The place of sustainable development in ESG risks formation in banking sector

Magomed Tashtamirov

Kadyrov Chechen State University, 32, Sheripova Street, 364024, Grozny, Russia

Abstract. Environmental, social and governance (ESG) issues as well as related opportunities and risks are becoming increasingly relevant for financial institutions. For banks, sustainability is not only an ethical issue, but may soon become an economic and existential one, generating a new kind of risk - ESG risk. Banks must approach ESG risk in a comprehensive way by incorporating it into their risk management systems. This process includes adjusting business and risk strategies, and related risk appetite statements, as well as ensuring full transparency. While ESG risk is not a completely stand-alone type of risk, it affects financial and non-financial risks present in the bank to varying degrees. Consequently, risk management methods and processes must be modified to take into account the complex causal relationships between risk types. This involves the use of risk measurement/assessment techniques in the bank management and change processes, as well as in stress testing. In addition to incorporating ESG into the risk framework, banks need to consider related issues in product development, pricing, and sales decisions. In addition, proper consideration of ESG risks in a wide range of change processes is vital to improving profitability. Regulators, rating agencies and other parties around the world are showing increased interest in this topic, leading to increased reporting requirements and needs. This constant stream of new regulations poses serious compliance challenges for banks. This paper explores these issues. It examines ESG factors and sustainability issues in the banking sector, highlights the opportunities to embed these considerations throughout the risk management process, and provides parallels that can be used to learn from the COVID-19 crisis. This article proposes a holistic approach to ESG risks in risk management.

1 Introduction

The acronym ESG has certainly become one of the most urgent topics in investment management in recent years. The number of Google searches for the term "ESG investing" has grown exponentially over the past three years, so it has certainly caught people's attention!
As a result, corporate executives have a whole new range of management topics, now that global warming issues have raised environmental concerns and the COVID-19 pandemic has further highlighted social issues.

Broadly defined as an analysis of a company's environmental, social, and governance practices, ESG first came to the attention of the financial world after the release in 2005 of the UN Global Compact report, which argued that incorporating ESG factors into capital markets would "do well by doing well." [1].

The Principles for Responsible Investment (PRI) investor network, which was established in 2006, has grown from 63 asset management companies and owner-signatories with $6.5 trillion in assets under management to more than 3,000 signatories with more than $103 trillion in assets under management. Such processes cannot but affect the banking sector, which in recent years has been increasingly reorienting its activities towards sustainable development and the expansion of the "green" economy [2].

Efforts to incorporate environmental and related sustainability factors into the banking system have gained momentum in recent years, driven by a combination of market forces, political factors and changing customer attitudes that have forced banks to consider a range of environmental, social and governance risks and opportunities in their operations. Most recently, the launch of the UN Principles for Responsible Banking in 2019, supported by 130 banks from 49 countries as signatories, encourages banks to incorporate green and sustainable finance principles into their strategies and operations and link their business plans to societal goals. as stated in the UN Sustainable Development Goals and the Paris Agreement [3].

Although the Paris Agreement on Climate Protection and the UN 2030 Agenda for Sustainable Development are not sector specific, initiatives have been launched specifically to engage the financial services industry, aiming to reconcile sustainability and the economy. The stated goals of the EU Sustainable Finance Action Plan, one of the most important publications of our day, are to reallocate capital flows to sustainable investments, to incorporate sustainability into risk management, and to promote transparency and longevity. In this regard, a wide range of EU regulations are in the midst of significant changes.

Innovative regulations in the context of sustainability, such as the EBA Sustainable Finance Action Plan [4, 5], should be expected to come into force over the next two years. Banks have long dealt with sustainability issues in a largely piecemeal fashion. However, the confusing flow of information and speculation about future regulatory changes makes it difficult for most institutions to develop a comprehensive strategy regarding ESG factors.

In addition, sustainability is rapidly gaining importance in society and raising awareness of issues such as climate change, social inequality, or corporate misconduct, and is rapidly changing the market environment. Investors around the world are showing a significantly increased demand for sustainable financial products [6]. Sustainability and corporate behavior affect the reputation and business success of financial institutions [7]. Thus, the trend towards sustainability has the potential to fundamentally change the global banking sector. Banks that do not act now are unlikely to get a chance to integrate sustainability regulations into their system in a timely manner, let alone adapt to changing market demands. In addition, simple solutions are rare: for example, abandoning a long-term relationship with an automotive supplier that presumably cannot adequately (quickly enough) manage the transition to alternative drive components could result in the bank losing its reputation among this group of customers. The continuation of such business, in turn, could upset other stakeholders, who might accuse the bank of being unwilling to support the transformation to a sustainable economy.

The study makes several contributions. First, it complements the recent literature on the relationship between ESG and bank risk [8]. That literature shows that higher ESG ratings
are associated with lower bank default risk and system-wide distress. We complement this literature by demonstrating the usefulness of ESG in the structures used to build a transformational bank business model.

1 Materials and methods

Globalization, with society, politics and business focused on achieving sustainable development goals, accelerates the processes of transformation of banking institutions in a rapidly changing environment. The purpose of this article is to identify the key risks of the ESG agenda and integrate them into the business model of banking activities, taking into account the systematization and grouping of the main factors of the external and internal environment of banking institutions in the context of scaling sustainable development and the accompanying limitations of this policy. Also, a related task is to determine the areas of impact of banking institutions on society and future generations under the influence of ESG-risk factors.

The main scientific approach of this research was systemic, which allowed to identify the main threats from the spread and development of global policies for sustainable development of the environment, society and corporate governance, combining these aspects within a single concept of a new group of ESG risks in the banking sector. The work is structured in several stages.

The first stage includes the construction of the transformational business model of the bank in the development of ESG policy. Traditional banking business is built on deposit and credit activity, which is associated with many risks of financial, market and operational nature. Accordingly, the emergence of a new concept of global economic development in the form of achieving sustainable development goals creates the need to include new types of ESG risks in the business model of the bank, as well as their inclusion in the current activities of the banking institution. Using the traditional structure of the bank's activity at the micro level, a transformational business model of the bank was built, taking into account ESG-concept factors, using the scientific method of structural analysis and synthesis.

The second stage was the identification and grouping of ESG risks in order to determine the factor influence of the given threats of uncertainty on the bank and the reverse impact from the bank on the external environment. At this stage the method of logical generalization, method of systematization and grouping were used.

The third stage used the method of comparative and comparative analysis between the COVID-19 crisis and ESG risks in order to identify the distinctive features of the two types of new threats to the sustainability of banking activities. The consequences for banks of the COVID-19 crisis were identified, which were expressed in spontaneous, unpredictable changes in the financial behavior of bank customers and measures taken by governments of different countries in the form of lockdowns and increased social tensions from long periods of distant work. The acceleration of digitalization of the economy and financial relations has also affected banks' policies to accelerate informatization of banking activities using information and communication technologies.

2 Results

2.1 Bank business model transformation under ESG conditions

Despite all the problems associated with the upcoming changes in the regulatory framework for financial activities in the context of the implementation of the Sustainable Development
Goals and in the global financial services market, there are also opportunities for banks here. Skilful prediction of the directions of development of business transformation under ESG, can be used to actively position the bank as an institution pursuing the goals of ensuring decarbonization of the economy and promoting carbon neutrality [9].

Theoretically, ESG can also affect the risk of bank default through both direct and indirect channels [10]. From a stakeholder theory perspective, a high commitment to ESG may indicate improved bank transparency and greater stakeholder support, whereas a low ESG performance may indicate a lack of commitment to minority stakeholders, including bondholders [11]. These signals, which are likely important in terms of reputation, may allow banks with high ESG to attract more deposits and loans than their low ESG counterparts [12].

The sustainability goals and their scaling in the global economy and financial system will increase the degree of impact on banking and transform its business model [13]. Sustainability is expected to impact banks along their entire value chain, both strategically and operationally [14] - and create new opportunities (see Figure 1).

![Figure 1](image-url)

**Fig. 1.** Transformation of the banking business model when taking into account ESG risks and sustainable development goals. *Source: compiled by the author.*
For example, in the area of sustainable finance, banks need to actively incorporate ESG factors into their business strategy and risk management, and integrate ESG risks into their business plans, internal controls and decision-making processes. These proposals bring ESG risk considerations to the forefront.

2.2 Identification and classification of ESG risks

ESG risks will be reflected in the formation of liabilities and placement of assets. The attraction of the bank's deposit base raises the question of applying effective capital refinancing instruments for the implementation of sustainable development goals in the interests of investors and depositors. On the other hand, banks using the attracted capital will reinvest it in credit resources, which will have low environmental risks and will be granted exclusively in the projects of "green", social and sustainable orientation. Apart from the key deposit and credit operations the transformation will occur in the part of trading activity of the bank in the financial markets in the form of investments in the securities market, foreign currency, precious metals trading and operations with counterparts. Separate changes must occur in the formation of accounting and financial reporting, where it is important to reflect the consequences of banking activities in terms of implementation or minimization of ESG risks, as well as creating a system of monitoring and analysis of data associated with activities in the field of ESG.

Since the concept of sustainability was introduced to the financial sector, a new type of risk has emerged: sustainability risks, also referred to as environmental, social or governance (ESG) risks. They manifest themselves interdependently in relation to institutions and the external environment. On the one hand, external factors affect the behavior of institutions from the need to comply with a number of restrictions in the context of the decarbonization of the economy and the reduction of economic, industrial activity by economic agents. Also, consumers reduce their demand under constraints. On the other hand, the institutions themselves, in this case banking, change the mechanism of their operating activities of the concept of organizing credit and investment operations, which inversely causes the impact on the environment, customers, investors and society as a whole. If ESG risks caused by environmental damage from the bank's lending policies are realized, there is a threat of incurring losses or receiving financial damage, the growth of bad assets and the reduction of the bank's reputation. On the other hand, banks that issue green financial instruments or social bonds improve their reputation and rating [15].

ESG risks include environmental risk, social risk and governance risk, as well as the resulting impact on banks' profits and losses and liquidity. The particularity of the topic concerning the banking sector is that ESG risks can affect the bank directly (e.g., damage to bank buildings by a hurricane or other natural disaster), but also affect customers (changes in sales opportunities, disruptions in production, etc.), which leads, for example, to increased defaults on loans.

Due to current political agendas, and presumably for reasons of materiality, the current focus is on environmental risks and the topic of climate change (see Figure 2).
In turn, environmental risks are divided into physical risks and transition risks:

- The first group of physical risks contains the threat borne by organizations whose economic activities involve the achievement or non-achievement of sustainable climate goals, which otherwise entail real physical damage. They can materialize as acute risks (i.e., isolated, irregular physical risk events) or as chronic risks (i.e., continuous deterioration in the achievement of ESG goals with a lasting negative impact on their own economic activities).

- Transient risks are associated with those negative consequences faced by economic agents forced to restructure their business models under the new "normality" after systemic changes that occurred as a result of the implementation of ESG concept requirements and norms. An example is the change in the legal framework under the impact of new restrictions on various industrial activities and the introduction of carbon credits.

In addition to their different characteristics described above, we can distinguish two dimensions of ESG risks: financial and non-financial.

- Regarding the financial dimension, the key question is: "What ESG risks and opportunities does the business model of our customers and investments bring and what does that mean for our business model?" This dimension is closely related to the external effects of ESG, i.e. the business implications of external current and anticipated ESG events (see Figure 3).
- In contrast, the non-financial dimension looks at the impact the bank has on the environment and society. The key question is as follows: "What opportunities will arise from sustainable products and sustainable trade, and how can reputational risks be avoided?"

Here we look at the "inside-out" effect, that is, the results of the bank's actions to address environmental or societal issues.

Once external and internal effects have emerged and triggered further reactions, however, they are no longer easy to distinguish.

Reputational risks, in particular, act as transmitters between customers and the bank. The inside-out effects harbor reputational risks, which, in turn, must affect the bank. After several cycles of causality, it is no longer possible to determine when and where the original effects were caused.
2.3 Matching ESG Risks and COVID-19 Crisis Threats

The COVID-19 crisis and its impact on banks has much in common with ESG risks. Thus, observing the current crisis presents an opportunity: Banks can use (bad) experiences with COVID-19 to better cope with future ESG risk challenges.

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

First, COVID-19 has a direct impact on banks (akin to physical ESG risks) through the following factors (among others):
- Increased morbidity leading to a shrinking workforce.
- Lockdowns in various countries, territories, and states, which largely require homework, leading to discord.
- Travel bans making it difficult to do international business.
- Network capacity, cyber risk and IT security issues.

These events are particularly effective in the area of operational risks, much like ESG risks. They can also have an additional impact on ratings if stakeholder expectations are not fully met, even after discounting some of the crisis-induced goodwill. Subsequently, business and liquidity risks are likely to arise, while demand for some banking services may decline and customers may withdraw their deposits.

As with ESG risks, the strength of the impact of the changes depends largely on the industry in which companies operate. This means that bank customers are often hit even harder by the crisis, depending on which industry segment they work in. In addition to the points above, customers face problems such as:
- Government orders to close various businesses indefinitely (e.g., restaurants).
- Broken supply chains (particularly hitting global suppliers hard).
- Massive reduction in demand (both at home and abroad) [16].

External effects, which in turn affect banks because of the problems mentioned, can be seen through an increase in defaults. This is expected to occur in both the corporate and retail banking sectors, for example, due to customers becoming unemployed. Asset depreciation (including mortgages) should also be expected because, for example, commercial real estate is difficult to rent during a crisis.

But customers are not the only ones negatively affected by COVID-19; the same can happen to banks' outsourcing partners and suppliers. In this case, service quality is expected to decline or fail completely.

Finally, similar to the transition risks described in connection with ESG risks, governments have a large impact on people and businesses. It is also expected to affect banks directly (e.g., if employees are quarantined) as well as their customers and suppliers (e.g., if additional business segments are forced to close).

The main difference between the COVID-19 crisis and the ESG risks is the corresponding time frame. While ESG risks are subject to a multi-year, mostly transparently planned transition, the COVID-19 crisis intervention changes almost daily, with little predictability, forcing banks to adapt quickly to changing, unpredictable conditions.

In the current pandemic, banks only have the ability to react quickly, and mostly ad hoc. However, if they also use the crisis to examine the direct and indirect impact of external triggers, they can plan for similar ESG risk transfer channels in the future.

Banks' ability to cope with COVID-19 as well as ESG risks depends largely on their level of maturity in terms of operational resilience. The operational resilience framework is designed not only to maintain business continuity, but also to ensure that organizations can continually adapt to changing conditions. Investments in these systems can pay off many times over.
3 Discussion

ESG risks must be considered from all of the aforementioned perspectives. This requires a holistic approach when embedding them into a bank's risk management framework, starting with robust risk management and a sound risk management strategy to embedding these risks into the strategic and tactical management cycle. Specific next steps for banks should include a quick and early examination of available data sources and tools to conduct the first stress tests on climate risks. ESG risks materialize in known types of risk. For example, extreme weather can manifest as credit defaults and changes in market sentiment can manifest as impairments; climate damage coverage can be felt as a savings deduction, and outsourced services may no longer be used.

Thus, ESG risks can affect counterparty, market price, liquidity, and operational risks. However, causal mechanisms require a wide range of expertise throughout the process (e.g., on translating climate scenarios and models into business impacts throughout the value chain).

A critical step in the ESG risk measurement and assessment process is the assessment of current ESG impacts. This includes incorporating ESG risks in capital adequacy assessments, as well as in regulatory and economic capital calculations.

Notably, the inclusion of ESG significantly reduces the likelihood of misclassifying troubled banks as healthy. The results have implications for bank supervisors in developing models for predicting a bank's financial problems and for improving the effectiveness of supervisory efforts. In particular, include ESG factors as potential indicators for assessing banks' performance in terms of achieving sustainability goals.

References

2. A. Avrampou, A. Skouloudis, G. Iliopoulos, & N. Khan. Sustainable Development. 27, 743 (2019)
3. F. Bourguignon. CESifo Economic Studies. 64, 345 (2018)