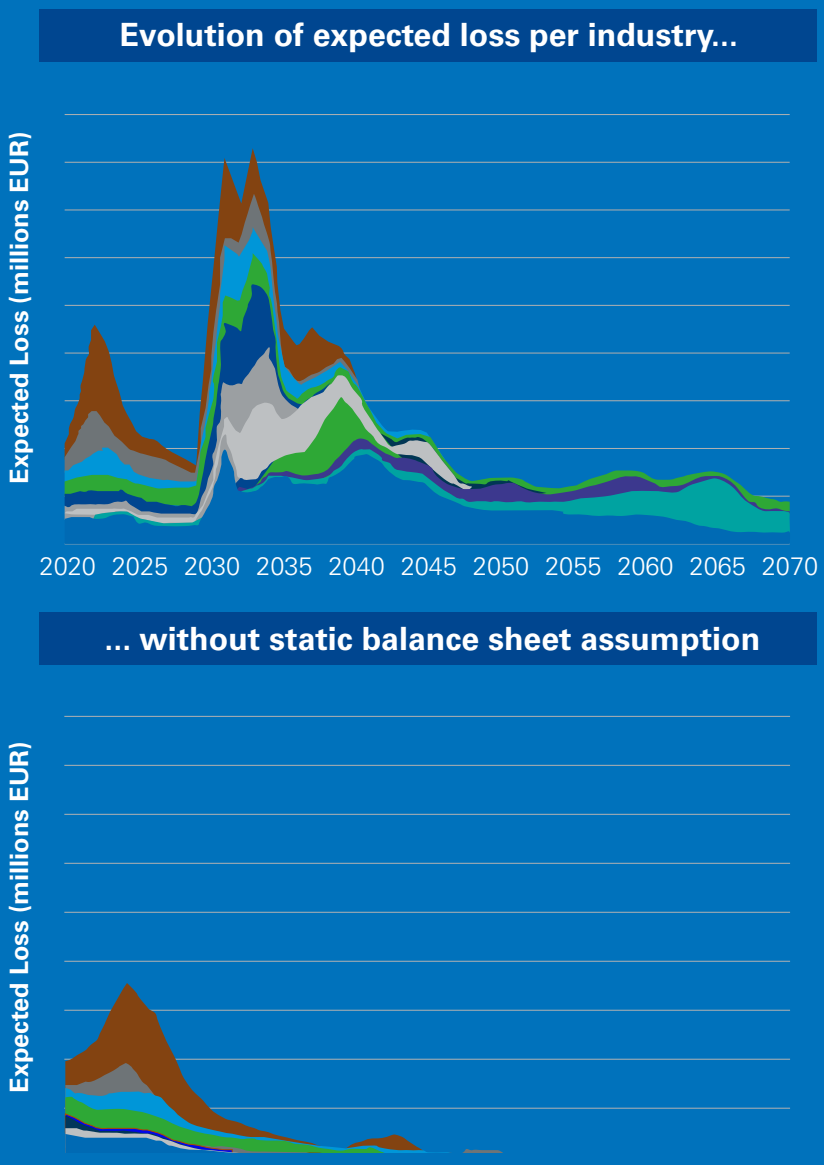
GUI implemented in R shiny package (for demonstration), displaying results in pivot-style table.

KPMG's climate risk stress testing prototype basically integrates three elements.

Client data (bank's loan portfolio (individual loans or aggregated proxies; credit risk properties (EAD, LGD, PD, maturity); financials of the borrower (equity, debts, turnover, profit); industry/sector allocation)

Sector Information Carbon footprint (e.g. from EXIOBASE3, a multi-regional input-output table)

Scenario Evolution of Carbon Cost (e.g. from NGFS scenarios).



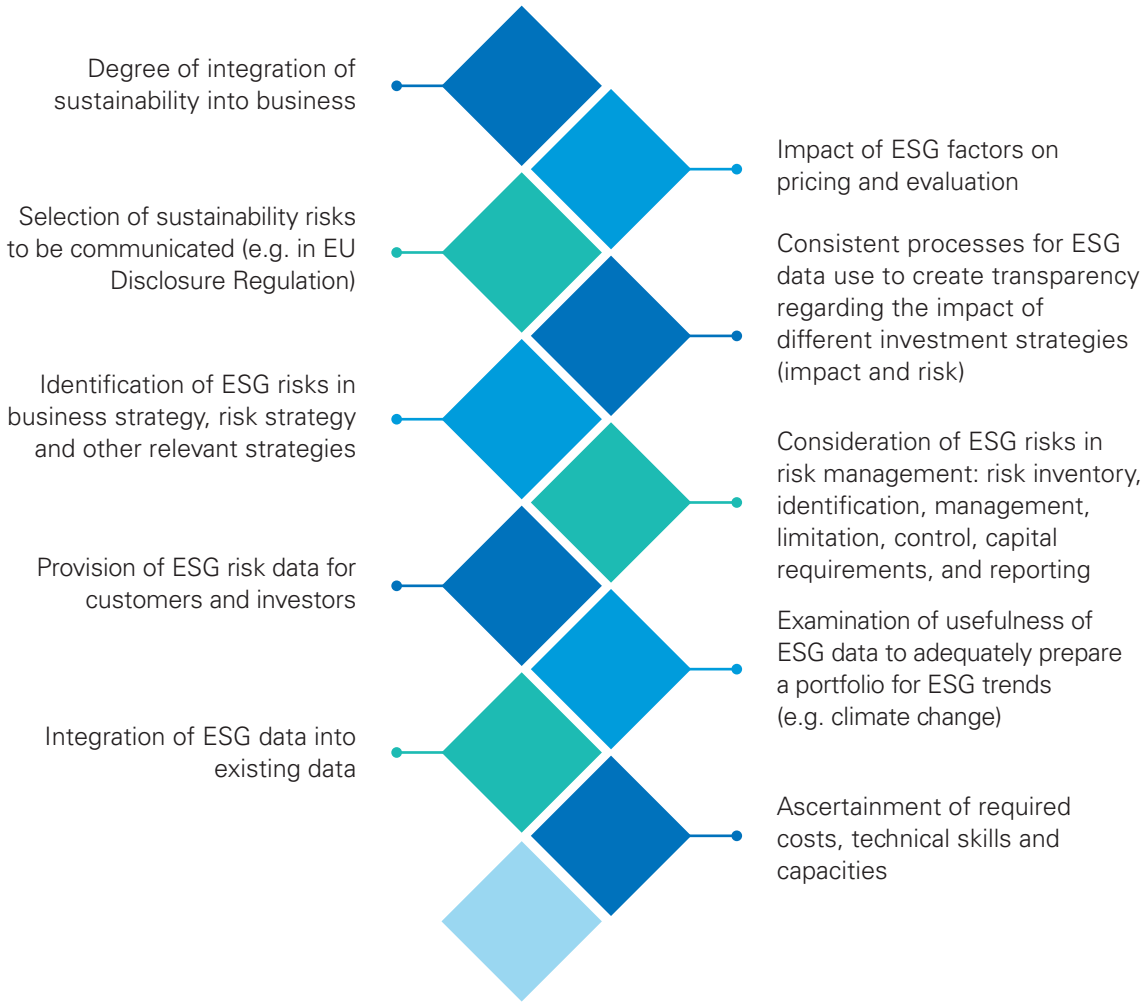
Source: Extracted from the climate risk stress testing prototype, ESG in Banks, KPMG International, 2021

KPMG's climate risk stress testing prototype yielded transparent results for stressed PDs and evolution of expected credit loss at transaction level for different industry sectors (as indicated by the different colors in the plots). Also, the prototype enables the aggregation to industry level and highlights the sensitivity of key exposures under the scenario while making the impact and limitations of simplifying assumptions (e.g. static balance sheet assumption) transparent.
This summary of quantitative results can be used to communicate climate sensitivity of business within the organization, up to management board level.

Actions for banks

The implementation of ESG risks into the risk management framework scales up risk management with the addition of a new perspective: the impact of risks on their stakeholders and in turn, their effect on the institution's overall performance. This perspective may also shed new light on other risk types and influence their ratings.

Despite the ever-growing stock of new publications and the expected regulatory changes, banks can approach ESG risks in a structured manner. Topics that have to be dealt with include, but are not limited to:



KPMG supports banks facing those challenges and supports their establishment of a holistic ESG risk management.

We will analyze the regulatory and economic risk management process (strategy, inventory, risk measurement, control and reporting) and incorporate ESG risk factors:

— Integration of ESG risks, i.e. full consideration of the ESG risk drivers and impact relationships with known risk types (taxonomy/risk inventory/risk strategy)

— Integration into the existing risk and model landscape

— Selection of risk assessment tools

— Involvement in reporting and forecasting processes

— Consideration of ESG factors in business and capital planning (via scenario or sensitivity analysis).

Figure 5: Iterative steps to integrate ESG risk governance

Source: ESG risks in banks, KPMG International, 2021

Taking the time now to consider motivational goals for implementing sustainability, to make the relevant changes to business and risk strategies as well as to implement ESG risks into every step of the risk management cycle gives financial institutes the opportunity to take advantage of the market opportunities these changes present.

Our approach can deliver clear and tangible outcomes that move you toward an effective, efficient and sustainable CRO Function with respect to ESG risk management.

Wrapper Americas

As global regulators in the United Kingdom and Europe have taken actions to address climate change through regulation, the United States, under the administration of President Biden, has made ESG regulation a top priority. President Biden's executive orders reinforce the new Administration's commitment to ESG-related issues and focus on climate (1–5 below) and racial equity (7–9 below). These executive orders will directly and/or indirectly impact the broader financial services industry (regulators, companies, customers).

1. Establishing climate change as a foreign policy and national security priority.
2. Implementing a Government-wide approach to climate, including creating a new White House Office of Domestic Climate Policy, a National Climate Task Force, a White House Environmental Justice Interagency Council, and a White House Environmental Justice Advisory Council.
3. Pausing new oil and gas leases on public lands and waters.
4. Creating 'environmental justice' for communities disproportionally impacted by climate change.
5. Requiring an accounting for the social costs, or monetized damages, associated with greenhouse gas emissions when analyzing regulatory and other relevant agency actions; metrics to be finalized by January 2022 by a new Interagency Working Group.
6. Rejoining the Paris Climate Agreement and achieving net-zero emissions by 2050.
7. Directing HUD to mitigate racial bias in federal housing policies, and specifically to review the effects of its recent (2020) final rules addressing 'Affirmatively Furthering Fair Housing' (AFFH) and disparate impact.
8. Modernizing regulatory review to 'promote public health and safety, economic growth, social welfare, racial justice, environmental stewardship, human dignity, equity, and the interests of future generations.'
9. Assessing potential barriers to providing underserved communities with equal access to agency policies and programs as well as identifying methods to assess equity with respect to race, ethnicity, religion, income, geography, gender identity, sexual orientation, and disability.

Change can be driven by many forces; however, government policy and central bank mandates is known to be one of the most effective. The above actions are expected to play a key role in defining expectations related to the reporting of climate-related financial disclosures in the Americas over the next 12–18 months.

Wrapper

ASPAC

Regulators in Asia have turned up the heat recently on ESG and climate change, demanding banks meet tight deadlines with initial roll-outs on progress reporting and stress testing. In May 2020 the Hong Kong Monetary Authority (HKMA) and the Securities and Futures Commission (SFC) established the Green and Sustainable Finance Cross-Agency Steering Group. The HKMA is full steam ahead with its green banking initiatives and has released a number of detailed guidelines and reporting templates to the industry.[1]

These guidelines are excellent resources to understanding the future policy direction and supervisory expectations in Hong Kong and Asia. The guidelines have laid out **9 guiding principles** for managing the risk and opportunities brought by climate change.

1. Board Accountability
2. Climate Strategy Development
3. Strategic Formulation Process
4. Climate Risk Implementation
5. Risk Identification
6. Risk Measurement
7. Risk Monitoring & Reporting
8. Risk Exposure Controls and Mitigation
9. Disclosure

Integration of ESG into bank-wide ERM and governance frameworks is the first major step that institutions will need to take in Asia. The board of directors and senior management will need to set the tone from the top to start the integration process. Some banks in Asia will have already established committees to review and undertake the exercise of ESG implementation while others are still in the process of establishing such committees.

The next step will be a consultation on supervisory expectations in the first half of 2021 followed by a second self-assessment later in 2021.

[1] https://assets.kpmg/content/dam/kpmg/cn/pdf/en/2020/08/building-climate-resilience-in-the-hong-kong-banking-sector.pdf

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Environmental, social and governance (ESG) issues as well as their associated opportunities and risks are becoming more and more relevant for financial institutions.

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