# Impact of ESG Risks on Bank Financing Business

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#### Abstract:

**Purpose:** The aim of the study is to assess the effects of ESG information on the assessment of the risk of financing business entities by banks.

**Design/Methodology/Approach:** The article uses a critical analysis of literature and legal acts. An assessment was made of internal regulations of banking institutions in the studied scope as well as few industry reports. The scope of the article refers to the impact of ESG risk on the assessment of the creditworthiness of business entities and the assessment of the possible loss of value of accepted collateral (e.g. real estate).

**Findings:** The thesis that information disclosed in the field of ESG may be crucial for assessing the possibility of providing financing to business entities by banking institutions was verified in the paper.

**Practical Implications:** The research results allow us to conclude that ESG risk management, depending on the efficiency of this process, may limit the negative impact on the assessment of the creditworthiness of the entity.

**Originality/Value:** The topic of sustainable development is present in the literature on a wide scale, due to the implementation of legal regulations at the European level in the field of reporting and auditing reports on the environment, social and management aspects of activities (ESG). There is a research gap in the literature in the area of assessing the impact of ESG information on individual stakeholder groups.

**Keywords:** Sustainable development, ESG reporting (environmental, social, governance), bank, credit, creditworthiness.

JEL codes: G15, G18, G20, Q54.

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### 1. Introduction

The adoption of United Nations resolutions by member states (Agenda 2030, 2015) is forcing economic entities to take steps towards a transformation leading to the achievement of the Sustainable Development Goals (SDGs).

The sustainability-related pressures on businesses stem from expectations set by customers, investors and even employees. Potential investors view companies more favourably that take ESG (Environmental, Social, Governance) factors into account in their business decision-making.

Subsequent EU directives expand the scope and structure of mandatory disclosures by imposing, among other things, the need to monitor and manage the impact that a company's activities have on its environment and to assess the impact that the environment has on its operations. The research problem of this paper is to assess the impact of ESG risk management information of business entities on banks' propensity for loan financing.

Environmental factors concern the impact of the natural environment and climate change on the activities of economic entities (and vice versa). Social factors relate to the broader wellbeing of communities. In the context of business, these will include issues relating to safety and working conditions, equal treatment, the wage gap, employee education.

Governance factors relate to issues of competence, gender equality in leadership positions and the quality of company management. In relation to contractors, they address issues of ethical performance, absence of bribery, quality of relationships with suppliers and customers throughout the supply chain.

The aim of the article is to assess the impact of ESG information in the context of assessing the risk of banks providing financing to businesses. The thesis of the article is that ESG information disclosed at the loan application stage (or as part of sustainability reporting) can be critical in assessing the ability of financial institutions to provide financing to businesses (Thalassinos *et al.*, 2015).

In examining the impact of ESG risk on the assessment of the creditworthiness of businesses, the sources of data that banks use to pre-assess the level of ESG risk were identified. It also investigated what range of information banks obtain from customers to deepen their ESG risk analysis, what risk mitigation methods they use and how the outcome of the assessment influences the creditworthiness assessment.

The final section identifies directions for the development of banks' financial offerings as a method of promoting sustainable finance.

### 2. Literature Review

The topic of sustainability is present extensively in the literature due to the implementation of successive regulations (NFRD, 2014; CSRD, 2022). There is a consensus that corporate financial reporting is already an insufficient tool for communication with the environment (Rogowski and Lipski, 2022). Companies are being forced by regulations to expand non-financial reporting to include ESG aspects (Morrison, 2021), as access to capital is determined by the quality of the reported information (Rau and Yu, 2023; Thalassinos, 2024).

Investors largely agree that returns on investment and corporate sustainability resulting from ESG strategies go hand in hand. Therefore, companies increasingly recognise the economic value of integrating ESG criteria into their operations (Levantesi, D'Ecclesia, and D'Amato, 2023). This approach is rapidly becoming a cornerstone of many companies' growth strategies (DeCotis, 2021) and an a sound ESG strategy is becoming essential for the proper management of a company's operational risks (Herrera and Brenneis, 2020l Pagkalou *et al.*, 2024; 2025).

Developing an ESG reporting policy generates implementation, due diligence and disclosure costs (Nizam, Ng, Dewandaru, Nagayev, and Nkoba, 2019). The aforementioned costs, should be compensated by revenue stability, lower business risk, increased efficiency and enterprise value (Buallay, 2019). ESG risk management should also carry benefits in terms of improving a company's creditworthiness (Grima *et al.*, 2024).

Polish banks are increasingly aware of ESG risks and the need to integrate them into their risk management processes (Pyka and Nocoń, 2024). For banks, the development of sustainable finance and risk management is doubly important (Buallay, Fadel, Alajmi, and Saudagaran, 2020). First, banks need to integrate social and environmental considerations into their business operations to minimise the impact of ESG risks to the environment. Second, banks are obliged to consider ESG factors in their lending, financing and investment decisions.

Banks are also extending the non-financial ESG reporting initiative to the companies they provide financing to (Zabawa and Łosiewicz-Dniestrzańska, 2023). Banks report publicly that they are more willing to work with borrowers who have high ESG index scores (Houston and Shan 2022; Chang *et al.*, 2021). They adopt proenvironmental measures in their credit assessment process, thus promoting green lending to applicants.

Literature research on the impact of ESG on business performance is extensive, including articles in the nature of a review of the existing body of work (Menicucci and Paolucci, 2022). Table 1 presents an overview of current research in examining the impact of ESG factors on different areas of corporate performance.

Scope of research	Study authors	
Exploring the relationship	Di Tommaso and Thorton, 2020; Gangi, Meles,	
between corporate risk and ESG	D'Angelo, and Daniele, 2018; Sassen, Hinze, and	
factors	Hardeck, 2016;	
Exploring the relationship	Esteban-Sanchez, de la Cuesta-Gonzalez, and Paredes-	
between ESG and corporate	Gazquez, 2017; Friede, Busch, and Bassen, 2015; Xie,	
performance	Nozawa, Yagi, Fujii, and Managi, 2018;	
Assessing the impact of	Utz, 2019; Nizam et al., 2019; Siuela, Wang, and	
sustainability indices on	Deladem, 2019; Forcadell and Aracil, 2017;	
profitability indicators		
Research into the impact of ESG	Sherwood and Pollard, 2018; Verheyden, Eccles, and	
factors on market performance	Feiner, 2016;	
and portfolio strategies		
Research on ESG ratings and	Berg, Kölbel, and Rigobon, 2019; Eccles and Stroehle,	

2018; Escrig-Olmedo, Rivera-Lirio, Muñoz-Torres,

and Fernández-Izquierdo, 2017; Huber, Comstock,

Table 1. Scope of research for analysing the impact of ESG factors

Source: Own study.

measures

With regard to the banking sector, several studies confirm the relevance of the impact of climate change on credit management (Georgopoulou *et al.*, 2015) and the need for a prudential framework to mitigate the potential impact on financial stability (Nieto, 2019; Marcinkowska 2022; Smolenska 2023; Kulińska-Sładocha, 2024). In contrast, other ongoing research (Batten, Sowerbutts and Tanaka, 2016; Campiglio *et al.*, 2018; Monnin, 2018) suggests that climate change may affect not only banks' activities but also central banks' financial stability objectives.

Polk, and Wardwell, 2017

There is a research gap in the literature regarding the assessment of the impact of ESG information on different stakeholder groups. This is particularly the case for assessing the perceptions of borrowers by banking sector actors in the context of the existence of ESG risks on the part of applicants. This study fills this gap by pointing out directional factors that need to be taken into account in order to effectively manage these risks.

## 3. Methodology

Risk is often defined as the likelihood of events (positive and negative) that may affect the achievement of objectives or expected outcomes (Aven, Renn, 2009). Some authors use the word 'risk' to describe the essence of risk as the appearance of the probability of negative outcomes of a decision (Gędek, 2018). ESG risks should be seen in this context when assessing a bank customer interested in lending.

ESG risk for banks indicates the threat of adverse effects arising from the impact of ESG factors on an entity's financial performance or liquidity. In a broad view, both

the direct impact of ESG factors on the institution and the indirect impact (i.e., through its counterparties or invested assets) should be seen. In a narrow (regulatory-supervisory) view, ESG risk is seen only as the financial implications of the impact of environmental, social and corporate governance factors on the institution's counterparties or its invested assets (EBA, 2021). The research process carried out in this article involved the steps outlined in Table 2.

**Table 2.** Stages of the research process

Sta		Activities				
1.	Formulati	The research objective and the research thesis are formulated in the				
1.	on of the	introduction of the article after defining the research gap based on a				
	research	critical literature review. The research questions concern the assessment				
	problem	of the impact of ESG risk management information of economic agents				
	problem	on banks' willingness to provide loan financing. The research problem				
		was embedded in the banking sector due to its role for economic				
		development, especially in terms of providing capital.				
2.	Test	The multiple case study method was chosen for the research. It allows				
۷.	procedure	the banks selected for the study to be analysed in detail in the context of				
	procedure	credit assessment procedures taking into account ESG risks. The case				
		study allows for a wide range of analysis of the studied objects. On the				
		other hand, this method has a dysfunction regarding the possibility of				
		making generalisations due to the limited number of observations. A				
		method of document analysis was used, in particular banks' internal				
		procedures and other legal acts.				
3.	Descriptio	The selection of entities for the study was purposive. The largest				
٥.	n of the	commercial banks in Poland, Cooperative Banks as well as Bank				
	research	Gospodarstwa Krajowego, which plays an important role both in				
	sample	economic transactions and in the realisation of the function of security				
	Sample	and stability of state finances, were examined.				
4.	Flow of	The research analysed the procedures and guidelines of selected banks in				
4.	data	Poland regarding ESG risk assessment. The methodology of the study				
	analysis	included a critical analysis of literature and legal acts as well as non-				
	alialysis	financial reports of selected banks. Internal regulations of banking				
		institutions in the studied scope as well as few industry reports available in the financial sector were evaluated. In the discussion of the results, the				
		recommendations. The conclusions indicate the limitations of the study				
		and possible directions for further research.				

Source: Own study.

ESG risks are an element that affects access to capital, as they are taken into account by banks at the stage of deciding whether to grant finance. Banks expect to be provided with information that allows them to estimate what ESG risks are present in the company applying for a loan and to what extent they may increase the likelihood of loan default.

# 4. Research Results and Discussion - ESG Risks in the Context of Assessing the Creditworthiness of Companies

## 4.1 Source Data for Determining the Level of ESG Risk

Banks view ESG risk as a cross-cutting risk embedded in all other relevant banking risks, i.e., concentration, operational, reputational, compliance, liquidity and credit risk. The processes carried out in banks as part of credit risk assessment are used to determine whether an applicant has creditworthiness, defined as the ability to repay an obligation (loan) incurred with the bank, together with the consideration for it (interest), within the deadlines indicated in the agreement (Article 70(1) of the Banking Act, 1997).

Creditworthiness is determined by the bank for a specific transaction, but credit risk is a much broader concept and refers to all activities carried out in cooperation with the bank, e.g., guarantees, letters of credit, sureties, foreign exchange operations (Iwanowicz-Drozdowska *et al.*, 2013, p. 255).

Given that banks will condition their willingness to provide funding on the level of exposure to ESG risks, there will be types of business with easier access to capital (mBank, 2023)<sup>3</sup>. The effect of such a division will be to identify industries that are more readily financed by banks and those for which credit exposure will be successively reduced (PKO BP, 2023).<sup>4</sup>

**Table 3.** Summary of industries with easier access to capital and industries with declining access to capital

Industries with difficult access to capital	Industries with easier access to capital (preferred)		
<ul> <li>related to coal and lignite mining,</li> <li>Coal-related industries (production of mining machinery, coal trade),</li> <li>high-emission</li> <li>oil, gas extraction,</li> <li>production and distribution of liquid and gaseous fuels,</li> <li>manufacture and marketing of chemicals and rubber products</li> </ul>	<ul> <li>RES (photovoltaic and wind farms)</li> <li>electromobility</li> <li>recycling</li> <li>low carbon industries</li> <li>construction (investments with energy performance certificates)</li> </ul>		

**Source:** Own compilation based on non-financial reports: (PKO BP, 2023; mBank, 2023).

<sup>&</sup>lt;sup>3</sup>Mainstreaming the EU Taxonomy into processes including credit and procedures, financial products is one of the objectives of mBank's strategy for 2021-2025.

<sup>&</sup>lt;sup>4</sup>In section 13 of the PKO BP S.A report, i.e. the Statement on Non-Financial Information, paragraph 13.7.6 Environment in the Conviction of Preferred Industries.

Banks are required by the EBA (*European Banking Authority*) guidelines to identify borrowers who are exposed directly and indirectly to ESG risks (EBA Guidelines, 2020). For this purpose, banks can use risk maps that relate climate-related risks to the relevant economic sectors.

The assessment of ESG risks on the basis of risk maps is, in this respect, the first step in the analysis conducted by financial institutions towards the customer. Financial institutions make different assumptions and data sources when creating risk maps, but they always start from two basic issues, i.e. the business object and the location.

Table 4. Extent of information considered for ESG risk assessment based on risk

maps

Parameter	Type of code	Scope of the analysis
Object of activity	PKD codes	<ul> <li>the type of activity is analysed (the main activity will be taken into account)</li> <li>each PAC code is assigned a level for risks E, S and G according to a gradation, e.g.: high, medium, low or none</li> <li>each PAC code also has a transition risk level assigned to it, e.g. significant, insignificant or none</li> </ul>
Location	TERYT or postal codes	<ul> <li>the location of the business is analysed and, if the loan concerns an investment, the location of the investment project carried out is analysed</li> <li>location information provides knowledge about exposure to physical climate risks (chronic and sudden)</li> </ul>

Source: Own compilation based on (EC Regulation 2022/2453) and expert knowledge.

Data on the type of activity carried out on the basis of the PKD code are uniform and used in business registers (CEIDG, KRS<sup>5</sup>) and for the needs of public statistics (Table 4). In the case of TERYT codes and the postal codes used less frequently for ESG risk assessment purposes, these are unified systems. Financial institutions are more likely to use TERYT codes because they are a set of non-repeating elements, unlike postal codes, where there are already identical codes for different locations.<sup>6</sup>

A much more difficult task is to determine the second component (the potential level of exposure to ESG risks) needed to determine the risk value in the matrix. There is currently no single regulatory-approved data source<sup>7</sup>. Currently, banks use a variety

<sup>&</sup>lt;sup>5</sup>All business entities in Poland have a minimum of one PKD code indicated.

<sup>&</sup>lt;sup>6</sup>The TERYT code search engine is available at the following link:

https://eteryt.stat.gov.pl/eTeryt/rejestr\_teryt/udostepnianie\_danych/baza\_teryt/uzytkownicy\_i ndywidualni/wyszukiwanie/wyszukiwanie.aspx?contrast=default

<sup>&</sup>lt;sup>7</sup>Following the presentation of the EBA Draft Guidelines on the management of ESG risks to representatives of the banking sector in February 2024, the Polish Bank Association pointed out the need to develop a single tool to assess ESG risks.

of sources including publicly available ones such as Klimada 2.0, Copernicus and those available by subscription such as data from the Cenatorium database (Table 5).

Table 5. Extent of available data by source

Type of source	Scope of information available	Source availability	
Klimada 2.0	<ul> <li>climate scenarios (for existing emissions and for reductions)</li> <li>risks related to environmental factors (e.g. heat and drought)</li> <li>information and analysis on climate change adaptation (can be sorted by decade and factors e.g. temperature, precipitation)</li> <li>the knowledge base of environmental risk legislation</li> </ul>	An open resource does not require a contract. Information available at: https://klimada2.ios.gov.pl/(15.10.2024)	
Copernicus	<ul> <li>contains statistical data, e.g. on the number of days with frost, days with heat, days without rain, etc.</li> <li>collects data in a number of areas including sectors using a so-called climate data warehouse</li> <li>includes historical data and projections to 2100</li> </ul>	Open resource does not require a contract (EU-implemented programme). Information available at: <a href="https://www.copernicus.eu/pl">https://www.copernicus.eu/pl</a> (15.10.2024)	
ThinkHazard	allows the impact of a given factor (e.g. river floods, fires, landslides) to be determined for a specific geographical area	An open resource does not require a contract. Information available at: <a href="https://thinkhazard.org/en/">https://thinkhazard.org/en/</a> (15.10.2024)	
Cenatorium Sp. z o.o. (ul. Piękna 68, 00-672 Warsaw)	<ul> <li>a tool designed to assess the exposure to ESG risks of real estate pledged as collateral for repayment of liabilities</li> <li>in addition to information on environmental risks, the range of data presented can be extended to include, among other things, the frequency of crimes committed in a given area and their type</li> <li>includes information on the energy performance certificate and year of construction of the property</li> </ul>	The database is available following a contract specifying the scope of the data.	

Source: Own study.

Once the sources of information, the location and the potential exposure to ESG risks have been extracted, a risk map is created to enable the assessment of individual clients. The EBA in its lending and credit monitoring guidelines also

indicates the need to deepen the analysis if the assessment of potential ESG risks carried out on the basis of the risk maps shows high risks.

## 4.2 Methods for Relating the Level of ESG Risk to Creditworthiness

As part of the lending process, ESG risk is considered in terms of the risk associated with the financing requested and in relation to the entity with which the bank is entering into a lending relationship (Table 6).

**Table 6.** ESG risks in the credit process

Context	Establishing a relationship	As part of the requested credit transaction		
What is being assessed?	<ul> <li>the degree to which ESG factors are implemented as part of the entity's policies</li> <li>the extent to which the entity has taken steps to identify and, where necessary, mitigate ESG risks</li> </ul>	<ul> <li>assessment of the investment project's objective, e.g. by evaluating its compliance with the EU Taxonomy</li> <li>assessment of the positive/negative impact of funding on the environment under environmental, social and governance factors</li> <li>in the case of working capital financing, an assessment in the context of the business activity</li> </ul>		
With what frequency is the assessment carried out?	<ul> <li>at the stage of establishing a relationship or reapplying for funding</li> <li>in the framework of credit monitoring</li> </ul>	at the funding application stage in the framework of credit monitoring		
What are the sources of the data	<ul> <li>entity reports</li> <li>information available on the entity's website</li> <li>ratings (including search engines on rating companies' websites)</li> <li>customer statements</li> </ul>	<ul> <li>the entity's reports and the information available on the entity's website</li> <li>ratings (including search engines on rating companies' websites)</li> <li>technical documentation related to the investment</li> <li>expert reports and opinions relating to the investment</li> <li>statements and questionnaires completed by the customer</li> <li>conclusions of the site visit</li> </ul>		

Source: Own compilation based on (ed. Iwanowicz-Drozdowska, 2024, pp. 161-164).

The determination of the basic (first) level of potential exposure to ESG risks takes place at the stage of the customer's contact with the business unit, i.e. the employees responsible for sales and customer service. Banks, in order to reconcile the need to expand business, acquire new customers, maintain profitability with keeping credit

risk at an acceptable level, use an additional intermediate stage of risk assessment. This is used to classify customers according to the level of ESG risk obtained at the first stage. If ESG risks are identified at a high level, an in-depth analysis is applied.

In the case of customers for whom a high level of ESG risk is identified (by default more damaging), the bank will look for opportunities to mitigate credit risk by assuming a higher level of detail. The bank may scrutinise more closely, e.g., the management report, additional information, the entity's website, press releases in search of information on investments made by the company with the aim of, for example, reducing electricity consumption, minimising the negative impact of environmental risks (e.g., flooding).

The extent of the information collected varies from one financial institution to another. Some banks use very extensive questionnaires and tailor the questions to the sector or industry in which clients operate. Ultimately, the primary role of ESG risk information should be taken over by mandatory ESG reporting. The scope of information obtained at the loan application stage in selected banks is included in Table 7.

**Table 7.** Extent of ESG information obtained by banks at the loan application stage

Scope of the statements to be made at the credit application stage	Name of bank	Source
<ul> <li>no surveys by sector/industry</li> <li>the thematic scope of the questions concerns: possession of legally required permits, approvals and concessions, impact of the activity on protected areas, areas under archaeological protection, areas of particular cultural importance, areas of ecological importance, possible penalties imposed on him (in the last 2 years) resulting from non-compliance with: health and safety rules, labour code, environmental rules</li> </ul>	Commercial bank	Form for information about the applicant.
<ul> <li>3 surveys for large companies, small companies and farmers</li> <li>range of questions divided into three blocks, i.e. environmental, social and managerial factors</li> </ul>	Cooperative Banks Association 1	A questionnaire to be completed at the loan application stage.

<ul> <li>two questionnaires per segment defined as micro/small/medium and large</li> <li>division of issues in the survey into environmental, social, governance and in addition</li> </ul>		A questionnaire
<ul> <li>physical and transition risks</li> <li>for a large customer to expect the release of emissions information from SCOPE 1, SCOPE 2 and SCOPE 3<sup>8</sup></li> </ul>	Cooperative Banks Association 2	to be completed at the loan application stage.
• the opportunity to provide information on risk mitigation is included in the survey		
<ul> <li>general survey and special surveys (health, heating, social housing)</li> <li>The scope of the questions in the detailed questionnaires relates to: the obligation to prepare non-financial reports (according to the Accounting Act), the estimation of the carbon footprint, the planned measures for its reduction, the question of information on whether the area of operation has historically been affected by climatic events with a sudden course, information on water and waste management policy</li> <li>the scope of the questions in the standard questionnaire concerns: estimation of the carbon footprint, water consumption, procedures regarding workers' rights, carrying out public consultations prior to the start of the project, the scope of the measures implemented to combat climate change</li> </ul>	Bank Gospodarstwa Krajowego	Presentation by a representative of Bank Gospodarstwa Krajowego at the ESG 2024 Conference (18- 19.03.2024 Warsaw).

Source: Own study.

The above summary shows that there are significant discrepancies in the information collected, and that already at this stage banks have extensive information on the customer's response to ESG risk factors. When the level of ESG risk is identified as high, the lending process is halted and the applicant is requested to provide additional documentation or clarification.

**Table 8.** High ESG risk mitigation documents (post credit application stage)

Type of	Type of financing		Comments	
document	targeted	swivel	Comments	
Additional	_		It represents a statement by the client, there	
questionnaire with	T		may be difficulties in verifying the reliability	

<sup>8</sup>SCOPE 1 - Scope one emissions, these are the direct emissions of the entity (e.g. heating, emissions resulting from the use of owned vehicles, air conditioning). SCOPE 2 - Scope two emissions are the indirect emissions resulting from e.g. purchased electricity. SCOPE 3 - Scope three emissions are indirect emissions resulting from the values established in the value chain (emissions resulting from the activities of the entity's suppliers and customers).

		1		
detailed questions				
Statement on high-risk activities	+	+	It represents a statement by the client, there may be difficulties in verifying the reliability of the information.	
Environmental expertise	+*		A document prepared by a competent person does not give rise to document reliability risks. It does not give information on all the activities carried out (*not applicable to SPVs).	
ESG rating		+	Produced by a company specialising in ESG ratings, it addresses ESG risks in the context of the overall business not of individual investment projects. The wide divergence in rating scales and assessment methodologies adopted raises the risk of misreading the level of risk.	
Investment permits (e.g. planning permission), technical opinions	+*		Documents prepared by persons with relevant competence and authority. The document relates to individual investments from not all activities (*not applicable to SPVs ).9	

Source: Own study.

There are methods of calculating ESG risk that, through the use of a matrix approach, result in a single combined score. The simplified rating, constructed in this way, forms part of the feedback provided by the staff analysing the credit application to the decision-maker (the decision-maker) (Figure 1).

Figure 1. An example of an ESG risk assessment in a matrix-based credit process.

The risk of establishing relationships where: a - low b - medium c - high d - unacceptable

d I	d II	d III	d IV	d V
c I	c II	c III	c IV	c V
b I	b II	b III	b IV	b V
a I	a II	a III	a IV	a V

<sup>9</sup>SPV or special purpose vehicle, or SPE a special purpose vehicle. Usually a limited liability company or limited partnership that has been established for a specific purpose, such as the implementation of a single investment project.

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The risk of the proposed transaction, where:

I - insignificant, II - low, III - medium, IV - high, V - unacceptable
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Source: Own elaboration.

The documents and statements indicated in Tables 7 and 8, depending on the methodology adopted in each bank, can serve to reduce ESG risk in aggregate or for its individual components. The assessment of ESG risk as part of the monitoring indicated in Figure 1 as the third step, is secondary and serves to assess within the portfolio analysis. It does not directly impact continued lending, but may involve the need for additional information from the client, e.g. when there is a significant change in a previously established risk level.

### 5. Conclusions

Assessing a company through the prism of its sustainability performance already influences access to capital. Entrepreneurs applying for financing are subject to investigations into how ESG risks affect their business. The growing expectations of banks to disclose information on ESG risks is becoming a standard process. The need to embed an ESG framework into other elements of a company's strategy is emerging (Khalid *et al.*, 2021).

It should be assumed that even if some banks will lend to finance 'dirty assets', these will only be short-term loans, with a high cost of servicing them (commission, margin, insurance). This is because a portfolio with credit exposures in so-called "dirty industries" will escalate with an increase in ESG risk (Adrian *et al.*, 2022; Monasterelo, 2020; Monasterello and Battiston, 2020).

Such a portfolio will require banks to provide additional collateral, increasing sectoral systemic risk, with consequent increases in operating costs (ECB, 2022; ESRB, 2020; Giuzio *et al.*, 2019). As a consequence, some banks will stop funding 'dirty industries' assets altogether, with adverse socio-economic impacts (Xu, Ramanathan, and Victor, 2018).

As one of the most implemented in ESG issues, the banking sector is aware of the high expectations regarding the standards of the processes implemented and their transparent disclosure. Responsibility for the quality of the portfolio, the share of environmentally sustainable financing, the quality of the product offering that promotes sustainability is of interest to stakeholders and financial regulators.

At the same time, financial institutions see the obligations arising from the transition to a sustainable economy as an opportunity to develop lending and even expand their offerings to include services that make it easier for entrepreneurs to fulfil their disclosures in exchange for loyalty to the bank that is the customer's first choice (serving the customer in terms of credit, transactions and deposits).

The obligation to report non-financially on ESG factors poses a major challenge, affecting a growing group of business entities. This is influenced by the growing interest in doing business in a sustainable manner due to, among other things, the significant impact of ESG risks on the ability to obtain capital through bank financing.

The correct estimation and skilful management of ESG risks by a business (with appropriate information on this in the disclosures) presents an opportunity to be included among the group of customers against whom banks will not apply a credit downgrade.

A bank's assessment that ESG risk is non-existent or low will be treated neutrally (at best) as a lower probability of loan default/loss of collateral value. Generally, this will not improve the credit rating. Bank practice indicates that the identification of ESG risks can only worsen a borrower's rating. A positive assessment by the bank of ESG risks results in no deterioration of the entity's overall rating.

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