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EXPOSURE TO THE ESG RISK OF THE POLISH BANKING SECTOR

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ABSTRACT: The main aim of the article is to explore changes taking place in ESG risk management in the Polish banking sector. The following research methods were used: in-depth literature studies, desk research methods, questionnaire survey methods, case study analyses, and observation and synthesis methods. The article verified the adopted research hypothesis, stating that knowledge and awareness of the importance of ESG risk in commercial banks in Poland increased, which is reflected in practical activities related to their bank risk management systems. The research that was conducted showed that Polish banks are increasingly aware of the ESG risk and the need for their inclusion in risk management processes. This inclusion takes place through various channels. However, an important aspect of this system is the assessment of banks' exposure to ESG risk. Commercial banks in Poland use mainly qualitative methods, although they also recognise quantitative ones to measure the scale of ESG risk taken.

KEYWORDS: ESG risk, ESG risk management, ESG factors, sustainable development, sustainable finance

Introduction

Risk in the context of credit institutions' activity has been a subject of particular interest for a long time (Iwanicz-Drozdowska et al., 2017). An important reason for this is undoubtedly the activity of the Basel Committee on Banking Supervision aimed at its measuring and securing. The first document of the Committee, referred to as Basel I, was published in 1989. However, the real "regulatory tsunami" was caused by Basel III, aimed mainly at increasing the safety and financial stability of banks affected by the global financial crisis of 2008 (BIS, 2010). For this reason, banking is currently the most regulated area of the economy (Minkina & Mórąwski, 2023). A new impulse in research and publications related to the regulation of bank risk is closely related to the implementation of the sustainable development idea in the global economy (Albert, 1996; Bocian, 2009; Borkowski, 2001; Borys, 2011; Forrester, 1971; Forrester, 1995; Górka, 2010; Kistowski, 2009; Kozłowski, 2007a; Kozłowski, 2007b; Niedziółka, 2021). It was first specified in the report of the United Nations in the 1980s (United Nations, 1987), but the fundamental progress in the realisation of the sustainable development concept is associated with the Paris Agreement on Climate Change signed in 2015 (UNFCCC, 2015). The signatories of the Conference of the Parties (COP21) in Paris directed their commitment to environmental protection to activities related to stopping and limiting an increase in global average temperature, strengthening the ability to adapt to negative consequences of climate change and reducing greenhouse gas emissions (provided that there are no negative effects on food production). In the European Union, the energy transformation, today commonly referred to as the *Fit for 55 package* (European Commission, 2021b), has gained particular momentum¹. Financial institutions, including banks, have seen spectacular benefits in this process. However, the expected scope of financing the accelerated energy transformation of the EU Member States exceeded the possibilities of obtaining green capital from the public sector and significantly increased the need for green finance in the private sector. This has stimulated and initiated discussions about the ESG risk. In this matter, despite the quick passing of time, there is still a lack of both unambiguous views and transparent solutions, but also an assessment of the degree of involvement and final effects of financing green investments by the private sector, including the banking sector. Therefore, the ESG risk management materialising in banks interested in green lending is the main subject of the article, whose main aim is to explore changes taking place in ESG risk management in the Polish banking sector. The paper's contribution relates to the low level of knowledge about banks' involvement in ESG risk management in the Polish banking sector.

The article has a theoretical as well as empirical nature. The first section presents extensive international literature studies, including the concept of sustainable development, uncertainty, and ESG risk of credit institutions, EU regulatory standards on ESG risk, and different approaches to ESG risk assessment. The second section describes the methodology of empirical research, indicating the research methods used, such as desk research method, questionnaire survey method, case study analysis, observation method and synthesis method. The third section includes the results of the questionnaire survey on the knowledge and awareness of ESG risk among representatives of the Polish banking sector, its measurement, inclusion in bank risk management systems, and reporting issues. The article ends with the "Discussion and conclusions" section, in which the main conclusions from the conducted literature studies and empirical research are presented. The conducted research allowed us to verify the adopted research hypothesis that knowledge and awareness of the importance of ESG risk in commercial banks in Poland increases, which is reflected in practical activities related to their bank risk management systems. The inclusion of ESG risk into risk management processes in the Polish banking sector takes place through various channels, confirming that ESG risk management is a complex undertaking requiring joint responsibility of all stakeholders of green investments, as its absence may threaten the reputation of entities accepting and implementing the idea of sustainable development. In this context, the importance of areas and determinants of ESG uncertainty related to the instability of the modern global economy and the concept of sustainable development increases.

1 In March 2018, the European Commission proposed the EU Action Plan on Financing Sustainable Growth. In 2019, it committed to implement the Green Deal and in 2021 adopted the EU Sustainable Finance Strategy.

An overview of the literature

Uncertainty and ESG risk of credit institutions

ESG risk, from a theoretical perspective, taking into account the broad knowledge accumulated so far, is defined by indicating its negative effects caused by various ESG factors in various areas of the economy and society functioning (Zioło et al., 2024; Marcinkowska, 2022). Therefore, it is treated very broadly, referring to subsequent areas of the sustainable development idea (Environmental, Social, Governance – ESG), or it is specified very narrowly, attributing to its main characteristics of specific institutions or economic entities. Despite this, the indicated approaches do not exhaust the possibilities of defining ESG risk. There is an immense number of recognised and unrecognised causative factors (Marcinkowska, 2022; KPMG, 2021; PwC, 2022; EBA, 2021; Zioło & Spoz, 2022), causing the ESG risk is a category that remains the subject of numerous controversies and debates. In this situation, it seems important to treat the ESG risk spectacularly, distinguishing it from the uncertainty accompanying the idea of sustainable development. This approach is not new in the research related to risk (Maybee et al., 2023). Basically, it is associated with the concept of the American economist F.H. Knight, assuming that risk refers to phenomena that can be measured and expressed quantitatively, while uncertainty does not have such a property (Knight, 1964). Thus, ESG risk is a measurable uncertainty, while ESG uncertainty is immeasurable. The ESG uncertainty means that a margin of underestimation of ESG risk remains high, and moreover, new areas and determinants of it may multiply, modifying not only the concept of ESG risk but also hindering its measurement and, consequently, securing expected effects for all stakeholders of green investment financing. Figure 1 shows the main reasons for ESG uncertainty.

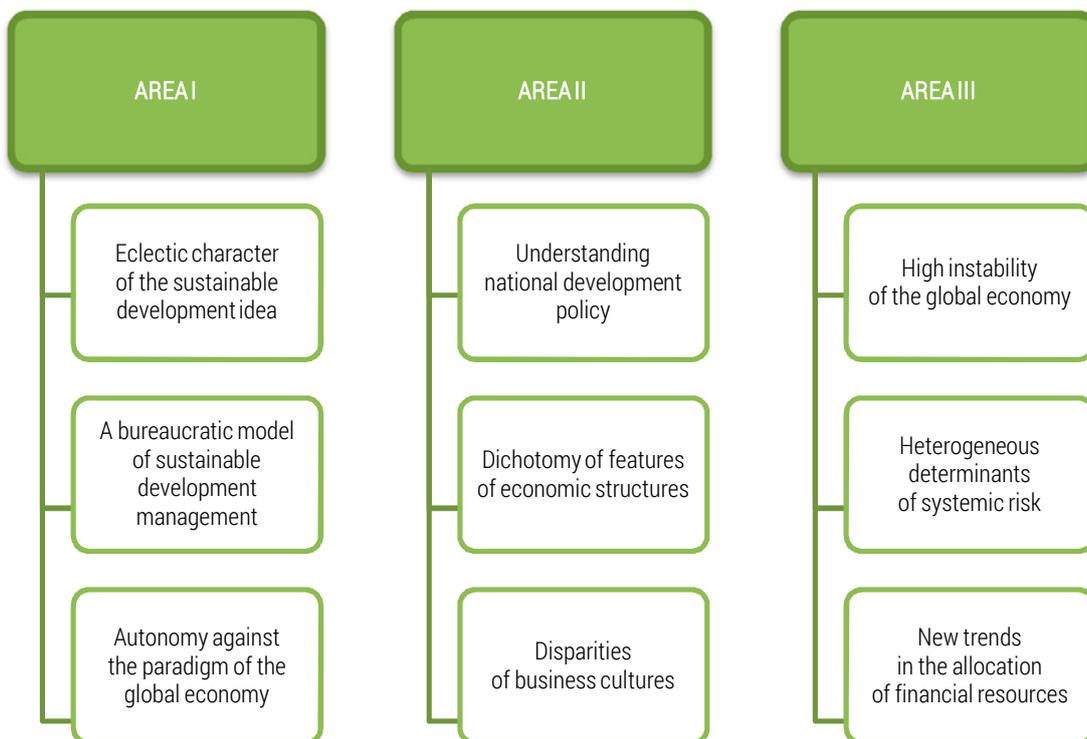


Figure 1. Areas of ESG uncertainty

First of all, they are related to the idea of sustainable development. Sustainable development is a concept that has many interpretations and definitions (Yamaguchi et al., 2023). Initially, the idea of sustainable development was associated with reducing the negative impact of the economy on the natural environment, social progress, and economic growth, which ultimately resulted in the well-being of the present and next generations (Cohen, 2020). Currently, it concentrates mainly on the reduc-

tion of greenhouse gases (United Nations, 2021). However, in various legal acts, strategic documents or political materials, the definition of sustainable development is differentiated, giving it various spectacular features (Ogrzyzek, 2023; Emas, 2015). This situation makes the objectives and preferences of achieving the expected positive effects of a sustainable global economy heterogeneous and imprecise. Undoubtedly, among entities interested in green financing, it generates an increase of the ESG risk. The constant intensification of administrative management of sustainable development is also extremely disturbing. In the process of crystallisation of its concept, the number of commands and prohibitions grows disproportionately, being in direct contradiction to the idea of a free market and liberal economy. Ultimately, a sustainable development strategy implemented centrally in economic processes may generate a high risk of lack of acceptance by non-financial and financial economic entities, as well as turning expected achievements into unexpected losses. A simple manifestation of “business cunning” and administrative disloyalty is the greenwashing phenomenon, which currently requires separate regulations (Delmas & Burbano, 2011).

The concept of sustainable development is also, in many respects, in contradiction with the economic criteria of global economic processes. Sustainable development goals, the way of their implementation, as well as sources of financing are subordinated to the subjective decision-making processes of the “current administrator”. Although the idea of sustainable development strengthens the importance of social criteria in economic processes, which are difficult to question, however as broad historical experience shows, statist or totalitarian systems are also guided by these criteria. While the global economy bases its economic growth on various international trade, monetary and capital dependencies, as well as the accompanying consumerism, bringing increasing ownership profits. Therefore, its driving force is mercantile motives, reinforcing the trend towards economic freedom and liberalism. Although the global financial crisis has weakened and negatively verified the scope of some international links, international economic cooperation constantly brings measurable financial benefits on a global scale. Therefore, the high ESG risk also results from the uncertainty concerning to what extent growing social awareness in the field of ecology and humanism will dominate economic, so far common in the global economy (Raich et al., 2011). The area of uncertainty that significantly affects changes in the level and scale of ESG risk is the socio-economic development policy conducted in individual national economies. However, there is a considerable diversity of views on this issue. Undoubtedly, the implementation of sustainable development is taking place in highly developed countries, including EU Member States. In developing countries, acceptance of this idea itself is not connected with the financial possibilities of its implementation. While in poorly developed countries, sustainable development is even more complicated. The needs of this development are not a priority among social and economic objectives. Hence, the level of financial resources of these countries, as well as their allocation, are mainly related to meeting current needs. On an international scale, the analysed diversity causes that the positive consequences of climate change are strongly limited by a lack of sustainable development cohesion policy, incurred costs grow and are unevenly distributed, constituting an important source of ESG risk in various areas. In addition, the concept of sustainable development has recently been accompanied by changes in the world’s economic map. The pace of growth of the hitherto strongest economies is slowing down, while countries of poor regions of Asia and Africa are developing faster and faster, and the imperial motives of Russia and China are strongly changing the current economic reality. Uncertainty of the sustainable development of the world is therefore enriched by new, unknown and unrecognisable so far determinants. There is also a significant diversification of economic structures and business cultures of countries on an international scale, which increases the scale of ESG uncertainty. Another important area of ESG uncertainty is the high instability of the global economy, which has been observed since its destabilisation under the influence of the global financial crisis. The protective actions undertaken by the financial safety net institutions were not positively verified (Galati & Messner, 2010; Bisiac et al., 2012; Oosterloo & de Haan, 2003; Szpunar, 2012) also when the global economy collapsed under the Covid-19 pandemic. Government aid programs in the face of the breakdown of the financial liquidity of a number of economic entities failed to recover, and the global economy plunged into a serious energy crisis. However, the problems of global economic instability do not stop there. China is in a difficult economic situation and is at risk of a slowdown due to the zero-COVID policy. In the European Union, the cost of living is constantly rising, which threatens social dissatisfaction with all its negative economic consequences. In underdeveloped countries, the spectre of famine is becoming

ever more serious, intensified by Russia's aggression against Ukraine. In the United States, the banking sector remains unstable, and sovereign debt is rising dangerously. The war in Ukraine, which has unleashed new trends in the allocation of public resources among NATO countries, also remains an unresolved problem. All indicated factors primarily affect the dynamics of economic growth on a global and national scale, and from the perspective of sustainable development, they generate ESG uncertainty and multiply ESG risk factors.

EU regulatory standards on ESG risk

Observing and analysing changes accompanying ESG in the European Union, it is increasingly noticeable that sustainable development is being transformed from a choice into a necessity. In business companies, the ESG (Environmental, Social, Governance) strategy systematically replaces CSR (Corporate Social Responsibility). This means that these organisations are moving from voluntary, socially responsible activity to a mandatory and integrally related ESG strategy. This strategy, often also referred to as "governance+" (G+), covers a number of issues that, in addition to traditionally understood corporate governance, introduce those important from the point of view of sustainable development. Currently, they relate to risk management, internal control and running a business focused on creating long-term sustainable value rather than short-term business benefits. This process is accelerated by the regulations accompanying the redirection of financial capital to green investments, which have been strongly intensified since the Paris Agreement (Dasgupta et al., 2016). On March 10, 2021, Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019, sustainability-related disclosures in the financial services sector, called SFDR (i.e. Sustainable Finance Disclosure Regulation), was implemented in the European Union (Regulation, 2019). SFDR has established harmonised rules for credit institutions (applicable to all financial market participants and financial advisers) on transparency regarding the inclusion of sustainability risks and consideration of adverse sustainability impacts in their processes, as well as on the provision of sustainability-related information regarding financial products. Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investments ("Taxonomy Regulation") has become an important supplement to the SFDR (Regulation, 2020). Thus, in the European Union, a green activity classification system has been implemented for all investors, enterprises and financial institutions to determine its impact on the environment. On December 16, 2022, the Corporate Sustainability Reporting Directive (CSRD) was published (Directive, 2022). It significantly changed the subjective and objective scope of enterprises' obligations in the field of ESG reporting. All these regulations are extensive and detailed, and in some parts even meticulous, which must raise concerns about the possibility of respecting them by credit institutions. Although obligations arising from them are often implemented gradually and in a different order, it does not change the fact that they require the implementation of an ESG strategy responsible for sustainable development. It should be noted that in the European Union, further regulatory changes in the field of ESG reporting are planned, reaching even 2028 (ZBP, 2023). Moreover, in addition to the EU documents analysed so far, banks must take into account in the ESG risk management process the issues regulated by law in 2019 in the Banking Package (European Union, 2019). It includes EU changes to the BRRD (Bank Recovery and Resolution Directive), CRD (Capital Requirements Directive), SMR (Single Resolution Mechanism) and CRR (Capital Requirements Regulation). The implementation of these regulations was scheduled for December 2020, while already in October 2021, the European Commission published a "green" draft amendment to the CRD package, taking into account the postulate that banks should constantly analyse and manage ESG risk. The revised Banking Package also strengthens supervision by ensuring the appropriate management of EU banks and better protecting financial stability. Most notably, it provides stronger tools for supervisors overseeing EU banks and establishes a clear, robust, balanced, "fit and appropriate" set of rules whereby supervisors assess whether senior staff has the skills and knowledge required to manage a bank (European Commission, 2021a). In this matter in the European Union, where bank risk management is an integral element of the operational activities of credit institutions, this means a need to implement risks related to climate change and the promotion of sustainable finance, not only to strategic decisions (see Figure 2).

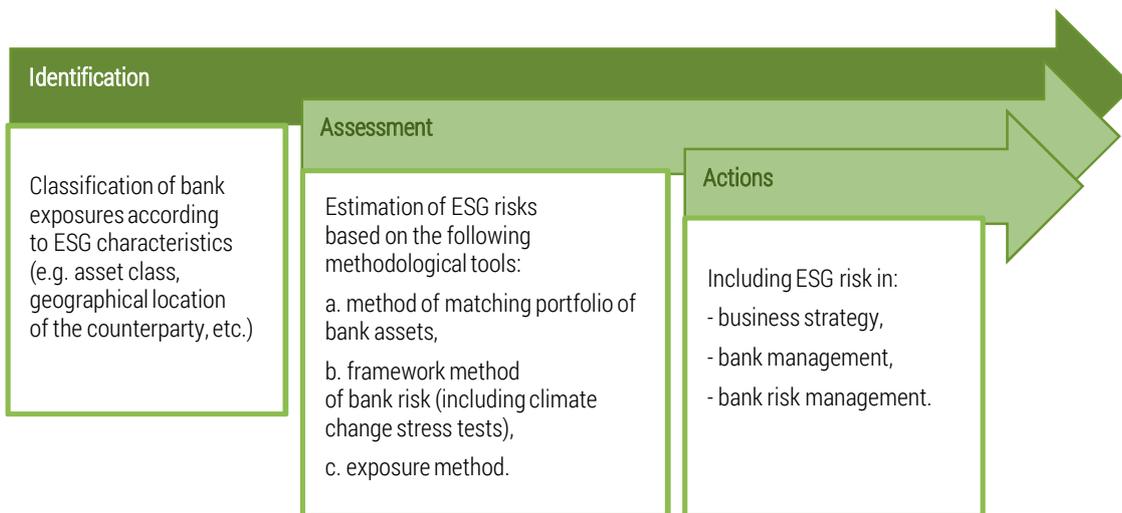


Figure 2. Approach to the ESG risk assessment

Additionally, important solutions are included in the EBA Report on Management and Supervision of ESG Risk for Credit Institutions and Investment Firms (EBA, 2021). The report defines ESG risk and its types, transmission channels, and assessment methods that are necessary for effective bank risk management. The EBA Report (2021) generally indicates how ESG factors and risks should be considered in the regulatory and supervisory framework for credit institutions and investment firms. Undoubtedly, criteria, parameters, ratios, metrics and methods, which can be used by banks to assess the impact of short-, medium- and long-term ESG risks on various areas of their operating activity, included in the EBA Report (2021) increase their safety and financial stability. At the same time, the rules adopted in the EBA Report (2021) for including ESG risks in a proportionate manner in the internal risk management framework and strategies facilitate their identification and increase the effectiveness of bank risk management. The increased banks' resilience to ESG risk is also created by the obligations of supervisory authorities contained in the EBA Report (2021).

Analysing the problems of ESG risk management, it is also worth emphasising that risk protection in banks is objective in nature. Banks have to hedge regulatory risk in accordance with micro- and macro-prudential standards. However, ESG risk is not a single type of risk; it is a cross-cutting one that affects individual types of regulatory risk. Therefore, a bank manages it as a part of managing other types of risk. Therefore, the ESG risk in relation to EU credit institutions will significantly modify prudential regulations. The Basel Committee on Banking Supervision, taking a position on this issue, indicated in 2021 that the ESG risk should be reflected in the individual pillars of capital standards (BIS, 2021). Basel III contributed to the identification of three such pillars. The first pillar concerns capital requirements, the second pillar relates to the internal capital of banks and their supervisory assessment, and the third pillar refers to disclosures enabling market discipline in credit institutions. Undoubtedly, the implementation of ESG risks to these pillars is a serious challenge in bank risk management. Banks will have to identify both the ESG risk relevant to their operating activities and the channels of its impact on prudential standards. They will then determine the scale of this impact and its effects by securing them with bank capital. However, many issues in this area still remain unexplained; some are at a consultation level (Marcinkowska, 2022), but the area of ESG uncertainty also remains significant. Banks are currently also subject to macro-prudential standards. ESG risk is undoubtedly a systemic risk; hence, it should be reflected in capital buffers and limits of excessive credit growth. Unfortunately, this regulatory area is constantly at a level of consultation and debate (Marcinkowska, 2022).

Nevertheless, the ESG risk is particularly important in bank risk management. It can affect banks' financial results and liquidity situation both directly – e.g. by destroying property belonging to a given institution as a result of sudden weather phenomena, but above all indirectly – as it affects the financial situation of bank's clients, e.g. through disruptions in production and supply chains, increased operating costs or changes in consumer behaviour and preferences. As a result, this may

cause higher provisions for bank credit losses and, ultimately, real losses incurred. Therefore, national and international regulatory authorities (including the Bank for International Settlements, European Central Bank and European Banking Authority) are making increasing efforts to make banks and their representatives aware of the essence and importance of risk related to the ESG factors, need to integrate ESG risk into risk management, as well as to understand main areas and a scale of the impact of ESG risk on individual parts of banking activity (KPMG, 2021).

In Europe, activities aimed at including ESG risk in bank risk management systems are carried out under the auspices and guidelines of financial supervision institutions and the central bank of the euro area countries. On December 13, 2022, the European Banking Authority (EBA) published the key objectives of the planned activities in the field of sustainable finance, which included the following eight areas (EBA, 2022):

- facilitating access to information and promoting market discipline,
- integrating ESG factors and risks in risk management and supervision,
- identifying the areas for possible enhancements to better capture environmental and social risks,
- embedding ESG risks gradually in the stress testing framework to help identify banks' vulnerabilities,
- supporting definitions and methodologies for sustainable banking products,
- specifying key features, drivers and risks of greenwashing and assessing its interaction with the supervisory framework,
- integrating information on ESG risks in supervisory reporting,
- monitoring material ESG risks and development in sustainable finance.

Thus, these areas determine the direction of changes in the field of ESG risk management from the perspective of banking institutions. In addition, they are supposed to affect their operations, indicating the next steps that should be taken to adapt to the new guidelines and regulations. In the euro area, the state of work of banking institutions in the field of implementing ESG risk management processes is supervised by the European Central Bank, which performs appropriate inspections in its subordinate banks, including climate stress tests aimed at determining the impact of climate risk on banks through their exposure to non-financial enterprises, which will materialise in the form of credit losses (credit risk) and revaluation of corporate bond portfolios (market risk) (Miszczak, 2021).

Research conducted so far in the Polish banking sector indicates a growing interest in green investment financing (Pyka & Nocoń, 2023). This means that, in accordance with the applicable bank risk management process, they should hedge their green asset portfolio against ESG risk. Sustainalytics is a company measuring the scale of ESG risk of companies, including banking institutions, and assessing the sustainable development of listed companies around the world based on their environmental, social, and corporate governance performance. It has also created a rating that takes into account the exposure of a given company to significant ESG risks specific to a given industry and how the entity manages these risks, as well as for listed banking companies (see Figure 3).

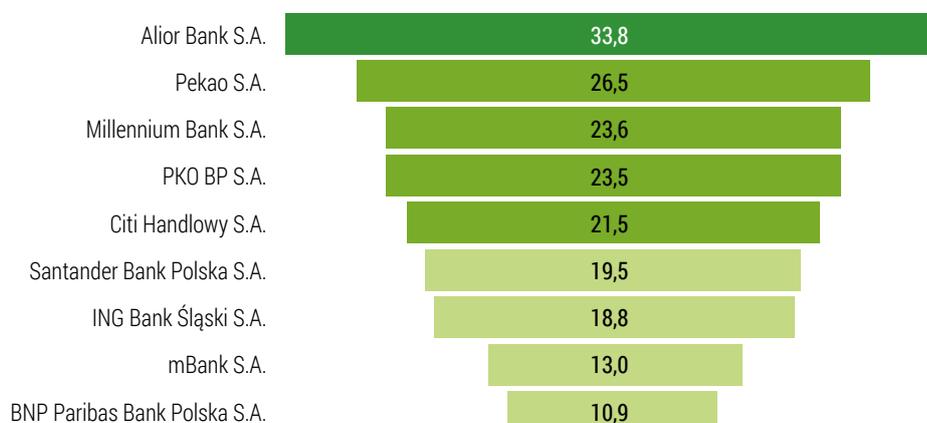


Figure 3. ESG risk of commercial banks in Poland, according to Sustainalytics

Source: authors' work based on Sustainalytics data.

Alior Bank S.A. is characterised by the highest ESG risk among commercial banks in Poland. Pekao S.A., Millennium Bank S.A., PKO BP S.A. and Citi Handlowy S.A. have a medium level of ESG risk. In turn, low exposure to ESG risk was reported in Santander Bank Polska S.A., ING Bank Śląski S.A., mBank S.A. and BNP Paribas Bank Polska S.A. This is mainly due to the fact that the parent companies of these institutions place great emphasis on sustainable development and are at an advanced stage of ESG risk management, which is reflected in the environmental, social and corporate governance policies of their subsidiaries registered in Poland as commercial banks. In relation to these listed banking companies, questionnaire surveys were conducted to focus on their individualised exposure to ESG risk management.

Research methods

The conducted questionnaire survey constituted the third stage of research conducted successively from 2020 among banking institutions associated with the transformation of the Polish banking sector in relation to the implementation of the sustainable development goals, in particular in the issues of sustainable financing, the process of greening bank loan portfolio as well as ESG policy and risk. This stage of the questionnaire survey was conducted in Q1 2023 among representatives of the 10 largest commercial banks in Poland. Therefore, the research sample included the following banks: PKO BP S.A., Bank Pekao S.A., Santander Bank Polska S.A., ING Bank Śląski S.A., mBank S.A., BNP Paribas S.A., Bank Millennium S.A., Alior Bank S.A., Citi Handlowy S.A. and Velo Bank S.A. At the same time, recognising that the value of total assets of these institutions constitutes 79% of the total assets of the Polish banking sector (KNF, 2022), it should be assumed that results obtained from surveys are representative and reflect results for the whole banking sector in Poland. 101 representatives of commercial banks in Poland participated in the research, while 46.06% of them held managerial positions, and 53.94% represented risk management departments. Moreover, 82.12% of the respondents had at least 10 years of work experience in a bank. The structure of respondents by sex and age seems to be of marginal importance from the point of view of the researched issues and obtained results.

The research procedure included the stage of collecting questionnaire data and their analysis from the point of view of the adopted research objectives and assumptions. The purpose of the questionnaire survey was to analyse and assess environmental, social responsibility and corporate governance aspects among commercial banks in Poland in the following four areas:

- 1) knowledge about ESG,
- 2) banks' ESG policy,
- 3) assessment of investment projects in the context of ESG issues,
- 4) ESG risk.

Results of the research

In the first stage of the empirical research, the knowledge of representatives of commercial banks in Poland on ESG risk and its importance in the bank risk management system was verified (Figure 4). 55.45% of respondents indicated that they are aware of a need to include ESG risk in bank risk management systems. Only 13.86% of them are unaware of the essence and importance of this relatively new type of risk in the holistic approach to bank risk management, while 30.69% have no opinion on this matter.

The research also analysed the opinions of the Polish banking sector representatives on whether and to what extent ESG risk affects banking activity (Figure 5). More than half of the respondents (54.46%) agree that ESG risk affects banking activities, of which 38.61% believe that this impact is strong, and 15.84% think that ESG risk affects the activities of banking institutions but only to a small extent. 10.89% of the respondents indicate that the ESG risk does not affect the bank's operations, while 34.65% have no opinion on this subject.

Are you aware of a need to incorporate ESG risk into your risk management systems?

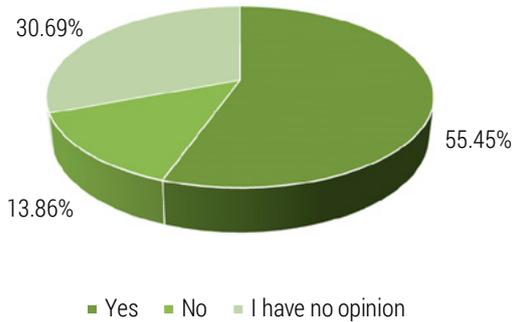


Figure 4. Research results – part 1

Do you think that ESG risk affects banking activities?

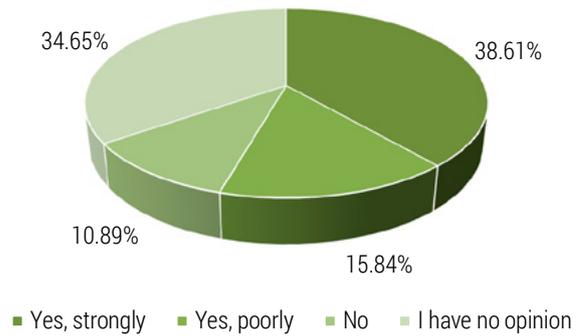


Figure 5. Research results – part 2

The further questionnaire survey was focused on the analysis of the degree of banks' involvement in practical activities related to ESG risk management. 83.17% of the respondents indicated that in the bank, they represent the ESG risk, which has been included in their bank risk management systems (Figure 6). Only 16.83% declared that such practices do not take place. These results thus prove that the vast majority of the Polish banking sector is not only aware of the essence of this risk but also has taken real steps to include the ESG risk resulting from activities aimed at implementing sustainable development objectives in their bank risk management systems. In turn, current regulatory trends clearly indicate that banks not only can but should include ESG risk in their risk management systems as soon as possible and, more importantly, treat them with the same due attention as traditional types of financial risk.

Has your bank included ESG risk in its risk management systems?

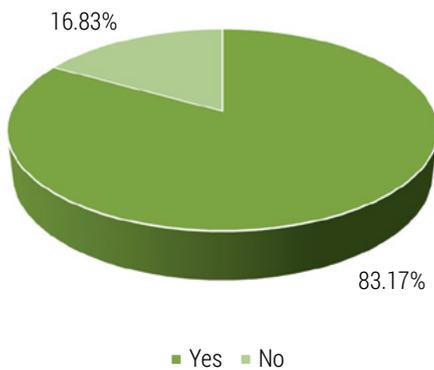


Figure 6. Research results – part 3

However, the inclusion of ESG risk into risk management systems can be done in a variety of ways, which is confirmed by the results of the questionnaire survey (Figure 7). Representatives of commercial banks in Poland added that the inclusion of ESG risk into risk management systems in their banks was done by adjusting the existing methods of risk identification (43.56%). Moreover, 43.56% of respondents additionally indicated a need to measure and control individual risks, 28.71% of them to include in the analysis cause and effect relations between these types of risk and ESG factors, while 18.81% declared that banks also pay attention to appropriate definition of ESG risk transmission channels to existing bank risk categories.

How did your bank incorporate ESG risk into its risk management system?

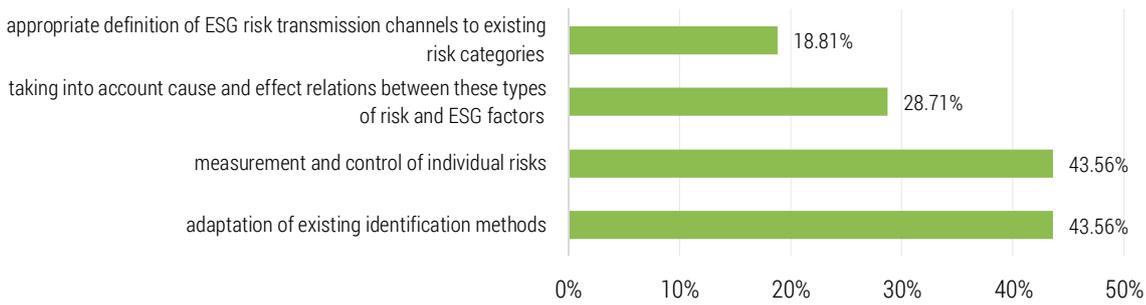


Figure 7. Research results – part 4

According to the respondents, estimating a bank’s exposure to ESG risk is particularly important in the overall process of including ESG risk in the risk management system. 65.35% of respondents indicated that banks represent a scale of ESG risk incurred (Figure 8). In turn, 34.65% of them declared that such practices still do not take place in banks. Nevertheless, these results are quite optimistic, all the more so ESG risk is treated by banks as a special type of cross-cutting risk which, to varying degrees and through various transmission channels, affects traditional types of financial and non-financial risk identified in a bank (including credit, operational or reputation risk). At the same time, the ESG risk is considered difficult to quantify unambiguously due to the fact that data related to ESG factors are mainly qualitative in nature. Therefore, its measurement most often focuses on cause-and-effect analysis between classic types of bank risk and ESG factors.

Only 22.77% of commercial banks in Poland have defined quantitative ESG risk measures so far (Figure 9). The respondents indicated that the adopted methodology for measuring the ESG risk in the banks they represent takes into account, among others, volatility measures, security and threat measures, a scale of financing investments in projects connected with sustainable development goals, a degree of bank’s involvement in ESG projects, climate measures, etc. However, as many as 77.23% of respondents declared that such measures have not been defined so far, and the risk assessment is still at a preliminary stage and has a mainly qualitative nature.

Does your bank assess a level of ESG risk?

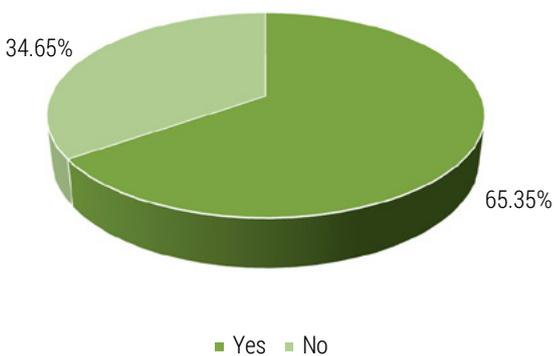


Figure 8. Research results – part 5

Have ESG risk measures been defined in your bank?

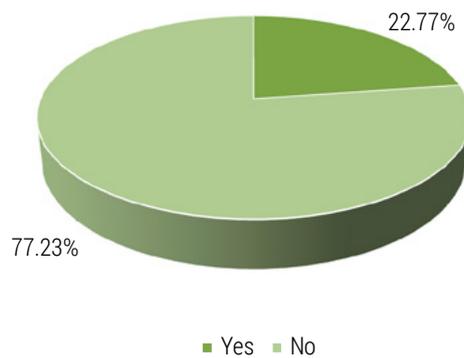


Figure 9. Research results – part 6

Banks, in accordance with the above-mentioned regulations, are also obliged to report the results of analyses and measurements of ESG risk exposure. The empirical research that was conducted showed that 37.50% of the indications of representatives of commercial banks in Poland were done through cyclical reports presenting ESG factors as well as the impact of these factors on a given entity (Figure 10). 33.33% of banking institutions in Poland prepare additional information on ESG risks, main threats and determinants of their exposure. On the other hand, 15.83% of respondents indicated that the bank they represent analyses the effectiveness of managing ESG risk factors, and only

13.33% of them declared that stress tests are performed, which so far are not obligatory under Polish legislation.

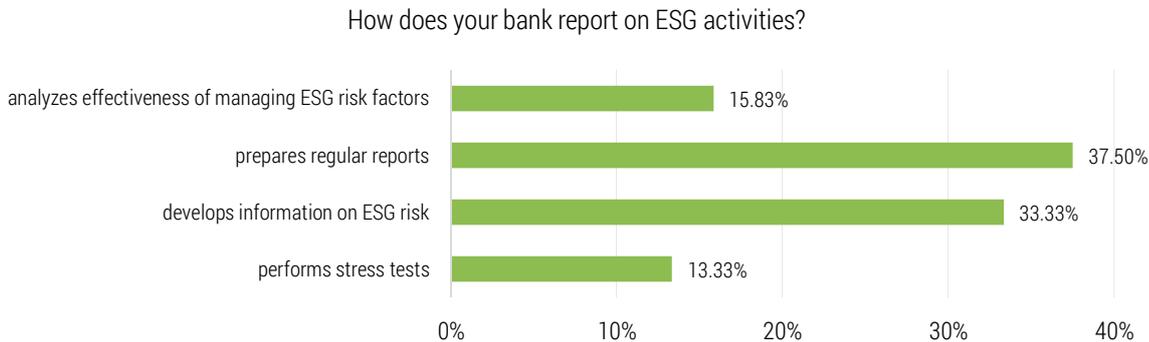


Figure 10. Research results – part 7

Discussion and conclusions

The theoretical and empirical studies that were conducted prove that the ESG risk in the new climate formula of the sustainable development idea of the global economy is increasingly accompanying the processes of green investment financing. However, the controversies constantly related to its formula remain overshadowed by the needs of the energy revolution, justified not only by climate needs but also by geopolitical changes, unexpected on an international scale, caused by Russia's aggression against Ukraine. In this perspective, both the intensification of sustainable development, especially in highly developed countries, including EU Member States, as well as increasing legal regulations and highly bureaucratic orders and bans are conducive to the escalation of ESG risk. This is particularly noticed by financial institutions, including banks invited to finance green investments in the face of insufficient public capital resources, demanding standardisation of green financing procedures and recognition of ESG risk (Zabawa, 2019). Financial institutions are motivated to become more involved in economic changes and to put pressure on their clients. It is believed that they can significantly accelerate the process of decarbonisation of the economy (ING & EY, 2021). In the European Union, which rigorously implements the Basel recommendations to the bank risk management process, regulation of ESG risk is undertaken with a similar consequence. The distinction between uncertainty and ESG risk introduced in the publication shows that an unpredictable and indefinite number of their determinants hinder the standard-setting process or make it ineffective. However, the lack of awareness of ESG risks in banking institutions can result in a loss of loyalty from clients who increasingly pay attention to social and environmental activities, decreasing interest from future investors and potentially high fines for non-compliance with ESG regulations, which in turn may affect their financial condition. Therefore, ESG risk should be identified, monitored, measured, and hedged at both individual credit institutions and sectoral and supervisory levels. Due to the complexity of the ESG risk, this process requires extensive research, consultation and appropriate recommendations.

The survey that was conducted indicated that the Polish banking sector is mostly aware of the need to include ESG risk in bank risk management systems. Moreover, banks include ESG risk assessment in key areas of their activity and where it is required by current regulations, i.e. in lending processes (100%), updating the strategy or business model (83%) and the process of approving new products (67%) (PwC, 2024). As the conducted research indicated, representatives of the largest commercial banks also believe that ESG risk strongly determines the activity of banking institutions; therefore, it should be properly managed similarly to credit, operational or market risk. Moreover, the vast majority of Polish banks are not only aware of the importance of ESG risk in their operations but also have taken real steps to include it in the bank risk management systems. These results are also consistent with the main outcomes of the research conducted by the ING bank and the consulting company EY, which showed that for some commercial banks in Poland, sustainable development is

important in the decision-making process of lending. Some of them have procedures for qualifying transactions and projects as “green” and for assessing ESG risk (ING & EY, 2021). This is largely due to the legal obligation to include and treat ESG risk with the same due attention as traditional financial risks. To a large extent, the process of inclusion of ESG risk into bank risk management systems is carried out by adjusting existing methods of risk identification as well as measuring and controlling individual risks. The obtained results also indicate that estimating a bank’s exposure to ESG risk is significantly important in the risk management process. However, so far, quantitative measures of ESG risk have been defined only in a small part of banks in Poland and are largely based on simple methods of risk estimation. It would, therefore, be worth motivating other institutions to define their own ESG risk measures in order to assess their exposure to this risk and thus take appropriate actions to reduce, mitigate or transfer the risk. As indicated in the ING and EY report (2021), both banks and non-financial business entities are developing new methodologies for measuring and reporting issues related to sustainable development, including in terms of assessing exposure to ESG risk.

ESG risk ratings prepared by international agencies indicate that commercial banks in Poland, which parent companies pay special attention to ESG factors and actions taken in this area, are characterised by a low level of risk. However, the level of ESG risk varies in the Polish banking sector. Therefore, in credit institutions with a high or medium level of ESG risk, there is a need to improve the appropriate management of this risk. Finally, the conducted questionnaire survey showed that, in accordance with the reporting requirements, banks publish the results of their ESG analyses in the form of cyclical reports and by identifying the main threats and determinants of their exposure to ESG risk. At the same time, the conducted research and formulated conclusions enabled to achieve the objective of the paper as well as positively verified the research hypothesis stating that knowledge and awareness of the importance of ESG risk in commercial banks in Poland increases, which is reflected in practical activities related to their bank risk management systems. Summarising the results of the previous analyses and this research, it should be noted that currently, in Poland, the banks’ approach to the issue of sustainable development is different. However, it is expected that in the next few years, sustainable development and the associated ESG risk will become a significant element of their operational activity. In turn, in the next 5-10 years, these aspects will be crucial in the business operations of all Polish banks (ING & EY, 2021).

Taking into account all objections to the questionnaire survey, it should be emphasised that in the conditions of constantly low levels of knowledge about the ESG risk and consequences of sustainable development, obtained conclusions allow for the objectification of the formulated views.

The contribution of the authors

Conceptualization, I.P. and A.N.; literature review, I.P.; methodology, A.N.; formal analysis, I.P. and A.N.; writing, I.P. and A.N.; conclusions and discussion, I.P. and A.N.

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EKSPOZYCJA POLSKIEGO SEKTORA BANKOWEGO NA RYZYKO ESG

STRESZCZENIE: Celem głównym artykułu jest eksploracja zmian zachodzących w zarządzaniu ryzykiem ESG w polskim sektorze bankowym. W jego realizacji wykorzystano następujące metody badawcze: pogłębione studia literaturowe, metodę desk research, metodę badań kwestionariuszowych, analizę case study, metodę obserwacji oraz metodę syntezy. W artykule weryfikowano przyjętą hipotezę badawczą głoszącą, iż wiedza i świadomość dotycząca znaczenia ryzyka ESG w bankach komercyjnych w Polsce wzrasta, co ma swoje odzwierciedlenie w praktycznych działaniach związanych z systemami zarządzania ich ryzykiem bankowym. Przeprowadzone badania wykazały, iż instytucje polskiego sektora bankowego są coraz bardziej świadome istoty ryzyka ESG oraz potrzeby ich inkluzji do procesów zarządzania ryzykiem. Włączenie to odbywa się różnymi kanałami, jednakże ważnym aspektem w tym systemie jest ocena ekspozycji banków na ryzyko ESG. Obecnie banki komercyjne w Polsce dokonują tego głównie w sposób jakościowy, chociaż rozpoznają również ilościowe metody pomiaru skali podejmowanego ryzyka ESG.

SŁOWA KLUCZOWE: ryzyko ESG, zarządzanie ryzykiem ESG, czynniki ESG, zrównoważony rozwój, zrównoważone finanse