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Commercial bank lending to climate-sensitive sectors in Poland

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Summary

The article offers an in-depth examination of how the Polish banking sector interacts with climate policy, focusing especially on the difficulties of financing sectors vulnerable to climate change and the integration of ESG standards. The author notes that Polish commercial banks are currently undergoing a transition to meet climate policy requirements, which necessitates adjustments in risk management, reporting processes, and lending strategies across different economic sectors. Although the sector faces multiple obstacles, banks are steadily aligning with evolving regulatory and market expectations. The analysis highlights that over half of the corporate lending portfolio is tied to industries sensitive to climate risks, with construction and real estate playing a leading role. The author points out the current stability of these portfolios and the relatively low share of non-performing loans, but also warns that such figures may not capture the potential risks arising from ongoing climate transformation. The text further stresses that the banking sector is confronted with substantial ESG-related challenges. A major issue is the insufficient availability and quality of ESG data from clients and partners, which hampers accurate risk assessment and compliance with stricter regulations. Moreover, banks must continuously adapt to frequently changing and sometimes unclear legal requirements, which calls for the development of new procedures, reporting frameworks, and regulatory interpretation mechanisms.

Keywords

climate policy • lending • climate-sensitive sectors • bank's lending exposure

1. Introduction

The loan portfolio of the banking sector in Poland to a large extent reflects the evolution of the socio-economic system. In terms of lending to households, residential mortgages predominate,

indicating a growing demand for residential real estate as a source of housing and an investment opportunity. On the other hand, when lending to businesses, commercial banks follow their investment preferences, but also implement principles that address contemporary challenges. In the face of rising threats related to climate change, it is important to understand the relationship between the banking sector and climate policy. The aim of this article is to present a comprehensive analysis of the links between the Polish banking sector and aspects of climate policy, with particular emphasis on the challenges associated with lending to climate-sensitive sectors and the implementation of ESG (Environmental, Social, and Governance) principles. The article highlights the need for commercial banks in Poland to adapt to the requirements of climate policy, which implies changes in credit risk management, bank lending policies and reporting in accordance with ESG requirements.

The article uses desk research and data on the credit exposure of commercial banks in Poland to sectors relevant to climate policy (CPRS) contained in the Financial Stability Reports of the National Bank of Poland. The analysis also covers the risk of lending to these sectors in the context of the transition to a low-carbon economy and ESG reporting requirements under European Union regulations, such as the CSRD Directive and the EU Taxonomy. The article also discusses the challenges facing banks in implementing ESG principles, such as the risk of greenwashing, the lack of data standards and the need to adapt IT systems. It also presents the impact of ESG reporting requirements on the lending policies of commercial banks in Poland, including the integration of ESG criteria into the credit risk assessment process.

2. Climate-policy relevant sectors

Climate-policy relevant sectors (CPRS) include the energy industry, agriculture and transport – the sectors particularly vulnerable to the effects of climate change that need to adjust their current strategies [Sadowski 2008]. In the face of growing threats related to climate change, it is becoming necessary to introduce innovative solutions and technologies that will mitigate the harmful effects of outdated technologies used in these sectors on the environment [Burchard-Dziubińska 2012]. The introduction of such solutions may include the development of renewable energy sources, sustainable agricultural practices and efficient transport systems that will contribute to the reduction of greenhouse gas emissions [Trystuła 2018]. Cooperation between the public and private sectors, together with investment in research and development, is key to the successful implementation of innovations that can make the economy more resilient to the negative effects of climate change. Promoting environmental education and raising public awareness of climate change are also critical to the transition process, enabling citizens to engage in more sustainable practices in their daily lives. Increasing investment in renewable technologies and supporting local initiatives can create jobs and stimulate economic growth, thereby positively impacting quality of life. Raising environmental awareness in society is key to mobilising people to take action to protect the environment and promote responsible consumer behaviour. Increased environmental awareness can lead to greater engagement of the community in local initiatives, which in turn will contribute to the creation of more

sustainable practices and pro-environmental policies at the regional and national levels. It is also important to support cooperation between different sectors, such as government, businesses and non-governmental organisations, in order to maximise the effectiveness of the initiatives undertaken. Joint actions can lead to innovative solutions that will not only improve the state of the environment, but also contribute to sustainable economic and social development.

3. Credit risk of climate-policy relevant sectors

Climate risk arises from the significant consequences of climate change and the need for measures to mitigate its negative effects on the economy and, consequently, on the stability of the financial sector. This risk manifests itself through direct credit exposures to entities whose business models may be threatened by the transition to a low-carbon economy, and through indirect exposures resulting from the effects of this transition on the economy as a whole.

Tighter regulatory requirements and companies having to adapt could lead to higher costs (like energy bills) and a drop in the value of some assets (like energy-inefficient real estate). As a result, climate change can significantly affect the stability of the banking sector through its impact on the economic situation of debtors and the value of assets servings as security for debts.

Polish banks are vulnerable to climate transition risk due to the high emissions of the domestic economy, which they finance to a large extent. Identifying the volume of lending to companies exposed to transition risk is difficult due to the limited availability of data on, among other things, the scale of greenhouse gas emissions, the used technologies and transition strategies. Current EU regulations, such as the CSRD Directive under the EU taxonomy, aim to increase the scope of non-financial reporting, which will enable more accurate identification of bank exposure and more precise measurement of climate risk in the future.

In practical terms, three approaches are used to measure the exposure of Polish banks to sectors sensitive to climate change [Battiston et al. 2017]:

- The first approach is based on measuring credit exposure to climate-policy relevant sectors (CPRS) using data on large exposures. The methodology identifies transition-sensitive sectors based on sectoral data on greenhouse gas emissions, their role in the supply chain, and internal regulations.
- The second approach uses data on greenhouse gas emissions by corporate borrowers, which allows for the calculation of the average emissions intensity of a bank's lending portfolio. The index takes into account the changing structure of the portfolio and the emission levels of different sectors of the economy. Indirectly, it indicates how involved banks are in financing high-emission entities.
- The third approach allows for the analysis of exposure to high-emission sectors by measuring the credit exposure of banks to companies whose greenhouse gas emissions are covered by the EU Emissions Trading System (EU ETS).

The structure of the Polish economy, which was 'coal-based' for decades, has led the Polish banking sector to show significant credit concentration in high-emission sectors with increased transition risk. From the perspective of the financial stability of the banking sector, it is crucial that banks managing these exposures carefully monitor and take this risk into account, including by creating appropriate provisions and capital buffers. Another important systemic challenge is the issue of banks limiting financing for investments by high-emission companies aimed at reducing their negative impact on the environment, as this could increase the risk of bankruptcy in key sectors of the economy and deteriorate the quality of banks' assets. In order to mitigate this risk, banks should have high-quality non-financial data and a comprehensive credit risk assessment system that takes environmental factors into account. However, it should be noted that the analysis at the sector level does not take into account the purpose of the loan, which is important from the point of view of financing the green transition in high-emission companies.

4. Types of loans covered by ESG reporting requirements in Polish commercial banks

In the framework of EU regulations, including the Corporate Sustainability Reporting Directive (CSRD) and the EU Taxonomy, Polish commercial banks are required to report detailed information on loans related to environmental, social and corporate governance objectives [Kryczka et al. 2024]. The list below identifies the key categories of loans covered by these requirements, based on current industry practices and regulatory documentation.

1. Green and climate loans

Loans that finance projects directly contributing to the reduction of greenhouse gas emissions or support energy transition, which constitute the primary area of reporting [Jeziolowicz and Wicha 2024], include:

- Financing RES installations: photovoltaic panels, heat pumps, wind farms.
- Energy upgrades for buildings: energy efficiency improvements, window replacement, installation of heat recovery ventilation systems.
- Mortgage loans with preferential terms for eco-friendly properties: e.g. bank offers with lower interest rates conditional on the installation of solar panels.

2. Loans related to objectives of ESG and SSLP

This category includes loans whose terms (e.g. interest rates) are contingent on the borrower achieving specific ESG targets [Barbrich 2025]. This mechanism, which complies with the Sustainability-Linked Loan Principles (SLLP), requires banks to report:

- Key Performance Indicators (KPIs): e.g., reduction in water consumption, increase in employment of marginalized groups.
- Third-party verification: independent confirmation of progress towards predefined targets.
- Credit margin adjustments: e.g., interest rate reduction upon achievement of predefined goals.

3. Loans to high ESG-risk sectors

Banks must report exposure to industries considered harmful to the climate or socially controversial, such as:

- Fossil fuel extraction industry.
- Weapons manufacturing: reporting includes both direct financing and indirect involvement through supply chains.
- Industrial agriculture: assessment of impact on deforestation and biodiversity.

4. Social loans and loans supporting financial inclusion

Although this area is less developed than the environmental one, reporting includes:

- Financing of social housing: projects aimed at combating housing exclusion.
- Loans for social enterprises: support for entities employing people with disabilities or working for local communities.
- Educational programs: e.g., preferential loans for students from low-income families.

5. Loans aligned with the EU Taxonomy

The EU Taxonomy defines environmental objectives, and banks must disclose the share of loans qualifying under this classification [Regulation (EU) 2020/852]. Mandatory indicators include:

- Green Asset Ratio (GAR): percentage of the portfolio financing activities aligned with the Taxonomy.
- Exposure-to-Taxonomy Ratio (ETR): exposure to projects partially aligned with environmental objectives.

5. Challenges for commercial banks in ESG reporting

The growing demand for transparency and accountability in environmental, social and governance (ESG) practices poses a serious challenge for commercial banks as they seek to align their reporting frameworks with changing regulatory standards and stakeholder expectations. As investors and customers increasingly focus on sustain-

ability issues, banks must not only adapt their reporting practices, but also introduce innovative solutions that enable them to effectively manage ESG risks [Holland 2019]. In this context, it is key to develop strategies that not only satisfy regulatory requirements but also build trust among customers and shareholders, which can contribute to the long-term success of financial institutions. The implementation of such strategies requires cooperation between different departments of banks to ensure the consistency and integrity of ESG information. This, in turn, can improve risk management and increase the bank's competitiveness in the market.

A challenge for banks is the phenomenon of greenwashing, which involves misleading clients about the actual impact of the bank's activities on the environment [Özer et al. 2024]. To effectively counteract this phenomenon, commercial banks must focus on the transparency and integrity of their practices, presenting concrete results and striving for real change in the field of sustainable development. The introduction of appropriate monitoring and reporting mechanisms by banks can help identify potential irregularities and increase confidence in the actions taken in support of ESG. Cooperation between banks and independent organisations and experts in sustainable development can further support banks in building credibility and social responsibility, which is crucial in the face of growing expectations from customers and the Financial Supervision Authority. In this way, credit institutions will not only be able to avoid accusations of greenwashing, but also actively contribute to positive changes in the environment and community, which in turn can increase client loyalty and an improved reputation for banks in the market. As more banks adopt sustainable practices, educating employees on ESG will also become crucial to ensure consistency across all levels of banking groups.

Another important challenge for banks will be the cost of adapting their IT systems to ESG reporting requirements. As a result, credit institutions must invest in advanced technologies and employee training to effectively integrate these requirements into their daily operations. The implementation of appropriate technological and training solutions will not only facilitate compliance with the requirements but also enhance banks' ability to monitor and analyse their impact on the environment and communities. In the long term, these measures may increase the competitiveness of banks in the market, as clients are increasingly choosing credit institutions that demonstrate social and environmental responsibility.

The lack of data standards is another challenge for banks [Dye et al. 2021]. Nearly half of commercial banks have not yet conducted a full analysis of their loan portfolios in terms of ESG requirements due to difficulties in obtaining reliable data from clients. Customer reluctance presents a problem for banks, as it affects the accuracy of their databases. In light of these challenges, it is key to develop relationships with external organisations and research institutions that can provide the necessary data and analytical tools to support banks in effectively implementing ESG strategies. This cooperation can also drive innovation in financial products that better meet customer needs and contribute to sustainable development.

6. The impact of ESG reporting requirements on commercial bank lending policy

Commercial banks in Poland are adapting their lending policies to the requirements of implementing ESG principles, which means that they are increasingly integrating ESG risk assessments into the process of lending and monitoring loan repayments [Urjasz and Karkowska 2025]. Banks integrate ESG criteria as a key element of credit risk assessment, allowing them determine accurately the long-term solvency of clients and their impact on sustainable development. As a result, projects that do not meet ESG criteria may be more expensive to finance or completely unavailable to potential borrowers. At the same time, banks offer incentives to companies pursuing sustainable development targets, with lower margins and longer loan repayment periods. The criteria taken into account by banks are designed to assess environmental, social and corporate governance risks and determine the impact of the borrower's activities on sustainable development [Kosztowniak 2025]. The main ESG criteria analysed by banks include the following aspects:

1. Environment

- CO_2 emissions: Banks examine the level of carbon dioxide emissions generated by the borrower's activities and analyse their plans for emission reduction.
- Energy efficiency: The energy efficiency of projects financed by banks, such as real estate or production facilities, is assessed.
- Waste management: Credit borrowers must demonstrate that they apply appropriate waste management and environmental protection practices.
- EU Taxonomy compliance: Projects financed by banks must meet the criteria set out in the EU Taxonomy framework, such as supporting renewable energy sources or low-emission technologies.

2. Society

- Working conditions: Banks assess whether the borrower provides appropriate working conditions, respects labor rights, and promotes diversity.
- Impact on local communities: Projects should keep in view their positive impact on local communities, for example by creating jobs or supporting the development of social infrastructure.
- Employee health and safety: Credit borrowers must demonstrate actions taken to improve the health and safety of their employees.

3. Corporate governance

- Operational transparency: Borrowers must demonstrate transparency in management, for example by publishing ESG reports and adhering to corporate governance principles.

- ESG strategy: Banks require credit borrowers to implement an ESG strategy that defines sustainability-related goals and how they will be achieved.
- ESG risk management: Borrowers must present mechanisms for managing risks related to ESG, including due diligence processes concerning environmental and social aspects.

4. Sector risk

- Banks evaluate ESG risks witt regard to a borrower's specific sector of activity, e.g. the energy or mining industries are considered high risk. High-risk sectors may be excluded from financing or subject to stricter requirements.

5. Key Performance Indicators

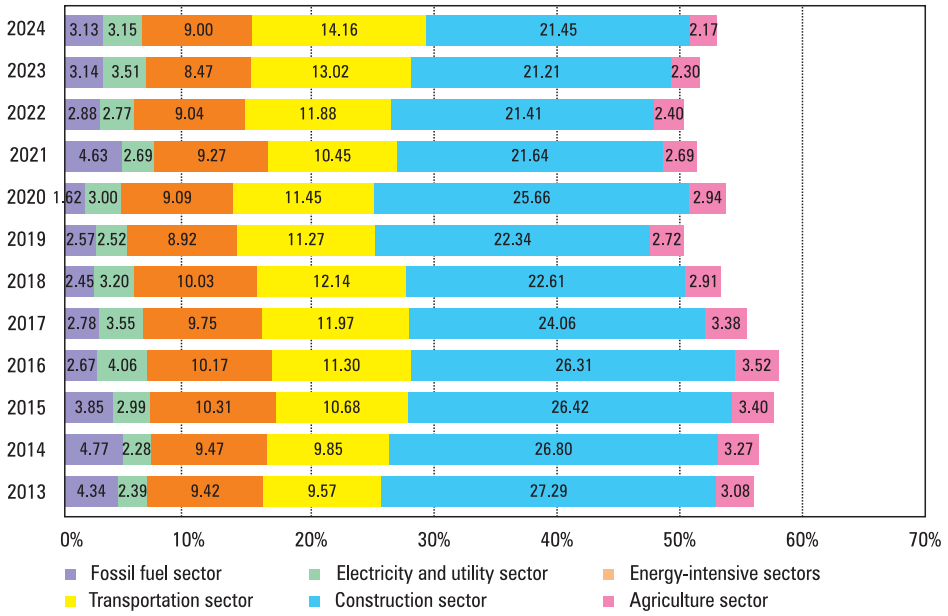
- In the case of sustainability-linked loans, banks set measurable targets (e.g. reduction of CO_2 emissions) that the borrower must achieve within a specified period of time. Failure to meet these targets may affect the terms of financing [Krawczyńska-Kaczmarek 2024].

7. Credit exposure of commercial banks in Poland to climate-sensitive sectors

The exposure of commercial banks in Poland to climate-sensitive sectors has become a pressing issue, as it highlights the financial risks associated with environmental changes and the transition to a more sustainable economy. Understanding these risks is crucial for banks to take informed lending decisions and develop risk management strategies that can help them adapt to upcoming regulatory and market changes. The urgency of understanding these risks is heightened by the fact that the banking sector's credit exposure to climate-sensitive sectors will reach approximately PLN 196 billion in 2024, accounting for more than half of the corporate loan portfolio. The portfolio of loans classified as climate-sensitive with regard to its sectoral structure is relatively stable, with a clear predominance of the construction sector (Fig. 1).

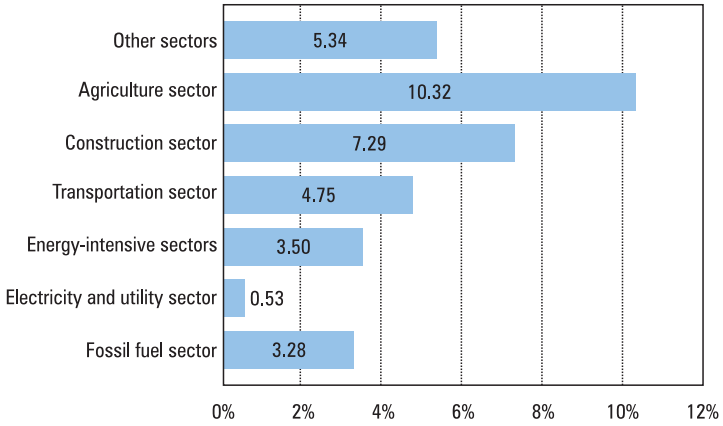
The predominant share of lending to the construction sector reflects the fact that residential real estate loans represent the largest portion of the banking sector's total loan portfolio. Furthermore, with the increase in demand for housing and the willingness of potential buyers to take out loans, the share of the construction sector will continue to grow, as it has been doing for over a decade. Growing awareness of developers regarding the availability of environmentally sustainable construction materials and technologies, as well as the legal regulations that enforce compliance, will lead to an increase in the share of credited properties whose ESG standards will improve. As a result, this will reduce the ESG risk of the portfolio, despite the growing share of the construction sector in the total climate-sensitive loan portfolio. This trend can already be observed in the transport sector. The growing share of environmentally friendly

means of transport financed by banks due to their type of propulsion is causing a slow decline in the exposure of this sector in the climate-sensitive loan portfolio.



Source: Raport o stabilności system finansowego (Report on the stability of the financial system), ed. O. Szczepańska. NBP, December 2024, p. 107.

Fig. 1. Commercial banks' credit exposure to climate policy relevant sectors



Source: Raport o stabilności system finansowego (Report on the stability of the financial system), ed. O. Szczepańska. NBP, December 2024, p. 107.

Fig. 2. Impaired loan ratio across sectors

The low percentage of non-performing loans among climate-sensitive loans is worth noting (Fig. 2). This situation is determined by the relatively good current financial condition of companies in high-emission sectors, which results in a low ratio of impaired loans. However, it should be taken into account that the non-performing loan ratio is retrospective in nature and does not reflect the risk that mayarise in the future due to the transition of credit borrower companies to a low-carbon economy.

8. Conclusion

Commercial banks in Poland face complex challenges related to adapting to climate policy and ESG requirements, which demands changes in their approach to credit risk assessment, lending policy and reporting. Despite significant exposure to climate-sensitive sectors, the banking sector is proving stable and gradually adapting to new regulatory and market requirements. However, banks will not be able to avoid nascent challenges, including greenwashing, the lack of standardised databases, as well as the need to restructure loan portfolios and introduce new criteria for assessing projects in terms of their climate impact. It is costly but necessary to introduce new analytical tools, such as climate stress tests, to assess how resilient banks are to different climate scenarios. Such tests, however, require long-term forecasts and access to reliable data, which presents another issue. Ultimately, banks must consider climate risk as one of the main systemic risk factors, especially in portfolios concentrated in sectors and regions particularly vulnerable to the effects of climate change.

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