

ESG financial risk management

A way forward for the financial institutions
around the 'all buzz but no progress' dilemma



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ESG financial risk management: a way forward for the financial institutions around the ‘all buzz but no progress’ dilemma

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Introduction

The topic of ESG¹ risks has made its way into every board room over the past few years. Although climate risk is only a part of the framework, the growing importance of the ESG considerations in the business world stems mainly from the increasing global awareness about climate change and the resulting inequalities. According to PwC's investigations of the UHNWI universe, there is a growing number of billionaires in the business world stemming from green innovations, spanning from renewable energy production, storage and the technologies behind it.² Such an outcome, observed in spite of the global pandemic, further indicates that the topic of climate-related risks is accelerating.

And yet, even though efforts to quantify and manage sustainability risks have increased immensely in recent years, more needs to be done to ensure such risks are properly taken into account. It's becoming increasingly evident that the consideration factors are and will be an integral part of a healthy business strategy.

Currently the conversation revolves mostly around the disclosure of the ESG-relevant numbers and/or strategies, primarily because this is where the regulators and the public have voiced their expectations. But implementing the disclosure-related requirements involves embedding ESG factors into the overall business strategy, governance and risk management, and goes much deeper than pure disclosure. The work of the Financial

Stability Board's (FSB) Taskforce on Climate-related Financial Disclosure (TCFD) has established a widely recognised standard that's regarded as the minimum standard for the topic and is increasingly implemented as a regulatory requirement across the world – from Switzerland, the European Union and the UK to Singapore and Hong Kong. Efforts on implementing the recommendations and developing suitable efforts are under way. As a recent study published by the WWF and PwC Switzerland shows, many financial institutions in Switzerland are still on their journey when it comes to managing the ESG risks of their investment and especially their financing business (see (WWF Schweiz, PwC Schweiz, 2021)). But with the growing regulatory and public pressure, the topic has to be prioritised.

We acknowledge that ESG risks stem from each of the three pillars ('E' - environmental, 'S' - social and 'G' - governance) and can be of a financial and non-financial nature. In this paper, our focus is primarily on the materialisation of the ESG risks through the classic financial risk categories. By choosing this focus, we aim to outline an executable approach for integrating ESG risk factors into existing financial risk management frameworks.

We start by giving an overview of the ESG risks landscape, proceed with an outline of the relevant regulatory landscape, and then make a deep dive into the selected aspects.

¹ ESG refers to environmental, social and governance factors.

² PwC and UBS 2020, Riding the Storm: Market turbulence accelerates diverging fortunes, <https://www.pwc.ch/en/publications/2020/UBS-PwC-Billionaires-Report-2020.pdf>

The landscape

According to the recent European Banking Authority (EBA) report, there are 11 frameworks (both international and European) addressing ESG factors, 6 frameworks specifically addressing environmental factors and 3 frameworks focusing on social factors.³ With such a multitude of approaches and the absence of the univer-

sal definition of ESG factors, it makes their management more complicated for the institutions.

ESG factors themselves can be positive or negative. Below we show the most common ESG factors in the European frameworks:

Table 1: Source: EBA Report, 2021 (adapted)

Environmental	Social	Governance
<ul style="list-style-type: none">• GHG emissions• Fossil fuels• Deforestation and soil degradation• Reduction in biodiversity• Fresh water pollution and management• Raw materials consumption	<ul style="list-style-type: none">• Violation of human rights and UN Global Compact Principles• Discrimination• Insufficient whistle-blower protection• Investment in human capital and communities• Inclusiveness/inequality• Accident rates, exposure to controversial weapons	<ul style="list-style-type: none">• Anti-corruption and anti-bribery policies• Excessive CEO pay• Diversity (gender pay gap, gender representation at board levels)

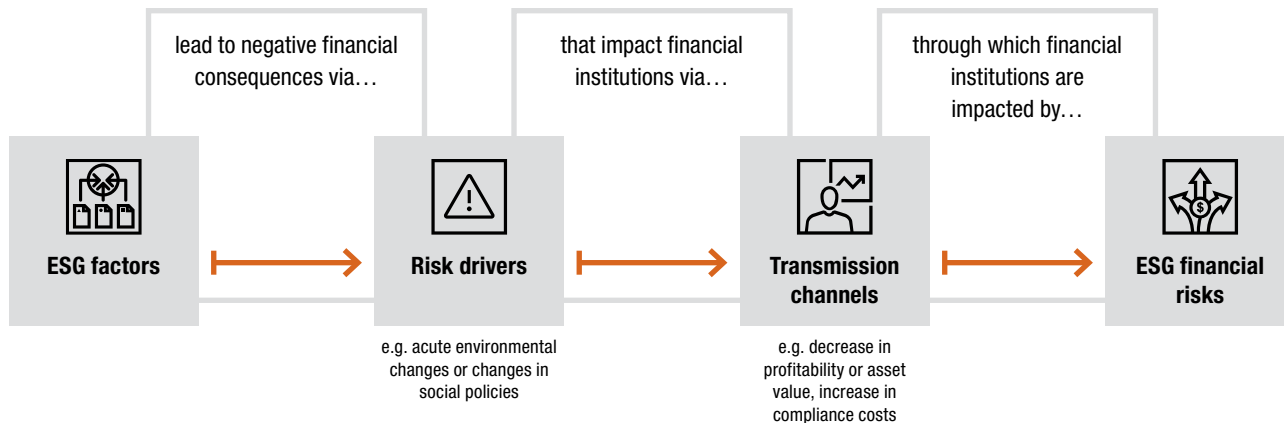
ESG risks can be understood as the negative materialisations of ESG factors. The chain from the ESG factors to

the measurable ESG impact on financial risks is complex but the main components can be summarised as follows.

³ European Banking Authority 2021, EBA Report on management and supervision of ESG risks for credit institutions and investment firms, https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf



Figure 1: Source: EBA Report, 2021 (adapted)



While each component above is worth writing a separate paper about, we maintain our focus on the ESG financial risks themselves, and would only note that the common transmission channels for ESG financial risks are decreased profitability, decreased asset performance and increased compliance costs, among others.

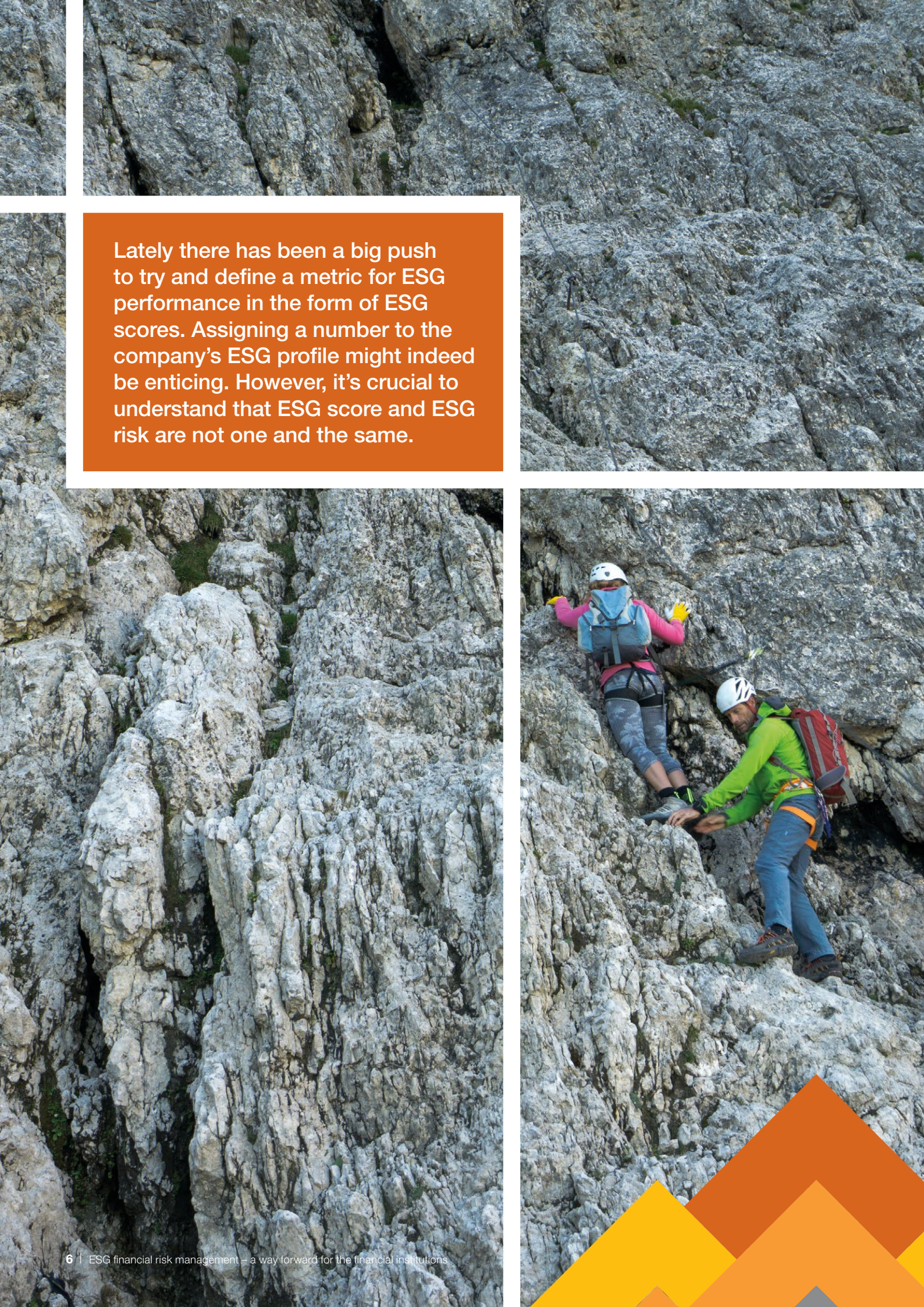
The materialisation of ESG factors into ESG risks is itself two-fold and can be either from ‘inside-out’ or ‘outside-in’ perspectives.⁴ For example, by financing businesses that pollute the environment, the financial institution directly exacerbates the effect of the negative ESG factors (inside-out perspective). From the other perspective, if a financial institution gives a loan to an energy-intensive business, this business may be affected by the new regulatory frameworks around ESG that are

increasing the cost pressure for the business which, in turn, can materialise into increased counterparty risk for the financial institution (outside-in perspective). The latter is a classic example of the materialisation of ESG risk through classic credit and counterparty risks, which we’ll cover in more detail in the Solutions sections.

As the EBA Report points out, the qualitative and quantitative indicators available to the institutions for the assessment of the ‘E’-pillar ESG risks tend to be more advanced than those for the ‘S’ or ‘G’ pillars.⁵ This, in turn, currently leads to the expectation (also from the regulatory perspective) that the management of ESG risks by financial institutions focuses more prominently on the environmental risks.

⁴ European Banking Authority. 2021. EBA Report on management and supervision of ESG risks for credit institutions and investment firms, https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf

⁵ European Banking Authority. 2021. EBA Report on management and supervision of ESG risks for credit institutions and investment firms, https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf

The background of the entire page is a photograph of a steep, grey rock face. In the lower right, two climbers are visible: a woman in a pink shirt and blue harness, and a man in a green shirt and blue pants, both wearing helmets and climbing gear. The rock surface is textured with cracks and small patches of moss.

Lately there has been a big push to try and define a metric for ESG performance in the form of ESG scores. Assigning a number to the company's ESG profile might indeed be enticing. However, it's crucial to understand that ESG score and ESG risk are not one and the same.

The challenges

From the risk management viewpoint, risks stemming from ESG factors are future risks. These future risks are often considered to be predominantly medium to long-term risks, even though they can materialise in the short term as well. So, to build up profitability in the long term and to be prepared for shorter-term impacts, financial institutions must make sure that the ESG risks are integrated into the overarching risk management framework, which includes embedding them in the risk appetite frameworks.

In order to assess the financial materiality of these risks, the institutions must first identify the ESG risks that have a direct effect on their core business activities, and then try to quantify them by adopting the future risk perspective, for instance, by using a scenario analysis or stress testing approach.⁶

Leaving the overarching viewpoint and focusing more on the concrete steps for the companies to capture the ESG risks in their risk management frameworks, there are several further challenges emerging.

The first one is ESG data. Paradoxically, there are two camps – those who say there is too much data and those who say there isn't enough data. Even more paradoxically, they can both very well be right. From the overall pool of financial and non-financial data available, it's yet to be defined what the most relevant ESG data is for determining the risks. And by this data we mean the data that not

only gives a clear picture of the company's current ESG risk position, but also that has predictive power and can actually be used to profile the company's strategic steps with regard to ESG risk management as well as help to quantify the future risk.

The issue of data extends naturally to the question of measurability: as the old business proverb says, "if you can't measure it, you can't improve it". Lately there has been a big push to try and define a metric for ESG performance in the form of ESG scores. Assigning a number to the company's ESG profile might indeed be enticing. However, it's crucial to understand that ESG score and ESG risk are not one and the same. The questions the companies are asking here are: how can a client's ESG score be considered in the credit risk officer's decision on granting or extending a credit line? Does or should an ESG score affect the probabilities of default in the internal models? How much predictive power does an ESG score have? How is ESG risk management integrated into the existing operational and credit risk management systems and ERM as a whole? These questions are just the tip of the iceberg.

It's also worth mentioning that the scores themselves aren't yet reliable. A recent study by the MIT Sloan School of Management showed that the existing ESG ratings are rather poorly correlated;⁷ indeed, they found that the correlations were 0.54 on average.⁸ Such discrepancies can, on the one hand, indicate the differences in the range and quality of the underlying data, but perhaps more importantly, they show that there's no consensus yet in the world with regard to what exactly an ESG score should measure. So, it's crucial that ESG scores and ratings don't remain a 'black box' but that companies and financial institutions understand the underlying methodologies and calculations of the score.

The topic of sustainable investing has on many occasions also been wrongly synonymised with the ESG future risk profile. Sustainable investing concerns itself primarily with maximising the portfolio returns under the consideration of ESG factors, while quantifying the ESG future risk profile is aimed at ensuring a company's profitability in the long term.

⁶ Both are currently used predominantly in the context of climate risk.

⁷ A strong correlation is generally considered to be at least 0.9 or higher.

⁸ Berg, F., Koelbel, J. F., Rigobon, R. Aggregate Confusion: The Divergence of ESG Ratings. 2020.

The regulators

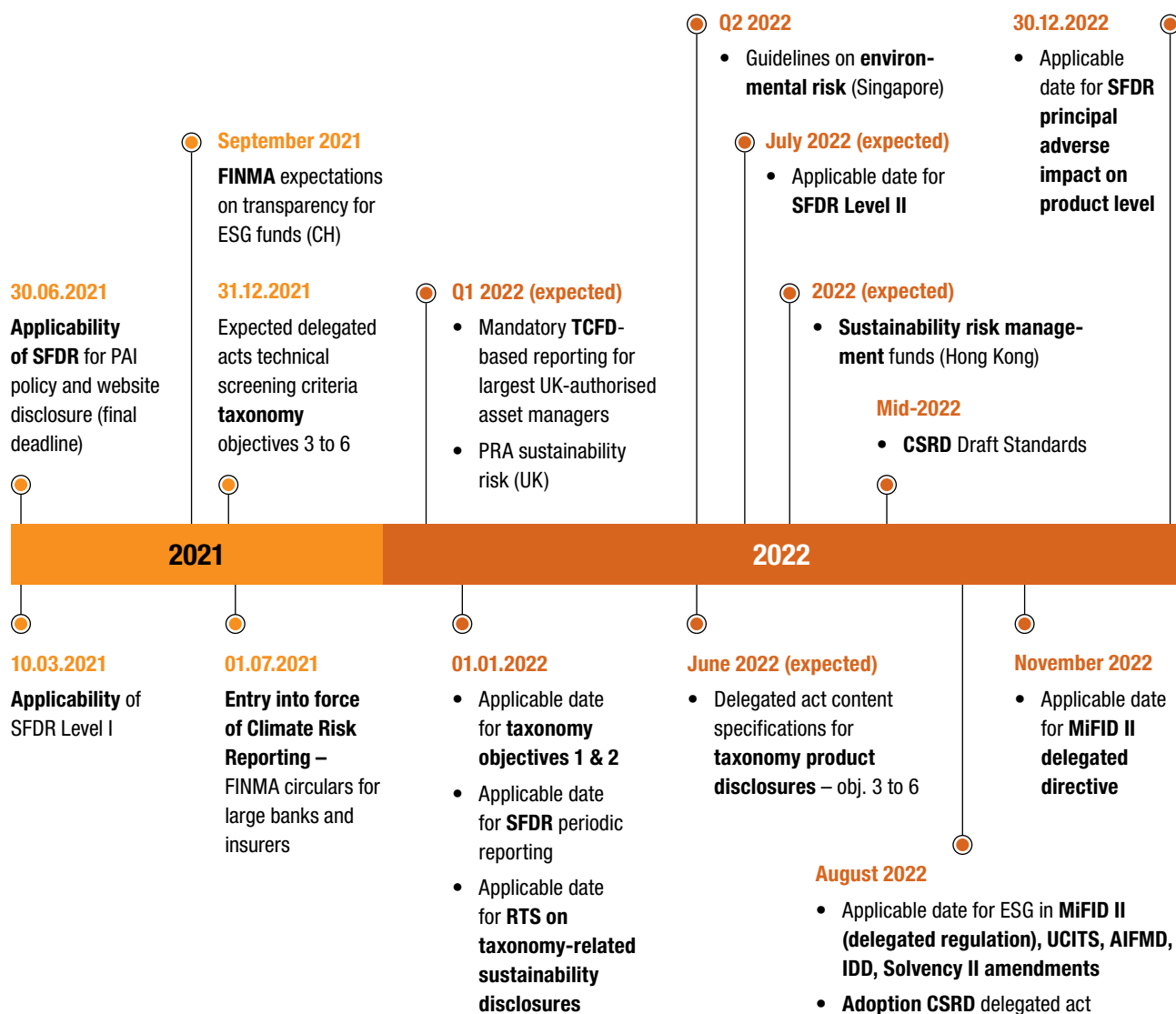
In the area of pre-ESG risk management, the regulatory requirements have proven to be a good guideline with respect to financial risk management (e.g. stress testing requirements, liquidity requirements) and operational risk management (e.g. standardised or advanced measurement approaches, risk inventories). With respect to ESG risk management, regulatory requirements now include the application of quantitative measures and the main focus, especially in Switzerland, is mostly on disclosure.

But reporting isn't a proxy for progress, and measurement is often nonstandard, incomplete, imprecise and

misleading.⁹ While disclosure might help as a good starting point to evaluate a business' starting position and progress, reporting alone doesn't help the company perform its risk management better, nor does it help the environmental and social inequalities rooted in the ESG framework.

Below is an overview of the development of the regulatory landscape with regard to ESG risk management, considering both Swiss and EU regulatory frameworks.

Figure 2: Regulatory timeline



⁹ Pucker, K. P. Overselling Sustainability Reporting. Harvard Business Review (May-June 2021).



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Looking, in particular, at the Swiss regulatory landscape, FINMA's November 2020 addition to Circular 2016/01 regarding ESG risk management was implemented from mid-2021 onwards and is based on TCFD standards. It includes expectations with regard to disclosure, but also ESG risks strategy, ESG risks identification and measurement and ESG risks governance, as well as using stress-testing related to climate risks.¹⁰

In January 2021, TCFD became officially supported by Switzerland¹¹ thereby presenting the companies with an additional range of ESG risk management and disclosure recommendations. Further, with the rejection of the 'Responsible Business Initiative' (RBI), an indirect counterproposal entered into force requiring statutory due diligence – a process that might require significant time for the companies to implement.

¹⁰ FINMA, Offenlegung klimabezogene Finanzrisiken: Teilrevision der FINMA-Rundschreiben 2016/1 «Offenlegung – Banken» and 2016/2 «Offenlegung – Versicherer (Public Disclosure)», 2020.

¹¹ <https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-81924.html>



The solutions

With the multitude of issues arising around the concept of ESG risk management, it might seem daunting to try and find the focal points. While having an ESG score at hand may be a good start, with the big discrepancies and low correlations, it asks for a more comprehensive way forward, rather than focusing on measuring and reporting one number.

To integrate ESG risks into overall enterprise risk management (ERM) in the long term, we start by pointing out that potentially crucial risk data is lost in the aggregation process that is necessary to construct most of the ESG scores. So instead, we choose to concentrate on the individual factors (that might ultimately flow into a potential score) and raw indicator data, as these are the primary components to tell us about the potential risk.

To start assessing the materiality of the individual factors, it's necessary to abandon the one-size-fits-all view or, more appropriately called in the current context, one-score-fits-all view. Depending on the industry type as well as intra-industrial specialisation, the risk factors contributing towards future risk might be rather different. With our expert knowledge of the market, competition and regulator, we use artificial intelligence (AI) tools to

derive the most relevant indicators and lay the foundation of the company's ESG future risk landscape while addressing the regulatory requirements.

On this basis, we can start building the ESG future risk profile by exploring various relevant future scenarios including stress testing. Depending on the industry type, the scenarios might range from applying CO₂ certificates price shocks to assuming bans on certain ingredients in the supply chain process, or any relevant combination thereof. Such a future-oriented view not only allows projections to be made about the industry development due to ESG risks, but also allows identification of the potential 'dying-out' industries or sub-industry types.

Our support involves an integrated practical approach to fully assist our clients in every area of ESG risk management. We aim to deliver a comprehensive solution that has ensuring the company's long-term profitability at its core. Our offering revolves around the four cornerstones: integration of ESG risks into the risk appetite, ESG scoring, integration of ESG risks into financial risk management and processes, and ESG regulatory reporting.

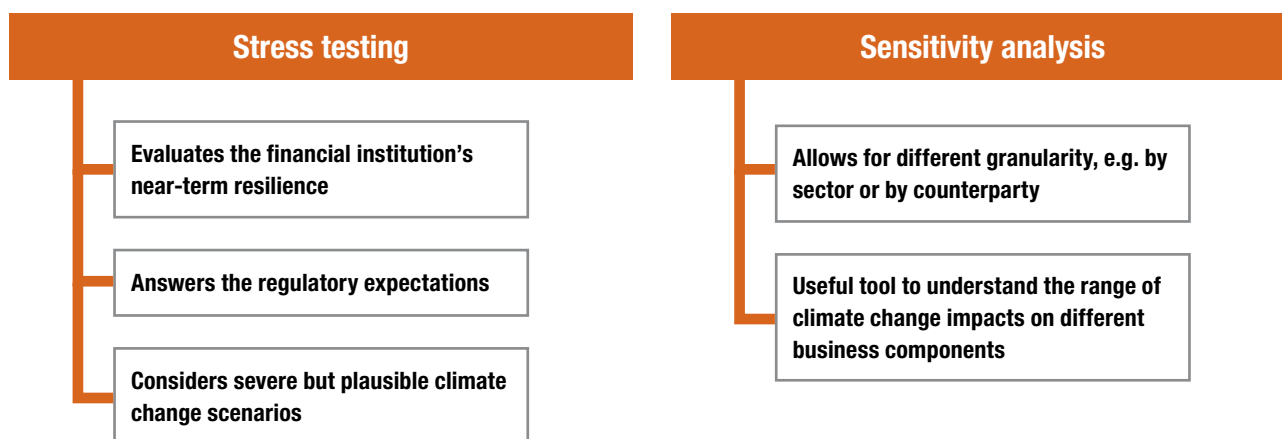
Risk appetite

Risk appetite. While incorporating the ESG risk view into the risk appetite of the financial institution, it's important to maintain a top-down approach to ensure alignment with the FINMA expectations. Bringing ESG risks into the risk appetite can be of either a qualitative or quantitative nature (or both), but it's important that by doing so, the board of directors (BoD) assumes its oversight responsibilities with respect to the ESG risks and, furthermore, the ESG risks are included in the overall risk strategy and risk view of the institution.

For the BoD to achieve such a forward-looking view on the risk appetite, some of the useful tools – especially in the context of climate risk – can be scenario and sensitivity analyses. Scenario analysis gives a long-term,

forward-looking projection of risk outcomes. Its time horizon might be up to 30+ years due to the evolution timeline of the climate change scenarios. Nevertheless, the results of these scenarios can give the board a better overview of the possible future of the core businesses while retaining an appropriate timeframe for the board to be able to act upon them.

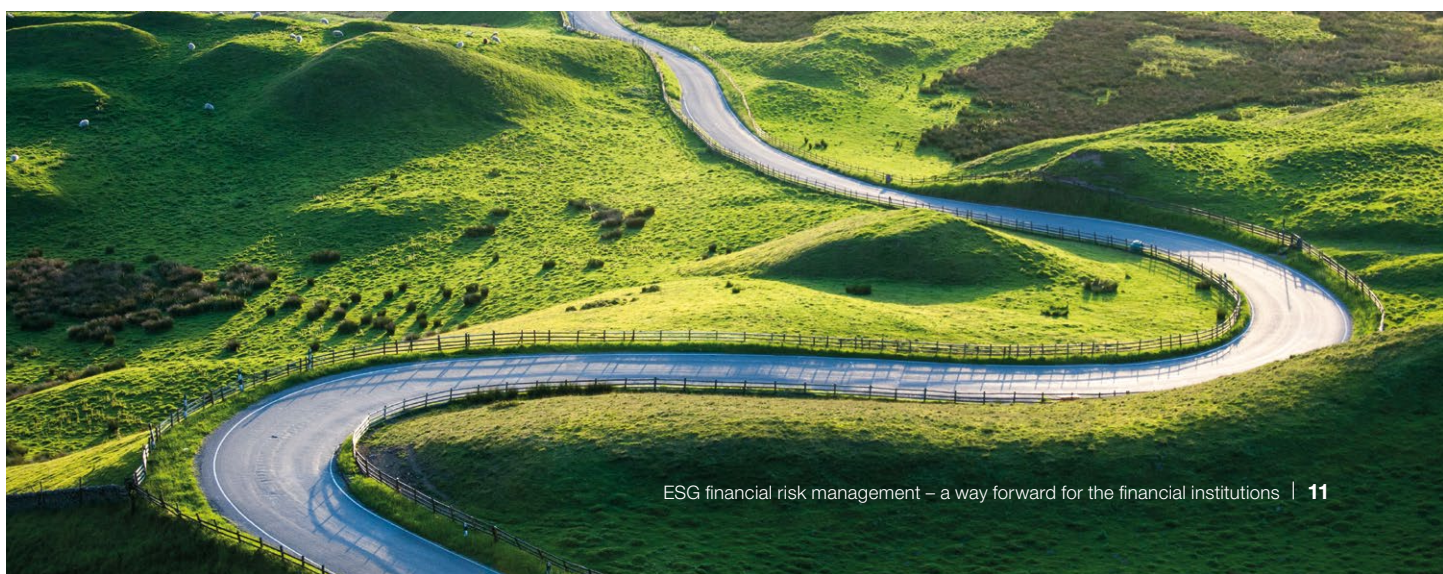
For the board of the financial institution to be able to focus on certain aspects of the core businesses with respect to the ESG risks, two techniques (both stemming from scenario analysis) can be used: stress testing and/or sensitivity analysis. The main features of the two are summarised below:



Scenario analysis along with stress testing and sensitivity analysis are considered among the main measurement methodologies for climate-related financial risks by the Basel Committee on Banking Supervision¹² and hence represent the gold standard of the available tools for assessing the future financial risks stemming from ESG fac-

tors. What's more, since scenario analysis is an integral part of the TCFD, which has been officially supported by Switzerland since January 2021, financial institutions will be expected to disclose not just the evidence of the performed scenario analysis but also the evidence of the decision-making based on the outcome of the analysis.

¹² Basel Committee on Banking Supervision. Climate-related financial risks – measurement methodologies (2021).




ESG scoring

There are a multitude of ESG scores available on the market, which, however, for the most part, rely on self-disclosed company data and currently cover predominantly large-cap and listed companies. The mid and small-cap companies remain mostly unrated while demand for the tools to understand ESG scoring keeps growing. This is true especially for the banks that want to ensure the robustness of their lending businesses.

With the help of our internally developed AI cognitive search engine, as well as using our deep expertise in

Internal Rating-Based (IRB) modelling, we can help to develop a bespoke, internal ESG rating system, tailored to the respective client base of the institution. Such a rating system allows customisation for possible idiosyncratic portfolio risks that may be overlooked when using a general one-size-fits-all scoring system offered in the market. In addition, such bespoke ESG scoring not only allows for the rating of small and medium-sized companies, but also makes sure that the know-how stays within the institution and the usual black box of external ratings is avoided.



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ESG financial risk integration

The next step involves using this information in the credit risk processes and financial risk management. This could be incorporated as a quantitative element in the credit risk officer decision process. We note that as of today, the consideration of ESG risk factors in the credit risk officer process has remained largely qualitative. The credit risk officers have a routine of considering the established credit risk factors in their approval processes (e.g. an institution's credit rating from an external agency) and in a similar way, an ESG risk score can be built into this process. Having a tailored ESG score would enable – for a most accurate definition of the possible rating – buckets to be built into the credit risk process, as it would measure precisely the factors specific to the client of the lending business on the one hand, and the factors necessary for the lending business' risk assessment on the other.

Taking into account the November 2020 ESG risks related in addition to FINMA Circular 2016/01, in our approach we don't consider the ESG risks as a separate risk category but rather as the factors exacerbating the existing and defined risks (e.g. credit risk, market risk, operational risk). Having deep and extensive expertise in the area of credit and market risk modelling, we aim to deliver a solution that uses classic metrics like probability of default (PD) and loss given default (LGD) to obtain new knowledge about the ESG risk profile. This can be done, for instance, by means of stress testing, which is already a widely used tool in classic risk management frameworks.

The EBA noted difficulties in using PD and LGD for the quantitative assessment of the ESG financial risks primarily due to the extensive historical data usage for those metrics, which is not readily available for the ESG factors.¹³ We'd also like to point out the difficulty that comes with the differences in the risk horizons for PD and LGD (typically one year) as opposed to the ESG factors. But this limitation can be overcome by expanding the stress testing to apply the PD shocks and haircuts on asset values stemming from the ESG factors. The relevant shocks can be identified using the bespoke ESG scoring previously discussed above, as it provides a portfolio-specific view.

Integration of the ESG risk factors into stress testing may have far-reaching consequences for capital planning. Already in the classic framework of capital stress testing, the outcome of the stress test(s) can have a direct impact on the institution's capital requirements (see, for instance, the FINMA press release on stress testing at large banks¹⁴). It can only be a matter of time until the ESG stress testing outcomes have a direct influence on the capital requirements as well. At this stage, FINMA have already expressed their view on the scenario analysis with regard to climate-related financial risks, describing the scenario analysis as generally sensible.¹⁵ To ensure both compliance and profitability, it's crucial to adopt a forward-looking approach by incorporating the ESG risks – and especially the quantitative aspects – into the established risk management frameworks now.

Regulatory reporting


The step that completes the ESG risks integration circle is reporting. Correct reporting of the ESG risks is essential for the fulfilment of many regulatory requirements. According to our approach, we start by building up the constituents that would then flow into reporting in the natural way, rather than start re-building the reporting processes and metrics before those processes and metrics have been appropriately tested and adapted for the

ESG risk management. Building on our extensive experience in auditing as well as working with the regulators, we have the knowledge of the best practices for setting up the reporting processes. Such an approach ultimately ensures the long-term and future-oriented integration of the ESG risks, which – at its core – supports the institution's business model while ensuring profitability.

¹³ European Banking Authority. 2021. EBA Report on management and supervision of ESG risks for credit institutions and investment firms, https://www.eba.europa.eu/sites/default/files/document_library/Publications/Reports/2021/1015656/EBA%20Report%20on%20ESG%20risks%20management%20and%20supervision.pdf

¹⁴ FINMA. 02.10.2009. FINMA provides information on stress tests [Press release]. <https://www.finma.ch/en/news/2009/10/mm-stresstests-20091002/>

¹⁵ FINMA. Offenlegung klimabezogene Finanzrisiken: Teilrevision der FINMA-Rundschreiben 2016/1 «Offenlegung – Banken» and 2016/2 «Offenlegung – Versicherer (Public Disclosure)», 2020.

A person wearing a grey beanie, a red jacket, and a backpack stands on a rocky mountain peak. They are looking out over a vast landscape that includes a body of water, distant mountains, and a valley with some buildings. The sky is clear and blue. The image is part of a collage with other photos of mountains and a large orange text box.

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