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THE IMPACT OF CSR ON STOCK EXCHANGE QUOTATIONS AND PROFITABILITY IN THE POLISH BANKING SECTOR

Mariusz ZIELIŃSKI[1*], Izabela JONEK-KOWALSKA[2]

[1] Opole University of Technology, Opole; m.zielinski@po.edu.pl, ORCID: 0000-0002-2121-1339
[2] The Silesian University of Technology, Gliwice; izabela.jonek-kowalska@polsl.pl, ORCID: 0000-0002-4006-4362
* Correspondence author

Purpose: This article analyses the relationship between the inclusion of the CSR policy in the bank's strategy and the level of stock exchange quotations and financial results (achieved profitability ratios), based on the example of Poland.
Design/methodology/approach: The article examined whether socially responsible banks obtain better stock exchange quotations and show higher profitability (improvement of profitability ratios). Secondary data used in the article concern 9 banks. The analysis period covers the years 2009-2019, in which the WIG-RESPECT index was calculated. The control group consists of four banks, two of which did not join the analyzed index, while two more only joined it after 6 or 7 years.
Findings: The study leads to the conclusion that CSR has a positive impact on the level of quotations and an improvement of the financial ratios of banks classified as socially responsible compared to the control group. However, just belonging to the group of banks perceived as socially responsible does not guarantee success in the form of higher quotations and an improvement of financial ratios.
Research limitations/implications: The sample for comparison is small, and the adopted control group is not fully homogeneous. The study only covered one country and therefore does not take into account the institutional differences between various economies and banking systems. The proposed directions for further research are to find an answer to the question whether the banks that introduced the CSR policy into the strategy with delay improve their results.
Practical implications: Banks should include CSR activities in their strategy, as they may bring benefits in the form of increased market quotations and profitability ratios. Exchange investors should take into account the involvement of banks in CSR activities, as they may affect the effectiveness of bank operations and, consequently, the level of their market valuation.
Social implications: Since socially responsible banks receive better market ratings and improvement of profitability ratios, it is expected that their activity in this area will develop, which will bring social benefits.
Originality/value: A comparison was made of the market valuation and financial ratios of banks, broken down into declaring and not declaring activities in the area of CSR.

Keywords: banks, stock exchange quotes, profitability ratios, CSR.

Category of the paper: research paper.

1. Introduction

Banks are key institutions for the functioning of the economy (Scholtens, 2009) because, as intermediaries between savers and investors, they co-decide on the allocation of resources in the economy (Moufty et al., 2021). They play an important role in the context of sustainable economic development for at least two reasons. Firstly, they decide what type of activity the enterprises will receive financing for, and one of the criteria for granting a loan may be the borrower's compliance with the principles of sustainable development. Secondly, the banks themselves can focus their business strategies and organizational culture in line with the recommendations of corporate social responsibility (CSR) (Nizam et al., 2019; Dedu et al., 2021).

The intangible nature of financial services, which hinders their measurement and comparison, speaks in favor of expanding the importance of CSR in banks' strategies. For this reason, it becomes important to maintain an appropriate reputation, depending on e.g. effective communication with customers (Walsh, Beatty, 2007). CSR policy may be an element of a differentiation strategy based on emphasizing the quality of products and services, customer orientation and building the image of a good employer in order to gain a sustainable competitive advantage (Sen et al., 2006).

Most authors point out that the reputation of the banking sector as a whole deteriorated during the 2008 global financial crisis. In the public perception, banks contributed to its creation, and during the crisis, they did not fulfil their obligations towards their stakeholders (Esteban-Sanchez et al., 2017). Although banks' efforts to build an accountable reputation for CSR have a positive effect on their results, the results of research on this issue are ambiguous, especially when it comes to the crisis period. Forcadell, Aracil (2017) found a negative relationship between CSR and financial results in the period after 2008, Esteban-Sanchez et al. (2017), while the research by Ganga et al. (2018) indicated the positive impact of CSR involvement on the financial performance of banks. Regardless of the profitability of CSR activities during the crisis, one of the ways to strengthen the credibility and confidence of stakeholders after the global financial crisis was the intensification of corporate social responsibility activities by banks (Miralles-Quirós et al., 2019).

This article analyses the relationship between the inclusion of the CSR policy in the bank's strategy and the level of stock exchange quotations and financial results (achieved profitability ratios), based on the example of Poland. The first part presents an overview of the literature on CSR, with particular emphasis on references to the banking sector. This review includes, inter alia, research results on the effectiveness and profitability of CSR activities. The following sections present the research assumptions, the method used and the results of the research. The originality of the undertaken research consists in comparing the financial results and stock exchange quotations of the banks declaring inclusion of CSR in their strategy with other banks. The article ends with the sections of discussion and conclusions.

2. Literature review

In search of a competitive advantage, more and more often enterprises reach for values consistent with CSR, trying to act as a good employer, citizen, neighbor. According to many authors, CSR, taking into account social and environmental goals as well as economic goals should become an element of the enterprise's strategy, because it is expected by the economic environment (Valeute 2015; Masoud, 2017; Suriyankietkaew, Petison, 2020).

One of the main reasons for the interest in CSR on the part of enterprises is the creation of an image-based reputation (Pérez, 2015; Engizek, Yasin, 2017), which is an important element of the differentiation strategy, mainly directed to customers (McWilliams, Siegel, 2011; Fatima, Elbanna, 2023). An appropriate image is also conducive to increasing employee satisfaction (Gond et al., 2010; Kolk et al., 2016) and other entities in the environment (Fombrun, van Riel, 1997; Jeffrey et al., 2019). This enables the improvement of the use of the enterprise's resources (better use of human resources, reduction of energy consumption and waste reduction, reduction of insurance costs, legal problems) (Maignan, Ferrell, 2001), contributing in the long term to the reduction of costs and risk (Saeidi et al., 2015). All of the above image effects should result in improved competitive position, market success and the possibility of achieving above average profit (Roberts, Dowling, 2002; van Marrewijk, 2003; Hsueh, 2014; Achi et al., 2022).

Building and managing reputation is especially important in the service sector due to the intangible nature of the offer. CSR activities can help build a strong reputation and better relationships with key stakeholders (Hillman, Keim, 2001; Kabus, Dziadkiewicz, 2022). Seen from this perspective, CSR programs can be treated as investments in reputation and relationships with stakeholders, in particular with customers (Narwal, 2007, McDonald, Rundle-Thiele, 2008, Ramzan et al., 2021). CSR initiatives targeted at customers have a significant impact on: the company's (brand) assessment, confidence in the value and quality of the service (product), which translates into intentions of buying (Bhattacharya, Sen, 2004; Mohr, Webb, 2005; Poolthong and Mandhachitara, 2009; Lécuyer et al., 2021), customer satisfaction and loyalty (Marin et al., 2009; Stanaland et al., 2011; McDonald, Lai, 2011; Mandhachitara, Poolthong, 2011; Perez et al., 2013; Muflih, 2021) and recommendations provided to other customers (Goyal, Chanda, 2017).

CSR activities contribute to the creation of a good image in the society, which creates favorable relations with all stakeholders. Good CSR performance, including investment in personnel, can provide increased ability to attract and retain valuable employees, increase satisfaction, motivation, morale, productivity, commitment and loyalty of existing employees, and reduce potential employment problems and costs (Branco, Rodrigues, 2006; Moufty et al., 2021). The accountability of banks to their shareholders helps to increase their confidence, making it easier to attract more investors, lenders and depositors, ultimately leading to improved long term financial results (Zhou et al., 2021).

The obtained reputation may translate into the higher earning potential of banks in terms of net interest income. Customers taking into account the bank's reputation resulting from, inter alia, CSR may be willing to accept a lower interest rate for their deposits if they come from a bank with strong CSR features (Wu and Shen, 2013). Some companies prefer loans from reputable banks, even if they have to pay higher interest rates on loans (Kim et al., 2005). A strong reputation for CSR may also allow banks to charge higher fees and commissions for additional services (Wu, Shen, 2013).

The above considerations indicate the need to invest in CSR as a way of building a bank's reputation. It should be noted here that not all authors share this opinion. Research by Ruiz and García (2020) on the example of Great Britain and Spain shows that the relationship between CSR and bank reputation is small (there may be a positive, negative or zero relationship between various CSR constructs and the bank's reputation). The reasons for this state of affairs were indicated by the instability of the financial system and the focus of CSR initiatives on restoring the lost reputation of banks (after the 2008 crisis), and not on real social problems. Other authors point out that CSR spending certainly improves public relations, but there is no certainty about the customer's reaction (Morrison, Bridwell, 2011).

One of the reasons why customers do not react to CSR initiatives may be insufficient communication. A critical prerequisite for reaping the benefits of involvement in CSR resulting in the expected customer behavior (increased loyalty, satisfaction, positive relay of information) is making customers aware of such activities and a customer understanding of the social issues in which banks engage (Fatma, Rahman, 2016; Cheung et al., 2020; Oyewumi et al., 2018). Research indicates that customers’ ability to accurately identify companies’ CSR activities is generally quite low (Bhattacharya, Sen, 2004). Therefore, banks should not only inform but also educate customers, making them aware of the importance of CSR activities (Pomering, Dolnicar, 2009).

The choice of methods and channels for the presentation of undertaken CSR initiatives and the selection of areas in which banks need greater visibility are the most important for the effectiveness of social marketing strategies (Hildebrand et al., 2011). These activities should be long-term and comprehensive, also covering the communication of all CSR activities. While initiatives directed at customers are rather visible to them, initiatives addressed to other stakeholders (i.e. employees, suppliers, investors) are less visible, and they also influence customer behavior (Pirsch et al., 2007; Fatma et al., 2014). The conclusions of the E&Y study (2016) indicate that disclosing CSR efforts (sustainability reports) brings the organization a better reputation, meeting employees' expectations, reducing incorrect information about the enterprise, improving social performance, increasing customer loyalty, etc. Other studies indicate that a higher level of CSR disclosure has a positive effect on the valuation of the company's shares (Mallin et al., 2014), and this effect is more visible in industries with a higher impact on the environment (De Klerk et al., 2015).

One of the basic strategic decision-making problems is the direction and scope of CSR activities undertaken. It is advisable to invest in activities that are closely related to the mission and value of the company and at the same time contribute to social development. The condition for the effectiveness of the message addressed to consumers is adjustment to their expectations and motivations as well as the adoption of an appropriate schedule of social initiatives and their appropriate promotion (Becker-Olsenetal, 2006).

Credibility plays an important role in the perception of CSR activities by customers. Research on banks in the EU and the US revealed a significant positive correlation between the internal social dimensions of sustainable development and banks' performance. An exception was the link between the environmental dimensions of sustainability and bank performance, as customers did not associate banking as an environmentally threatening sector. Customers may treat bank information on environmental activities as greenwashing (Brammer, Pavelin, 2006; Grougiou et al., 2014), i.e. a strategy according to which companies, in order to attract environmentally friendly investors and customers, disclose manipulated information (reporting CSR activities that they do not undertake or undertake to a small extent) (Saeed, 2021). The argument against undertaking a greenwashing strategy is that it may reduce the effectiveness of real CSR initiatives (Parguel et al., 2011), and the results obtained by Goss and Roberts (2011) and Lecuyer et al., (2021) indicate that efforts to manipulate stakeholders through greenwashing are likely to be ineffective.

CSR practices in particular sectors of economic activity are relatively “homogeneous” due to: regulations imposed by the state, influence of stakeholders, imitation of other organizations and unification of jobs in the sector. In pursuit of social legitimacy, organizations implement projects aimed at customers, communities and the environment, even though they involve costs and time (Khan et al., 2020). The scope of undertaken CSR activities depends on the decisions of managers whose task is to protect the interests of the corporation, taking into account the validity of the claims of various stakeholders (Donaldson, Preston, 1995; Maignan, Ferrell, 2004). Basically, managers act as shareholder agents as owners of the company, controlling the day-to-day operations of the enterprise and making all investment and financial policy decisions. As managers do not usually own the companies they manage, their interests do not always align with those of shareholders (Chakraborty et al., 2019). Part of the publication points out that CSR policy can be used by managers as a way to gain private benefits (such as personal reputation) and not to increase shareholder value (Barnea, Rubin, 2006; Barnea, Rubin, 2010; Chahine et al., 2019).

The scope of undertaken CSR initiatives depends on the intensity of competition and the financial situation of the organization. On the one hand, market competition drives company ethical behaviour, due to pressure from customers, competitors, or concerns about reputation. On the other hand, strong competition in the market reducing profitability may force companies to save on, for example, non-basic activities (including CSR expenses) in order to maintain profits (Shleifer, 2004; Forgione, Migliardo, 2020). When the level of competitive activities in a given sector is high, a positive image related to CSR can improve the company's financial performance, while when the level of competitive activities is low, the lack of such activities (omitting CSR expenditure) may improve financial results (Kim et al., 2018).

It is pointed out in the literature that past profitability (availability of financial resources) and the company's social performance are positively related. Investing in social performance is also found to be positively related to future financial performance. This type of feedback is seen as a result of good organizational management (Waddock, Graves, 1997). Companies voluntarily engaging in CSR activities expect that it will bring them financial benefits. In addition, they not only build their image as socially responsible, but also profitable (having funds for social expenditure) (Aswani et al., 2021).

Some authors emphasize the importance of the economic approach, writing that CSR should have a business justification (Esken et al., 2018; Wagner-Tsukamoto, 2019). According to this group of authors, the actions taken can be treated as socially responsible only when they bring positive financial effects (Lantos, 2001). Proponents of the economic approach state that there is an optimal level of investment in CSR that maximizes profit while satisfying stakeholders (consumers, investors, employees and the community) (McWilliams, Siegel, 2001; Barnett, Salomon, 2012). This level can be determined by analyzing the costs and benefits of investing in CSR. Godfrey et al., (2009) suggest the existence of an optimal level of CSR from the point of view of limiting broadly understood risk.

Most meta-analyses indicate a positive impact of the implementation of CSR rules in an enterprise on its profitability (Orlitzky et al., 2003; Allouche, Laroche, 2005; Boaventura et al., 2012; Wang et al., 2015; Mikołajek-Gocejna, 2016; AidElMekki, 2020), with some of them having a small impact (Margolis et al., 2009; Gallardo-Vázquez et al., 2019). However, it should be pointed out that it is really a minority, but some studies show that the relationship between CSR and financial results may be neutral or even negative (Boyle et al., 1997; McWilliams, Siegel, 2000; Hirigoyen, Poulain-Rehm, 2015; Zhao, Murrell, 2016; Lee et al., 2018). According to Bruno and Lahouel (2021), discrepancies in the results obtained by individual researchers are the result of: discrepancies in the adopted definitions, differences in the selection of ratios, differences in the selection of databases, methodological problems in the correct selection of the sample, ignoring organizational differences and sensitivity to the time scale.

Discrepancies in the obtained results also occur in surveys concerning the banking sector. Most of them show a positive relationship between CSR and bank profitability. An example can be the research conducted in the USA, according to which there is a positive and significant correlation between financial results and CSR (Simpson, Kohers, 2002; Cornett et al., 2016; Miller, 2016). Research based on international comparisons covering a larger number of countries indicates that CSR of banks is positively related to financial performance in relation to traditional measures (including ROA and ROE) (Shen et al., 2016; Esteban-Sanchez et al., 2017; Wu et al., 2017). Weber (2017) found a positive relationship between sustainability performance and bank financial ratios (i.e. total assets, net profit, ROA and ROE) of Chinese banks. However, there are also studies indicating the lack of a statistically significant relationship between CSR and financial performance, e.g. in the case of banks in Italy (Soana, 2011).

Attention should be paid to the two previously mentioned (Bruna, Lahouel, 2021) reasons for differences in the obtained test results, in the form of failure to take into account organizational (institutional) differences and sensitivity to the time scale (other reasons for differences in test results refer to the heterogeneity of definitions, adopted indicators and samples research.

An empirical study carried out by Belasri et al. (2020), based on an international sample of banks, made it possible to conclude that the CSR of banks is positively related to their effectiveness, and this relationship depends on the institutional context. CSR has a positive effect on the efficiency of banks only in developed countries, which have a high degree of stakeholder orientation and appropriate institutional features.

The study in Nigeria may argue the lack of a positive relationship between CSR and financial performance in developing countries. According to the researchers, the reason for the negative impact of CSR on bank results was the poor disclosure of actions taken by banks (Oyewumi et al., 2018). Other studies contradict the conclusion that in developing countries, banks do not benefit from applying CSR rules. Research in India (Maqbool, Zameer, 2018) shows the positive impact of CSR on financial results, socially responsible banks gain a competitive advantage in Jordan (Abu-Alkeir, 2021), and in Bangladesh the average rate of return on assets of socially responsible banks is higher than in other banks (Ahamed et al., 2012).

A very important aspect from the perspective of the impact of CSR on financial results is the difference between the long-term and short-term effect. Undertaking CSR activities is associated with incurring costs, which may have a negative impact on the financial result in the short term (Hillman, Keim, 2001). This effect is temporary, and in the long run, CSR activities should bring good reputation to banks and enable them to attract additional customers (Zhou et al., 2021). If the expected reputation can be built up, one can expect higher profitability of the resources involved, a better financial situation and a higher market valuation (Garriga, Melé, 2004). Therefore, CSR should be treated as a strategy that allows for higher returns in the long term, offsetting the costs incurred in the short term (Forgione, Migliardo, 2020).

Referring to the scale of operations, the research gives different answers to the question of what the impact of the size of banks is on the activities undertaken in the area of CSR. According to Forgione and Migliardo (2020), banks that dominate the market do not feel the moral pressure of public opinion to undertake social initiatives (they do not undertake a wider range of initiatives than smaller banks). In turn, the research of Cornett et al. (2016), indicates that the largest banks, to a greater extent than smaller banks, conducted socially responsible activities (e.g. lowering deposit fees, increasing services for low income communities.

Based on the results of the above mentioned research on the discussed issues, the article hypothesized that: **socially responsible banks obtain better market ratings and have a higher profitability (improvement of profitability ratios).**

3. Research metodology

All banks that meet three conditions at the same time were selected for the analysis: headquarters based in Poland, belong to the WIG-Banki index and have been listed on the Warsaw Stock Exchange since at least 2009. These criteria were met by 9 banks.

The WIG-RESPECT index, which has been listed on the Warsaw Stock Exchange since 19 November 2009, was used to distinguish socially responsible banks. This index functioned until the end of 2019 (since 1 January 2020, by a Resolution of the Stock Exchange Management Board, it has ceased to be published and was replaced with another index referring to CSR, covering all the largest companies listed on the stock exchange). Companies that wanted to be included in the WIG-RESPECT index underwent a three stage assessment, including an assessment of the liquidity of trading on the stock exchange, corporate governance practices and activities addressed to stakeholders as part of CSR, which were assessed from the perspective of environmental, social and economic factors (http://www.respectindex/…).

For the purposes of the analysis, the banks that were accepted into the WIG-RESPECT index at the beginning of its operation were accepted as socially responsible. The first two (Handlowy, ING) joined the index in 2009. Three more (MBank, Millennium, Santander Polska) joined the index in 2010. It was assumed that these banks implemented the CSR policy before joining the index of socially responsible companies.

The control group consists of the remaining banks that meet the adopted criteria. Two of them did not enter the WIG-RESPECT index at all (PKO BP and BOŚ). Two more banks joined the index, but only after several years of its operation (BOŚ in 2015 and Pekao in 2016). They were added to the control group, assuming that they had applied the CSR policy too briefly for its positive effects to be visible in the financial results.

An important additional piece of information about the banks forming the control group is the fact that they occupy the extreme positions in terms of total assets. In 2009, PKO BP and Pekao had the highest level of assets (in 2019, SantPL was promoted to second place ahead of Pekao). The two remaining banks belonging to the control group (BOŚ and Getin), both at the beginning and at the end of the analyzed period, had the lowest sum of assets among the 9 analyzed banks.

The research period covered the years 2009-2019, in which the WIG-RESPECT index was operating on the Warsaw Stock Exchange. The verification of the hypothesis was based on the available financial data of banks and stock exchange levels. The share prices of the analyzed banking companies are the closing values at the last trading session in a given year. The index method was used in order to obtain comparability of data, in the case of stock exchange quotations, assuming the level of quotations at the end of 2009 (i.e. the year in which the WIG-RESPECT index appeared on the Warsaw Stock Exchange) as the base value. As part of the stock price analysis, a comparison of the banking sector index (WIG-Banki) to the entire market (WIG), the index of socially responsible companies and the index of the largest companies listed on the Warsaw Stock Exchange was presented. To analyze the differences between the banks accepted as socially responsible and the control group, a chart showing changes between the beginning and end of the analyzed period was used, as well as a tree diagram for changes in exchange rates of the surveyed banks in the years 2009-2019.

With regard to the profitability analysis, the basic profitability ratios ROA, ROE and ROAA were calculated on the basis of the annual financial statements of the companies for the years 2009-2019. The analysis began with changes in the levels of profitability ratios in individual banks between the beginning and the end of the analyzed period. As an initial method of analysis, a ranking approach was used, taking into account the positions of individual banks, and the arithmetic mean of the achieved financial ratios for the groups of banks being compared. To check how different the achieved financial ratios differ in the analyzed groups of banks, tree diagrams were used to change all the analyzed profitability ratios in the years 2009-2019. At the end of the research part, the principal component analysis method was used, which simultaneously took into account: the change in the stock exchange rate between the beginning and the end of the analyzed period and the average levels of ROA, ROE and ROAA ratios obtained by individual banks.

4. Results

The impact of CSR on stock exchange quotations

Changes in the level of quotations of banking companies should be considered amongst the entire market and its selected segments. In the years 2009-2019, the Polish banking sector improved its performance much slower (15.32%) than the overall market (44.63%) (Table 1). This could be the result of the financial crisis of 2008, which caused an increase in the share of non performing loans in the loan portfolio, as well as a decline in customer and investor confidence in the banking sector as "complicit" to the crisis. In the analyzed period, the WIG-RESPECT index (socially responsible companies) improved its quotation by 45.94%. Referring to the 5 banking companies that co-created it, it should be pointed out that compared to the sector index (WIG-Banks), they showed a much better improvement in quotations. Admittedly, two of them underestimated the RESPECT index (one of them recorded a 26%

drop in quotations, while the other grew by only 21.88%), they are, however, the smallest of the analyzed banks, with the lowest share in the index. The three remaining banks with higher shares in the index recorded increases in quotations in the analyzed period exceeding the increase in the RESPECT index (increases from 49.77% to 159.62%). Therefore, the banking sector companies raised the WIG-RESPECT index and did not lower it.

The performance of the banking sector in Poland should also be related to the WIG-20 index, which groups the largest companies. In the conditions of the Polish stock exchange, banks are relatively large economic organizations. In 2009, 5 out of 9 analyzed banks were included in the index of the 20 largest companies, three more constituted the "reserve" (they were considered candidates for the index). In 2019, 4 of the analyzed banks remained in the index, and two more were treated as reserve banks.

In the analyzed period, the index of the largest companies on the Warsaw Stock Exchange dropped by 9.99%. One of the reasons for the relatively weak growth of the banking sector in Poland is therefore the size of banks as economic organizations (their affiliation to the WIG-20) at a time when investors shifted their investment preferences to smaller companies.

The ten year period of the analysis seems to be enough to answer the question – Is there a visible effect of the increase in quotations and improved profitability of socially responsible companies compared to the control group? Considering the differences between the changes in the level of quotations of the analyzed banks, between 2009 and 2019 there is an advantage of the banks that joined the WIG-RESPECT index in the years 2009-2010 (the first five in Fig. 1). Quotations improved four out of nine banks (Table 2), all belonged to the group of socially responsible. At the end of 2019, all banks from the control group had lower quotations than at the end of 2009.

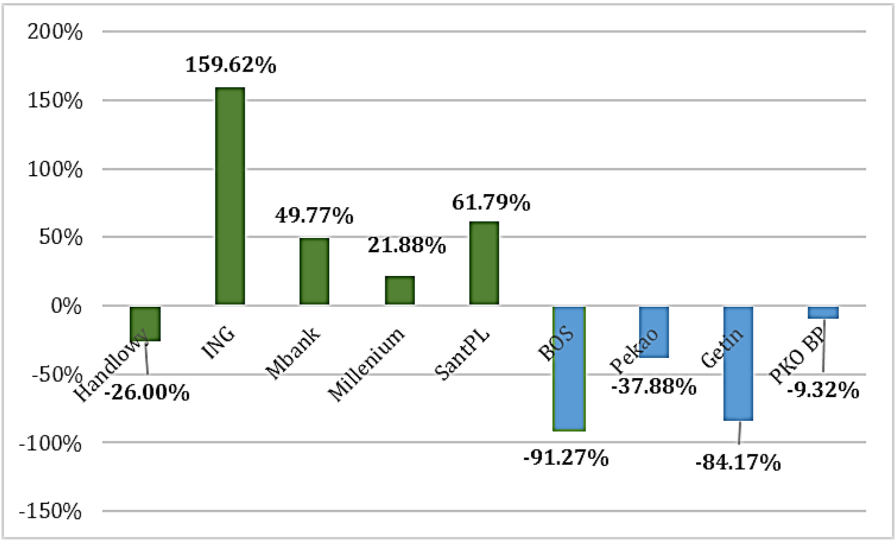

Figure 1. Change in the stock exchange rate of the surveyed banks in 2009-2019 [in %].
Source: own study based on data from the Warsaw Stock Exchange.

The only bank among those classified as socially responsible, whose quotations at the end of 2019 were lower than at the end of 2009, was Bank Handlowy. In terms of ranking, it was overtaken by PKO BP, which is not included in the RESPECT index (PKO BP recorded a lower decline in quotations than Bank Handlowy). However, it should be noted that the quotations of Bank Handlowy have dropped in the last two years (Table 2). In the entire analyzed period, it dropped below the quotations from 2009 only three times, which happened six times in the case of PKO BP.

The comparisons of the relative changes in the level of quotations of socially responsible companies compared to the control group, based on a comparison of the end and beginning of the analysis period, indicate a clear advantage of socially responsible companies.

The conclusions from the tree diagram for the exchange rate changes of the examined banks in the years 2009-2019 are not so clear (Fig. 2).

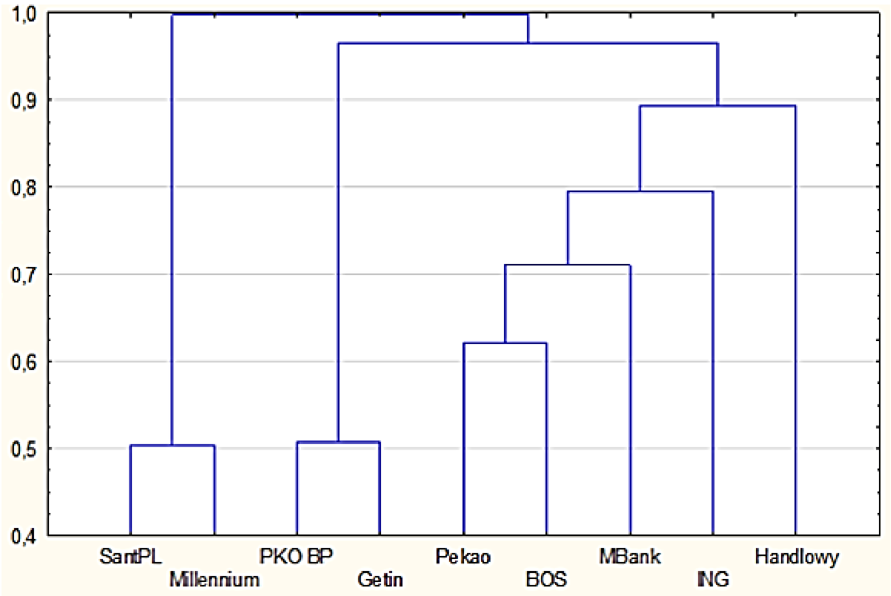

Figure 2. Tree diagram for changes in exchange rates of the examined banks in the years 2009-2019.
Source: own study.

It shows that the closest proximity is shown by the quotations of two pairs of banks included in the control group, i.e. PKO BP and Getin (neither entered the WIG-RESPECT index), as well as Pekao and BOŚ (both entered the index with a long delay). Changes in the quotations of banks classified as socially responsible have much higher dissimilarity measures than other banks. The exception is the pair SantPL and Millennium, whose quotation fluctuations are the closest to each other among the 9 analyzed banks. The indication that membership of the WIG-RESPECT index could be one of the factors taken into account by stock exchange investors, on the basis of the tree diagram, is therefore slightly weaker (taking into account the low similarity of socially responsible banks) than the conclusions drawn from the comparison of quotation changes at the beginning and end of the period analysis.

The impact of CSR on profitability ratios

Based on the data concerning the beginning of the analyzed period (2009), it can be stated that in the case of the Polish banking sector, the statement about the relationship between the interest in CSR activities and the achieved profitability level is not confirmed. The two largest banks on the market that were assigned to the control group (PKO BP, which did not join the index, and Pekao, which joined the index in 2016), distanced most of the banks that decided to join the WIG-RESPECT index at the beginning of the analysis period. As indicated by the data (Tables 2-4), these banks in 2009 were ranked first and third (in the case of ROA), second and fourth (ROE) and first and second (ROAA).

We begin the assessment of the impact of CSR on profitability ratios in the banking sector with their changes between 2009 and 2019. ROA was improved by 4 banks, including 3 classified as socially responsible and one that did not belong to the RESPECT index (Appendix 1). In terms of ranking, socially responsible banks took the first two places and, respectively, fourth, sixth and seventh when it comes to improving ROA.

In the case of ROE, an improvement was recorded by four banks, including 2 classified as socially responsible (Appendix 2). In terms of ranking, socially responsible banks took the first two places and, respectively, fifth, seventh and ninth when it comes to improving ROE.

In the case of ROAA, an improvement was recorded by three banks, including 2 classified as socially responsible (Appendix 3). In terms of ranking, socially responsible banks were ranked first, third, fourth, fifth and ninth, respectively, when it comes to improving ROAA.

As the ranking approach only shows the advantage of socially responsible banks in the case of ROA but does not give clear indications in the case of other ratios, the average values of financial ratios for both groups of banks at the beginning and end of the analyzed period were calculated (Table 6).

Table 1.
Changes in selected stock exchange indices in the years 2010-2019 compared to 2009 [in %]

Index	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
WIG	18.77	-5.98	18.69	28.26	28.59	16.21	29.43	59.42	44.28	44.63
WIG 20	14.88	-10.22	8.13	0.51	-3.05	-20.74	-18.45	3.03	-4.69	-9.99
WIG Banki	17.93	-7.63	13.28	36.55	35.64	3.71	6.72	45.55	27.00	15.32
WIG RESPECT	31.44	16.65	50.75	48.89	55.57	32.00	46.35%	79.05	62.47	45.94

Source: own study.

Table 2.
Change in the stock exchange rate of the surveyed banks in the years 2010-2019 compared to 2009 [in %]

Bank	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Handlowy	33.57	-3.00	40.43	50.00	52.79	2.71	9.13	16.97	-1.29	-26.00
ING	14.62	0.77	16.67	45.32	79.36	50.19	106.92	163.59	130.77	159.62
Mbank	16.92	-5.38	25.38	92.31	91.54	20.77	28.94	78.85	63.15	49.77
Millennium	2.08	-20.83	-7.92	50.00	72.92	15.83	8.13	86.25	84.79	21.88
SantPL	13.11	18.95	27.32	104.00	97.37	49.47	66.32	108.55	88.53	61.79
BOS	-5.88	-44.84	-63.24	-42.40	-58.33	-79.06	-86.92	-89.87	-90.99	-91.27
Pekao	10.70	-12.68	3.59	11.01	10.51	-11.26	-22.20	-19.91	-32.59	-37.88
Getin	28.49	-21.23	-68.49	-57.88	-79.22	-86.37	-88.38	-84.58	-98.10	-84.17
PKO BP	14.08	-15.47	-2.89	3.74	-5.89	-28.08	-25.95	16.61	3.87	-9.32

Source: own study.

Table 3.
Return on Assets (ROA) of the surveyed banks in 2009-2019 [in %]

Bank	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Handlowy	1.34	2.01	1.74	2.23	2.14	1.90	1.27	1.33	1.24	1.30
ING	0.99	1.17	1.26	1.06	1.11	1.04	1.04	1.07	1.11	1.08
Mbank	0.16	0.73	1.16	1.17	1.16	1.09	1.06	0.91	0.83	0.90
Millennium	0.00	0.69	0.92	0.90	0.94	1.07	0.83	1.02	0.96	0.95
SantPL	1.74	1.96	2.05	2.44	1.90	1.52	1.81	1.59	1.65	1.31
BOS	0.22	0.42	0.40	0.20	0.36	0.33	-0.24	-0.29	0.23	0.35
Pekao	1.85	1.89	1.98	1.96	1.76	1.63	1.36	1.31	1.33	1.20
Getin	0.95	1.02	1.85	6.55	2.08	1.29	1.19	1.78	1.04	-7.17
PKO BP	1.48	1.89	1.99	1.93	1.62	1.30	0.97	1.01	1.05	1.15

Source: own study.

Table 4.
Return on Equity (ROE) of the surveyed banks in 2009-2019 [in %]

Bank	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Handlowy	8.14	11.63	11.43	13.13	13.31	12.78	9.14	8.86	7.72	9.05
ING	12.18	13.32	13.72	10.23	11.14	9.95	10.55	11.96	11.90	11.44
Mbank	3.06	9.34	14.18	12.45	11.79	11.64	10.62	9.36	7.66	8.65
Millennium	0.05	7.97	10.17	9.79	9.99	11.29	8.48	10.10	8.76	9.07
SantPL	15.56	15.36	16.40	16.29	13.91	11.34	12.32	11.34	10.79	10.12
BOS	2.92	5.83	5.37	2.35	4.45	4.24	-3.48	-3.38	2.48	2.98
Pekao	13.18	12.49	13.62	12.64	11.89	11.33	9.79	9.95	10.64	10.03
Getin	8.29	9.64	18.26	31.11	12.39	9.92%	10.06	14.22	8.30	-188.32
PKO BP	11.31	15.04	16.67	15.29	12.83	11.74	8.59	8.83	8.58	9.57

Source: own study.

Table 5.
Return on Average Assets (ROAA) of the surveyed banks in 2009-2019 [in %]

Bank	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Handlowy	1.74	2.51	2.18	2.85	2.69	2.34	1.60	1.69	1.64	1.68
ING	1.15	1.38	1.54	1.25	1.33	1.34	1.28	1.40	1.49	1.44
Mbank	0.26	0.97	1.48	1.43	1.46	1.40	1.31	1.22	1.16	1.23
Millennium	-0.01	0.87	1.41	1.13	1.20	1.38	1.04	1.39	1.30	1.27
SantPL	2.15	2.54	2.56	3.03	2.36	1.96	2.26	2.04	2.15	1.63
BOS	0.28	0.48	0.49	0.22	0.41	0.42	-0.27	-0.38	0.36	0.49
Pekao	2.21	2.26	2.40	2.40	2.13	1.97	1.60	1.64	1.46	1.55
Getin	1.01	0.97	2.11	8.40	2.11	1.70	0.23	1.82	1.43	-5.60
PKO BP	2.84	2.40	2.52	2.39	2.03	1.61	1.18	1.14	1.42	1.54

Source: own study.

Table 6.
Arithmetic means of financial ratios for the group of socially responsible banks and the control group in the years 2009 and 2019

Index	Bank group	Years	
		2009	2019
ROA	Socially responsible	0.846%	0.874%
	Control group	1.125%	0.745%
ROE	Socially responsible	7.798%	7.872%
	Control group	8.925%	7.645%
ROAA	Socially responsible	1.058%	1.208%
	Control group	1.585%	1.023%

Source: Own calculations based on Appendices 1-3.

For all analyzed financial ratios, the arithmetic means at the beginning of the analyzed period were higher in the control group (treated as a whole). The situation was reversed at the end of the research period. This was a consequence of the fact that all arithmetic means of ratios improved in the group of socially responsible banks (treated as a whole), while they deteriorated in the control group. The above comparison definitely supports the hypothesis about the positive impact of CSR activities on profitability (improvement of its ratios) in the Polish banking sector.

As the achievable changes in ratios depend on their initial level and taking into account that the beginning and end of the period in the study may only generate errors, a more detailed analysis was based on the evolution of the analyzed financial ratios over the entire period.

Tree diagrams were used to check whether socially responsible banks differ from the control group in terms of the achieved profitability ratios. The first of the diagrams concerns ROA.

When analyzing the tree diagram for ROA achieved in the analyzed period, on the one hand, it points out that two small banks from the control group show the highest level of dissimilarity to the analyzed group, which is especially visible in the case of Getin bank. On the other hand, the two remaining banks from the control group are very similar to each other and to the group of socially responsible banks. The greatest similarity is between Millennium and Mbank, two of the socially responsible banks.

The next diagram (Fig. 4) relates to ROE.

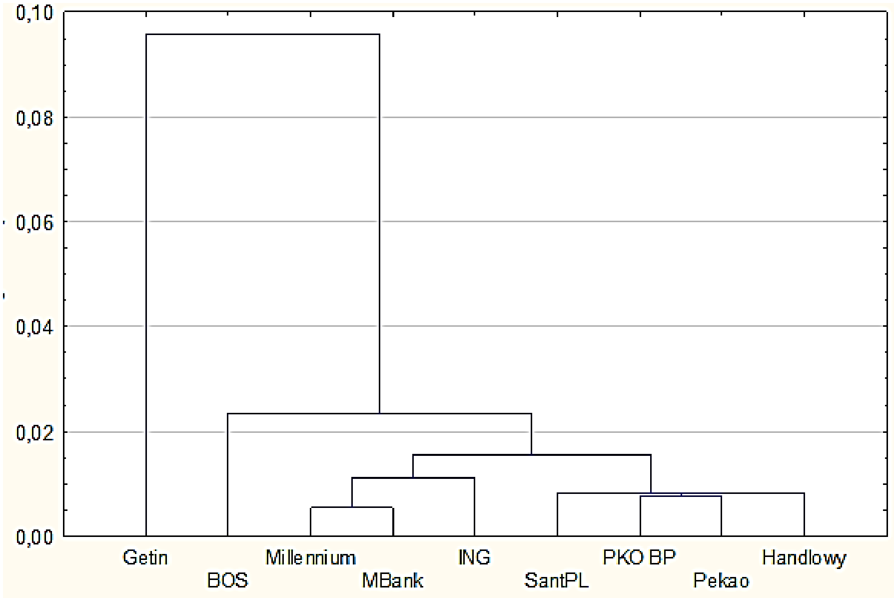

Figure 3. Tree diagram for ROA of the examined banks in the years 2009-2019.

Source: own study.

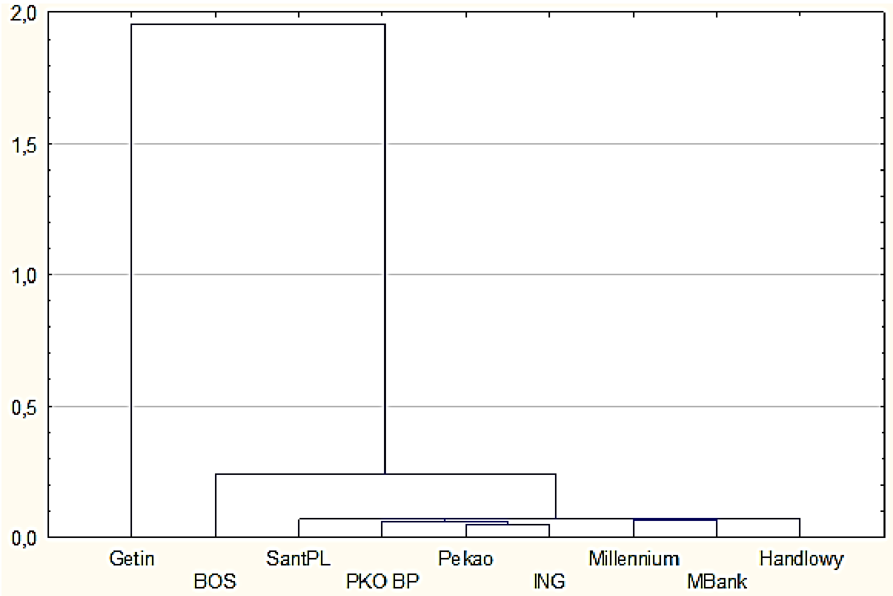

Figure 4. Tree diagram for ROE of the examined banks in the years 2009-2019

Source: own study.

The conclusions from the tree diagram in relation to ROE that are achieved by the analyzed banks are similar to those in the case of ROA. Again, the same two banks from the control group show the highest level of dissimilarity to the analyzed group (which is especially visible in the case of Getin bank). The two remaining banks from the control group are very similar to each other (with a greater similarity between Pekao and ING than between PKO BP and Pekao) and to the group of socially responsible banks.

The last tree diagram presented relates to ROAA.

As in the previous two cases, the ROAA achieved shows the highest level of dissimilarity to the analyzed group in the case of the same two banks from the control group (especially in the case of Getin bank). The two remaining banks from the control group are very similar to each other and to the group of socially responsible banks. The results obtained are very similar to those of the ROA (the greatest similarity is between Millennium and Mbank, the second most similar is between banks from the control group – PKO BP and Pekao.

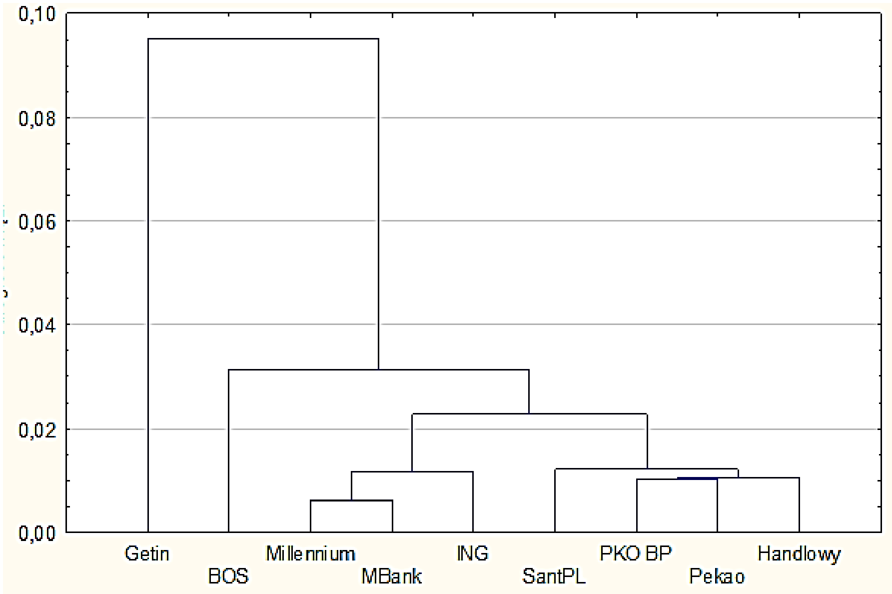

Figure 5. Tree diagram for ROAA of the examined banks in the years 2009-2019.
Source: own study.

To sum up, the tree diagram analysis for profitability ratios is ambiguous. Small banks belonging to the control group differ significantly from other banks. Their example could indicate that there is an impact of CSR on profitability ratios. However, this observation does not apply to the other two banks that form the control group – the profitability ratios they achieve are similar to those achieved by socially responsible banks. It should be remembered that the banks PKO BP and Pekao were the largest banks on the market in the analyzed period. Their size may be a factor determining the relative stability of their financial situation to a greater extent than undertaking CSR activities.

From the perspective of socially responsible banks, they are often more similar to PKO BP and Pekao than to one another (to other banks belonging to the WIG-RESPECT index since its inception). Thus, the analysis of tree diagrams shows the existing differences between financial results within the group of socially responsible banks. This confirms the differentiation within this group of banks, which was already noticed in the preliminary analysis based on the ranking method (a large range of positions taken in the statements concerning the improvement of financial ratios.

To summarize the considerations on the similarity between the analyzed groups of banks, and thus also to answer the question to what extent CSR activities affect the quotations and profitability of banks, the main component analysis method was used, for which the change of the stock exchange rate between the beginning and the end of the analyzed period and the obtained average levels of ROA, ROE and ROAA. (Fig. 6).

Principal component analysis confirms the conclusions of the tree diagram analysis. On the one hand, two small banks belonging to the control group deviate the most from the other banks. On the other hand, the features of PKO BP and Pekao are closest to those of the two socially responsible banks (Handlowy and SantPL).

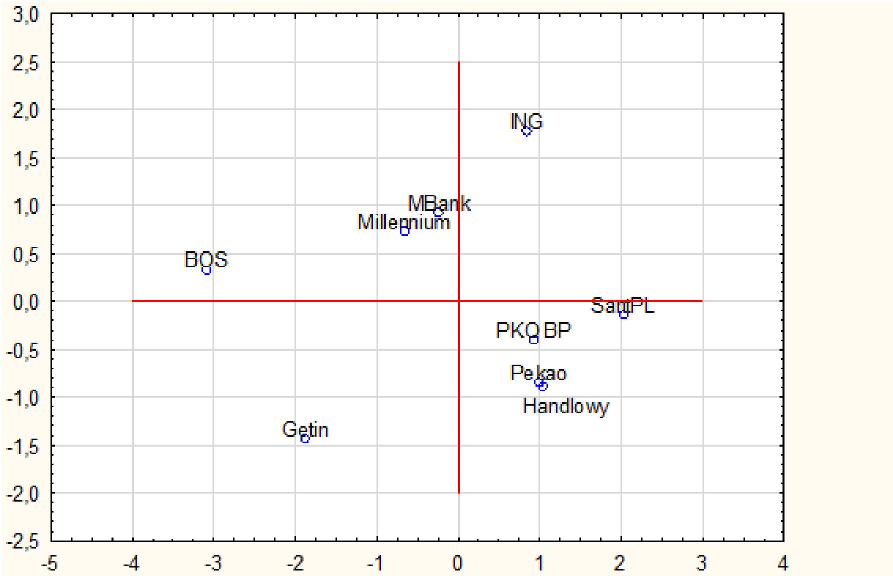

Figure 6. Principal component analysis and classification for the examined banks in the years 2009-2019.

Source: own study.

5. Discussion

The article contributes to the discussion on the connection of CSR activities with stock market quotations and profitability of enterprises, especially banking companies. On this basis, it can be used for discussion in a number of areas which have been alluded to in previous publications.

In the case of the Polish banking sector, it cannot be confirmed that banks with a strong financial position are more willing to invest in CSR in order to strengthen their reputation and emphasize the profitability of operations (having funds for social expenditure) (Aswani et al., 2021). The banks joining the WIG-RESPECT index in the years 2009-2010, treated as a whole, deviated from the banks in the control group in terms of profitability. This was mainly the result of the participation in the control group of the two largest banks on the market, having a relatively strong and stable financial position. An additional explanation for the slightly lower initial profitability ratios of socially responsible banks may be the effect of the short period, i.e. before applying to the index of socially responsible companies, banks probably undertook cost generating CSR activities, which contributed to their lower results in the short term (Hillman, Keim, 2001; Zhou et al., 2021).

The results of the rankings indicate a significantly higher improvement in the stock exchange quotations of banks classified as socially responsible as compared to the control group. This advantage is much higher than the advantage in improving profitability ratios, especially visible in terms of ranking. This may indicate that investor decisions are more influenced by the improvement of the bank image that is related to CSR activities or by considering the composition of the WIG-RESPECT index when building investment portfolios (selection of socially responsible entities in the first place.

The difference between socially responsible banks and the control group would be even more visible if the control group did not include PKO BP bank, which did not join the WIG-RESPECT index, and recorded only a slight drop in prices. Its lack of interest in joining the index may confirm the hypothesis that the largest banks on the market are not interested in bearing the costs of CSR activities (Forgione, Migliardo, 2020). Based on the above observation, Pekao, the second largest bank by assets only joined the WIG-RESPECT index in 2016.

In the case of an improvement in financial results, the advantage of socially responsible banks over the control group is especially visible in changes in the arithmetic average levels of profitability ratios for selected groups of banks. This may indicate the building of a stronger organizational culture and more effective management methods in socially responsible banks (Waddock, Graves, 1997). If we treat the analyzed groups of banks as two separate entities, it can be concluded that belonging to the group of socially responsible banks brings the expected results in terms of improving long-term financial results (Zhou et al., 2021) and higher market valuation (Garriga, Melé, 2004).

However, it should be pointed out that the analysis of changes in profitability ratios in individual banks shows that they are highly diversified. For example, in terms of ranking, Santander PL, which belongs to the socially responsible group, came last in the ROE improvement ranking, and Millennium was the last in ROAA improvement. This indicates that just belonging to the group of socially responsible banks does not guarantee success in the form of improvement of all financial ratios.

The obtained results are admittedly not fully unambiguous, but they support the theoretical indications as to the inclusion of CSR in the strategy of banks.

Practical implications of the article can be related to managers in the banking sector and stock market investors. Banks should include CSR activities in their strategy, as they may bring benefits in the form of increased market quotations and profitability ratios. Stock exchange investors should take into account the involvement of banks in CSR activities, as they may affect the effectiveness of bank operations and, consequently, the level of their market valuation.

6. Conclusions

The article contributes to the debate concerning the impact of CSR practices on the financial performance and listing level of companies in the banking sector. The study confirms the results of most previous studies, pointing to the positive impact of CSR activities on the market valuation and on the financial results achieved in the banking sector (Simpson, Kohers, 2002; Cornett et al., 2016; Miller, 2016; Esteban-Sanchez et al., 2017; Weber, 2017). In this way, it contributes to both theoretical and empirical considerations.

Our study has some limitations in terms of any generalizing the obtained results. The sample for comparison is small, and the adopted control group is not fully homogeneous (two banks with a delay in entering the WIG-RESPECT index and two not interested in participating in it). The study only covered one country and therefore does not take into account the institutional differences between various economies and banking systems.

Admittedly, the period adopted for the study is ten years, so it allows to check the long-term effects, but only two of the banks from the control group operated for three or four years in the index, which does not allow for a full assessment of the results of including socially responsible activities in their strategy. Additionally, the analysis is based on comparisons of two groups of banks, one of which declares a long-term CSR policy, but we have not analyzed the actual CSR activities undertaken by individual banks (their scale and direction).

The proposed directions for further research are related to the above limitations. First of all, it is necessary to find an answer to the question whether the banks that introduced the CSR policy into the strategy with delay (joined RESPECT in the years 2015-2016) improve their results (will there be a positive long-term effect of CSR activities). This will enable the analysis of market quotations and financial results obtained by these banks in the coming years.

A promising direction for future research seems to be checking what specific CSR activities individual banks focus on and how these activities affect financial results and the level of stock exchange quotations. Such a study would mainly refer to the identification of standard (implemented in most banks) and specific (undertaken by individual banks) CSR activities, the evolution of directions and scale of spending funds on CSR and their assessment from the perspective of bank stakeholders.

References

1. Abu-Alkeir, N.I. (2021). Examining the relationship between Corporate Social Responsibility (CSR) and Competitive Advantage (CA) in the commercial banking sector /case study of Jordan. *American Journal of Multidisciplinary Research & Development (AJMRD), 03*(07), pp. 27-31. www.ajmrd.com.
2. Achi, A., Adeola, O., Achi, F.C. (2022). CSR and green process innovation as antecedents of micro, small, and medium enterprise performance: Moderating role of perceived environmental volatility. *Journal of Business Research*, *139(C)*, pp. 771-781. doi: 10.1016/j.jbusres.2021.10.016.
3. Ahmed, S.U., Islam, M.Z., Hasan, I. (2012). Corporate social responsibility and financial performance linkage. Evidence from the banking sector of Bangladesh. *Journal of Organizational Management, 1(1),* pp. 14-21.
4. AitElMekki, O. (2020). Is socially responsible investment outperforming conventional investment or not? A meta-analysis. *American Journal of Industrial and Business Management, 10*, pp. 1760-1784. https://www.scirp.org/journal/ajibm.
5. Allouche, J. Laroche, P.A. (2005). Meta-analytical investigation of the relationship between corporate social and financial performance. *Revue de Gestion des Ressources Humaines, 18*, pp. 1-29. https://www.researchgate.net/publication/228960817.
6. Aswani, J., Chidambaran, N.K., Hasan, I. (2021). Who benefits from mandatory CSR? Evidence from the Indian Companies Act 2013. *Emerging Markets Review, 46*, *100753*, pp. 1-15. doi:10.1016/j.ememar.2020.100753.
7. Barnea, A., Rubin, A. (2010). Corporate social responsibility as a conflict between shareholders. *Journal of Business Ethics, 97(1),* pp. 71-86. doi: 10.1007/s10551-010-0496-z.
8. Barnett, M.L., Salomon, R.M. (2012). Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strategic Management Journal, 33*, pp. 1304-1320. doi:10.1002/smj.1980.
9. Becker-Olsen, K.L., Cudmore, B.A., Hill, R.P. (2006). The impact of perceived corporate social responsibility on consumer behavior. *Journal of Business Research, 59(1),* pp. 46-53. doi:10.1016/j.jbusres.2005.01.001.
10. Belasri, S., Gomes, M., Pijourlet, G. (2020). Corporate social responsibility and bank efficiency. *Journal of Multinational Financial Management, 54*, *100612*, pp. 1-10. doi:10.1016/j.mulfin.2020.100612.
11. Bhattacharya, C.B., Sen, S. (2004). Doing better at doing good: when, why and how consumers respond to corporate social initiatives. *California Management Review, 47(1),* pp. 9–24. doi:10.2307/41166284.

12. Boaventura, J.M.G., da Silva, R.S., Bandeira-de-Mello, R. (2012). Corporate financial performance and corporate social performance: Methodological development and the theoretical contribution of empirical studies. *Revista Contabilidade and Financas, 23(60),* pp. 232-245. doi:10.15728/bbr.2020.17.5.4.
13. Boyle, E.J., Higgins, M.M., Rhee, S.G. (1997). Stock market reaction to ethical initiatives of defense contractors: theory and evidence. *Critical Perspectives on Accounting, 8(6),* pp. 541-561. doi:10.1006/cpac.1997.0124.
14. Brammer, S.J., Pavelin, S. (2006). Corporate reputation and social performance: The importance of fit. *Journal of Management Studies, 43(3),* pp. 435-455. doi:10.1111/ j.1467-6486.2006.00597.x.
15. Branco, M.C., Rodrigues, L.L. (2006). Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics, 69(2),* pp. 111-132. doi:10.1007/s10551-006-9071-z.
16. Bruna, M.G., Lahouel, B.B. (2021). CSR and financial performance: Facing methodological and modelling issues commentary paper to the eponymous FRL article collection. *Finance Research Letters, 102026*, pp. 1-8. doi:10.1016/j.frl.2021.102036.
17. Chahine, S., Fang, Y., Hasan, I., Mazboudi, M. (2019). Entrenchment through corporate social responsibility: Evidence from CEO network centrality. *International Review of Financial Analysis, 66(C).* doi:10.1016/J.IRFA2019.04.010.
18. Chakraborty, A., Gao, L.S., Sheikh, S. (2019). Managerial risk taking incentives, corporate social responsibility and firm risk. *Journal of Economics and Business, 101*, pp. 58-72. doi:10.1016/j.jeconbus.2018.07.004.
19. Cheung, Y-L, Tan, W., Wang, W. (2020). Where do banks value corporate social responsibility more? Evidence on the role of national culture. *Journal of Banking & Finance, 118*, *105810*, pp. 1-18. doi:10.1016/j.jbankfin.2020.105810.
20. Cornett, M.M., Erhemjamts, O., Tehranian, H. (2016). Greed or good deeds: An examination of the relation between corporate social responsibility and the financial performance of U.S. commercial banks around the financial crisis. *Journal of Banking and Finance, 70*, pp. 137-159. doi:10.1016/j.jbankfin.2016.04.024.
21. De Klerk, M., de Villiers, C., van Staden, C. (2015). The influence of corporate social responsibility disclosure on share prices: Evidence from the United Kingdom. *Pacific Accounting Review, 27(2),* pp. 208-228. doi:10.1108/PAR-05-2013-0047.
22. Dedu, V., Nitescu, D.-C., Cristea, M.-A. (2021). The impact of macroeconomic, social and governance factors on the sustainability and well-being of the economic environment and the robustness of the banking system. *Sustainability*, *13(10), 5713,* pp. 1-13. doi:10.3390/su13105713.
23. Donaldson, T., Preston, L.E. (1995). The stakeholder theory of the corporation: concepts, Evidence, and implications. *Academy of Management Review, 20(January),* pp. 65-91. doi:10.2307/258887.

24. Engizek, N., Yasin, B. (2017). How CSR and overall service quality lead to affective commitment: mediating role of company reputation. *Social Responsibility Journal, 13(1),* pp. 111-125. doi:10.1108/SRJ-09-2015-0135.
25. Esken, B., Franco-Garcia, M.D., Fischer, P.A.M. (2018). CSR perception as a signpost for circular economy. *Management Research Review, 41(5),* pp. 586-604. doi:10.1108/MRR-02-2018-0054.
26. Esteban-Sanchez, P., de la Cuesta-Gonzalez, M., Paredes-Gazquez, J.D. (2017). Corporate social performance and its relation with corporate financial performance: International evidence in the banking industry. *Journal of Cleaner Production, 162*, pp. 1102-1110. doi:10.1016/j.jclepro.2017.06.127.
27. EY and BCC (2016). *Value of sustainability reporting, A study by EY and Boston College Center for Corporate Citizenship*, 1-32. http://globalsustain.org/files/ACM_BC_Corporate_Center.pdf.
28. Fatima, T., Albanna, S. (2023). Corporate Social Responsibility (CSR) Implementation: A Review and a Research Agenda Towards an Integrative Framework. *Journal of Business Ethics*, *183*, pp. 105-121. doi:10.1007/s10551-022-05047-8.
29. Fatma, M., Rahman, Z. (2016). The CSR's influence on customer responses in Indian banking sector. *Journal of Retailing and Consumer Services, 29*, pp. 49-57. doi:10.1016/j.jretconser.2015.11.008.
30. Fatma, M., Rahman, Z., Khan, I. (2014). Multi-item stakeholder based scale to measure CSR in the banking industry. *International Strategic Management Review, 2*, pp. 9-20. doi:10.1016/j.ism.2014.06.001.
31. Fombrun, C.J., van Riel, C. (1997). The reputational landscape. *Corporate Reputation Review, 1(1/2),* pp. 5-13. doi:10.1057/palgrave.crr.1540008.
32. Forcadell, F.J., Aracil, E. (2017). European banks' reputation for corporate social responsibility. *Corporate Social Responsibility and Environmental Management, 24*, pp. 1-14. doi: 10.1002/csr.1402.
33. Forgione, A.F., Migliardo, C. (2020). CSR engagement and market structure: Evidence from listed banks. *Finance Research Letters, 35*, *101592,* pp. 1-5. doi:10.1016/j.frl.2020.101592.
34. Gallardo-Vázquez, D., Barroso-Méndez, M.J., Pajuelo-Moreno, M.L., Sánchez-Meca, J. (2019). Corporate social responsibility disclosure and performance: A meta-analytic approach. *Sustainability, 11(4), 1115*, pp. 1-33. doi:10.3390/su11041115.
35. Gangi, F., Mustilli, M., Varrone, N., Daniele, L.M. (2018). Corporate social responsibility and banks' financial performance. *International Business Research; 11(10),* pp. 42-58. doi:10.5539/ibr.v11n10p42.
36. Garriga, E., Melé, D. (2004). Corporate Social Responsibility theories: mapping the territory. *Journal of Business Ethics, 53*, pp. 51-71. https://www.jstor.org/stable/25123282.

37. Godfrey, P.C., Merrill, C.B., Hansen, J.M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal, 30*, pp. 425-445. doi:10.1002/smj.750.
38. Gond, J.-P., El-Akremi, A., Igalens, J., Swaen, V. (2010). Corporate Social Responsibility influence on employees. Nottingham University, Business. School. *ICCSR Research Paper Series, 54*, pp. 1-45. http://htl.handle.net/2078.1/180416.
39. Goss, A., Roberts, G.S. (2011). The impact of corporate social responsibility on the cost of bank loans. *Journal of Banking & Finance, 35(7),* pp. 1794-1810. doi:10.1016/j.jbankfin.2010.12.002.
40. Goyal, P., Chanda, U. (2017). A Bayesian Network Model on the association between CSR, perceived service quality and customer loyalty in Indian Banking Industry. *Sustainable Production and Consumption, 10*, pp. 50-65, doi:10.1016/j.spc.2016.12.001.
41. Grougiou, V., Leventis, S., Dedoulis, E., Owusu-Ansah, S. (2014). Corporate social responsibility and earnings management in U.S. banks. *Accounting Forum, 38(3),* pp. 155-169. doi:10.1016/j.accfor.2014.05.003.
42. Hildebrand, D., Sen, S., Bhattacharya, C.B. (2011). Corporate social responsibility: A corporate marketing perspective. *European Journal of Marketing, 45(9/10),* pp. 1353-1364. doi:10.1108/03090561111151790.
43. Hillman, A.J., Keim, G.D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal, 22*, pp. 125-139. doi:10.1002/1097-0266(200101)22:23.0.CO;2-H.
44. Hirigoyen, G., Poulain-Rehm, T. (2015). Relationships between corporate social responsibility and financial performance: What is the causality? *Journal of Business & Management, 4(1)*, pp. 18-43. doi:10.12735/jbm.v4i1p18.
45. Hsueh, C.-F. (2014). Improving corporate social responsibility in a supply chain through a new revenue sharing contract. *International Journal Production Economics, 151*, pp. 214-222. doi:10.1016/j.ijpe.2013.10.017.
46. Jeffrey, S., Rosenberg, S., McCabe, B. (2019). Corporate social responsibility behaviors and corporate reputation. *Social Responsibility Journal, 15(3),* pp. 395-408. doi:10.1108/SRJ-11-2017-0255.
47. Kabus, J., Dziadkiewicz, M. (2022). Residents' Attitudes and Social Innovation Management in the Example of a Municipal Property Manager. *Energies, 15(16),* 5812; pp. 1-20. https://doi.org/10.3390/en15165812.
48. Khan, H.Z., Bose, S., Johns, R. (2020). Regulatory influences on CSR practices within banks in an emerging economy: Do banks merely comply? *Critical Perspectives on Accounting, 71*, *102096*, pp. 1-20. doi:10.1016/j.cpa.2019.102096.
49. Kim, K.-H., Kim, M.C., Qian, C. (2018). Effects of corporate social responsibility on corporate financial performance: A competitive-action perspective. *Journal of Management, 44*, pp. 1097-1118. doi:10.1177/0149206315602530.

50. Kim, M., Kristiansen, E.G., Vale, B. (2005). Endogenous product differentiation in credit markets: what do borrowers pay for? *Journal of Banking & Finance, 29(3),* pp. 681-699. doi:10.1016/j.jbankfin.2004.05.024.
51. Kolk, A., Vock, M., van Dolen, W. (2016). Microfoundations of partnership: Exploring the role of employees in trickle effects. *Journal of Business Ethics, 135*, pp. 19-34. doi:10.1007/s10551-015-2727-9.
52. Lantos, G.P. (2001). The boundaries of strategic corporate social responsibility. *Journal of Consumer Marketing, 18(7),* pp. 595-632. doi:10.1108/07363760110410281.
53. Lecuyer, C., Capelli, S., Sabadie, W. (2021). Consumers' implicit attitudes toward corporate social responsibility and corporate abilities: Examining the influence of bank governance using the implicit association test. *Journal of Retailing and Consumer Services, 61*, *101989*, pp. 1-8. doi:10.1016/j.jretconser.2019.101989.
54. Lee, J., Graves, S.B., Waddock, S. (2018). Doing good does not preclude doing well: corporate responsibility and financial performance. *Social Responsibility Journal, 14(4),* pp. 764-781. doi:10.1108/SRJ-03-2017-0044.
55. Maignan, I., Ferrell, O.C. (2001). Antecedents and benefits of corporate citizenship: an investigation of French businesses. *Journal of Business Research, 51(1),* pp. 37-51. doi:10.1016/S0148-2963(99)00042-9.
56. Maignan, I., Ferrell, O.C. (2004). Corporate social responsibility and marketing: An integrative framework. *Journal of the Academy of Marketing Science, 32*(1), 3-19. https://doi.org/10.1177/0092070303258971.
57. Mallin, C., Farag, H., Ow-Yong, K. (2014). Corporate social responsibility and financial performance in Islamic banks. *Journal of Economic Behavior and Organization, 103*, pp. 21-38. doi:10.1016/j.jebo.2014.03.001.
58. Mandhachitara, R., Poolthong, Y. (2011). A model of customer loyalty and corporate social responsibility. *Journal of Services Marketing, 25(2),* pp. 122-133. doi:10.1108/ 08876041111119840.
59. Maqbool, S., Zameer, M.N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. *Future Business Journal, l4*, pp. 84-93. doi:10.1016/j.fbj.2017.12.002.
60. Margolis, J.D., Elfenbein, H.A., Walsh, J.P. (2009). Does it pay to be good… And does it matter? A Meta-analysis of the relationship between corporate social and financial performance. *SSRN Electronic Journal, March*, pp. 1-68. doi:10.2139/ssrn.1866371.
61. Marin, L., Ruiz, S., Rubio, A. (2009). The role of identity salience in the effects of corporate social responsibility on consumer behavior. *Journal of Business Ethics, 84(1),* pp. 65-78. doi:10.1007/s10551-008-9673-8.
62. Masoud, N. (2017). How to win the battle of ideas in corporate social responsibility: the international pyramid model of CSR. *International Journal of Corporate Social Responsibility, 2(4),* pp. 1-22. doi:10.1186/s40991-017-0015-y.

63. McDonald, L.M., Lai, C.H. (2011). Impact of corporate social responsibility initiatives on Taiwanese banking customers. *International Journal of Bank Marketing, 29(1),* pp. 50-63. doi:10.1108/02652321111101374.
64. McDonald, L.M., Rundle-Thiele, S. (2008). Corporate social responsibility and bank customer satisfaction: a research agenda. *International Journal of Bank Marketing, 26(3),* pp. 170-182. doi:10.1108/0265320810864643.
65. McWilliams, A., Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal, 21*, pp. 603-609. doi:10.1002/(SICI)1097-0266(200005)21:53.0.CO;2-3.
66. McWilliams, A., Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *The Academy of Management Review, 26(1),* pp. 117-127. doi:10.5465/AMR.2001.4011987.
67. Mikołajek-Gocejna, M. (2016). The relationship between corporate social responsibility and corporate financial performance – evidence from empirical studies. *Comparative Economic Research, 19(4),* pp. 67-84. doi:10.1515/cer-2016-0030.
68. Miller, D.P. (2016). *The Relationship between corporate social performance and financial performance*. Walden University Scholarworks. https://scholarworks.waldenu.edu/dissertations, 19.04.2019.
69. Miralles-Quirós, M.M., Miralles-Quirós, J.L., Redondo-Hernández, J. (2019). The impact of environmental, social, and governance performance on stock prices: evidence from the banking industry. *Corporate Social Responsibility and Environmental Management, 26(6),* pp. 1446-1456. doi:10.1002/csr.1759.
70. Mohr, L.A., Webb, D.J. (2005). The effects of corporate social responsibility and price on consumer responses. *The Journal of Consumer Affairs, 39(1),* pp. 121-147. doi:10.1111/j.1745-6606.2005.00006.x.
71. Morrison, E., Bridwell, L. (2011). Consumer social responsibility – the true corporate social responsibility. *Competition Forum, 9 (1),* pp. 144-149.
72. Moufty, S., Clark, E., Al-Najjar, B. (2021). The different dimensions of sustainability and bank performance: Evidence from the EU and the USA. *Journal of International Accounting, Auditing and Taxation, 43*, *100381*, pp. 1-22. doi:10.1016/j.intaccaudtax.2021.100381.
73. Muflih, M. (2021). The link between corporate social responsibility and customer loyalty: Empirical evidence from the Islamic banking industry. *Journal of Retailing and Consumer Services, 61*, *102558*, pp. 1-8. doi:10.1016/j.jretconser.2021.102558.
74. Narwal, M. (2007). CSR initiatives of Indian banking industry. *Social Responsibility Journal, 3(4),* pp. 49-60. doi:10.1108/17471110710840233.
75. Orlitzky, M., Schmidt, F.L., Rynes, S.L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies, 24(3),* pp. 403-441, doi:10.1177/0170840603024003910.

76. Oyewumi, O.R., Ogunmeru, O.A., Oboh, C.S. (2018). Investment in corporate social responsibility, disclosure practices, and financial performance of banks in Nigeria. *Future Business Journal, 4(2),* pp. 195-205. doi:10.1016/j.fbj.2018.06.004.
77. Parguel, B., Benoît-Moreau, F., Larceneux, F. (2011). How sustainability ratings might deter ‘greenwashing’: A closer look at ethical corporate communication. *Journal of Business Ethics, 102(1),* pp. 15-28. doi:10.1007/s10551-011-0901-2.
78. Pérez, A. (2015). Corporate reputation and CSR reporting to stakeholders. *Corporate Communications An International Journal, 20*(1), 11-29. doi:10.1108/CCIJ-01-2014-0003.
79. Pérez, A., Garcia de los Salmones, M.M., Rodriguez del Bosque, I. (2013). The effect of corporate association on consumer behavior. *European Journal of Marketing, 47*, pp. 218-238. doi:10.1108/03090561311285529.
80. Pirsch, J., Gupta, S., Grau, S.L. (2007). A framework for understanding corporate social responsibility programs as a continuum: An exploratory study. *Journal of Business Ethics, 70(2),* pp. 125-140. doi:10.1007/s10551-006-9100-y.
81. Pomering, A., Dolnicar, S. (2009). Assessing the prerequisite of successful CSR implementation. Are consumers aware of CSR initiatives? *Journal of Business Ethics, 85(2),* pp. 285-301. doi:10.1007/s10551-008-9729-9.
82. Poolthong, Y., Mandhachitara, R. (2009). Customer expectations of CSR, perceived service quality and brand effect in Thai retail banking. *International Journal of Bank Marketing, 27(6),* pp. 408-427. doi:10.1108/02652320910988302.
83. Ramzan, M., Amin, M., Abbas, M. (2021). How does corporate social responsibility affect financial performance, financial stability, and financial inclusion in the banking sector? Evidence from Pakistan. *Research in International Business and Finance, 55, 101314*, pp. 1-9. doi:10.1016/j.ribaf.2020.101314.
84. Roberts, P.W., Dowling, G.R. (2002). Corporate reputation and sustained superior financial performance. *Strategic Management Journal, 23(12),* pp. 1077-1093. doi:10.1002/smj.274.
85. Ruiz, B., García, J.A. (2021). Analyzing the relationship between CSR and reputation in the banking sector. *Journal of Retailing and Consumer Services, 61*, *102552,* pp. 1-10. doi:10.1016/j.jretconser.2021.102552.
86. Saeed, A., Noreen, U., Azam, A., Sohail Tahir, M. (2021). Does CSR governance improve social sustainability and reduce the carbon footprint: International evidence from the energy sector. *Sustainability, 13*, *3596*, pp. 1-16. doi:10.3390/su13073596.
87. Saeidi, S.P., Sofian, S., Saeidi, P., Saeidi, S.P., Saaeidi, S.A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research, 68(2),* pp. 341-350. doi:10.1016/j.jbusres.2014.06.024.

88. Scholtens, B. (2009). Corporate social responsibility in the international banking industry. *Journal of Business Ethics, 86(2),* pp. 159-175. doi:10.1007/s10551-008-9841-x.
89. Sen, S., Bhattacharya, C.B., Korschun, D. (2006). The role of corporate social responsibility in strengthening multiple stakeholder relationships: A field experiment. *Journal of the Academy of Marketing Science, 34(2),* pp. 158-166. doi:10.1177/0092070305284978.
90. Shen, C.H., Wu, M.W., Chen, T.H., Fang, H. (2016). To engage or not to engage in corporate social responsibility: Empirical evidence from global banking sector. *Economic Modelling, 55(C)*, pp. 207-225. doi:10.1016/j.econmod.2016.02.007.
91. Shleifer, A. (2004). Does competition destroy ethical behavior? *American Economic Review, 94(2),* pp. 414-418. doi:10.1257/0002828041301498.
92. Simpson, W., Kohers, T. (2002). The link between corporate social and financial performance: Evidence from the banking industry. *Journal of Business Ethics, 35(2),* pp. 97-109. doi:10.1023/A:1013082525900.
93. Soana, M.-G. (2011). The relationship between corporate social performance and corporate financial performance in the banking sector. *Journal of Business Ethics, 104(1),* pp. 133-148. doi:10.1007/s10551-011-0894-x.
94. Stanaland, A.J.S., Lwin, M.O., Murphy, P.E. (2011). Consumer perceptions of the antecedents and consequences of corporate social responsibility. *Journal of Business Ethics, 102(1)*, pp. 47-55. doi:10.1007/s10551-011-0904-z.
95. Suriyankietkaew, S., Petison, P. (2020). A retrospective and foresight: Bibliometric review of international research on strategic management for sustainability, 1991-2019. *Sustainability, 12(1), 91*, pp. 1-27. doi:10.3390/su12010091.
96. Valente, M. (2015). Business sustainability embeddedness as a strategic imperative: A process framework. *Business & Society, 54*(1), 126-142. doi:10.1177/0007650312443199.
97. van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *Journal of Business Ethics, 44(2)*, pp. 95-105. doi:10.1023/A:1023331212247.
98. Waddock, S.A., Graves, S.B. (1997). The corporate social performance – financial performance link. *Strategic Management Journal, 18(4)*, pp. 303-319. doi:10.1002/(SICI)1097-0266(199704)18:4<303::AID-SMJ869>3.0.CO;2-G.
99. Wagner-Tsukamoto, S.A. (2019). In search of ethics: from Carroll to integrative CSR economics. *Social Responsibility Journal, 15(4)*, pp. 469-491. doi:10.1108/SRJ-09-2017-0188.
100. Walsh, G., Beatty, S.E. (2007). Customer-based corporate reputation of a service firm: Scale development and validation. *Journal of the Academic of Marketing Science, 35(1)*, pp. 127-143. doi:10.1007/s11747-007-0015-7.

101. Wang, Q., Dou, J., Jia, S. (2015). A meta-analytic review of corporate social responsibility and corporate financial performance: The moderating effect of contextual factors. *Business & Society, 55(8)*, pp. 1083-1121. doi:10.1177/0007650315584317.
102. Weber, O. (2017). Corporate sustainability and financial performance of Chinese banks. *Sustainability Accounting, Management and Policy Journal, 8(3)*, pp. 358-385. doi:10.1108/SAMPJ-09-2016-0066.
103. Wu, M.W., Shen, C.H. (2013). Corporate social responsibility in the banking industry: Motives and financial performance. *Journal of Banking & Finance, 37(9)*, pp. 3529-3547. doi:10.1016/j.jbankfin.2013.04.023.
104. Wu, M.-W., Shen, C.-H., Chen, T.-H. (2017). Application of multi-level matching between financial performance and corporate social responsibility in the banking industry. *Review of Quantitative Finance and Accounting, 49(1)*, pp. 29-63. doi:10.1007/s11156-016-0582-0.
105. Zhao, X., Murrell, A.J. (2016). Revisiting the corporate social performance-financial performance link: A replication of Waddock and Graves. *Strategic Management Journal, 37(11)*, pp. 2378-2388. doi:10.1002/smj.2579.
106. Zhou, G., Sun, Y., Sumei Luo, S., Liao, J. (2021). Corporate social responsibility and bank financial performance in China: The moderating role of green credit. *Energy Economics, 97*, *105190*, pp. 1-10. doi:10.1016/j.eneco.2021.105190.

Appendix

Appendix 1.

Change in ROA of the surveyed banks in the years 2010-2019 compared to 2009 [in %]

Bank	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Handlowy	50.11	29.96	66.36	59.86	41.80	-5.59	-0.72	-7.15	-3.33	-30.16
ING	17.47	26.91	7.01	11.54	4.89	4.16	7.34	12.05	8.44	5.24
Mbank	355.61	618.50	628.00	619.67	578.35	555.39	467.29	417.24	460.65	295.11
Millennium	20 744.84	27 465.61	26 795.93	28 131.59	32 094.98	24 689.04	30 524.57	28 667.90	28 302.08	17 079.89
SantPL	12.69	17.95	40.28	9.31	-12.38	4.43	-8.57	-5.04	-24.53	-32.84
BOS	87.06	79.40	-9.82	60.83	50.53	-209.81	-229.78	5.21	56.93	75.03
Pekao	1.79	7.05	5.97	-4.89	-12.30	-26.70	-29.41	-27.99	-35.42	-42.52
Getin	7.48	95.87	592.72	120.07	36.58	25.62	88.32	9.72	-858.71	-61.55
PKO BP	28.18	35.01	30.98	9.68	-11.74	-34.04	-31.83	-29.12	-21.89	-21.59

Source: own study.

Appendix 2.

Change in ROE of the surveyed banks in the years 2010-2019 compared to 2009 [in %]

Bank	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Handlowy	42.88	40.45	61.32	63.61	57.11	12.38	8.89	-5.14	11.27	-15.47
ING	9.41	12.64	-15.99	-8.49	-18.26	-13.34	-1.78	-2.31	-6.04	-10.52
Mbank	205.57	363.91	307.52	285.73	281.02	247.66	206.45	150.74	183.10	104.66
Millennium	14 757.14	18 863.09	18 148.79	18 526.37	20 949.43	15 714.63	18 735.94	16 240.82	16 814.62	11 592.09
SantPL	-1.27	5.38	4.71	-10.60	-27.11	-20.80	-27.10	-30.66	-34.95	-41.78
BOS	99.55	83.81	-19.71	52.27	45.12	-219.07	-215.47	-15.31	1.99	11.95
Pekao	-5.23	3.35	-4.10	-9.82	-14.01	-25.71	-24.51	-19.27	-23.90	-29.74
Getin	16.29	120.18	275.13	49.39	19.64	21.31	71.45	0.04	-2370.82	0.73
PKO BP	32.97	47.37	35.20	13.45	3.80	-24.02	-21.94	-24.20	-15.40	-14.28

Source: own study.

Appendix 3.

Change in ROAA of the surveyed banks in the years 2010-2019 compared to 2009 [in %]

Bank	Years									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Handlowy	44.28	25.03	63.65	54.37	34.64	-8.21	-2.85	-5.61	-3.41	-27.23
ING	20.77	34.59	9.31	16.16	16.66	11.41	22.15	30.32	25.30	23.85
Mbank	274.96	474.17	454.91	463.16	442.03	406.82	373.84	349.72	377.64	279.11
Millennium	-7 706.44	-12 422.14	-9 965.83	-10 593.45	-12 200.89	-9 214.82	-12 261.28	-11 497.51	-11 260.11	-7 565.81
SantPL	18.39	18.98	40.86	9.56	-8.74	4.91	-4.96	-0.15	-23.99	-29.44
BOS	69.78	72.73	-21.01	42.41	46.31	-195.45	-233.08	28.02	70.39	109.37
Pekao	2.38	8.75	8.75	-3.72	-11.05	-27.46	-25.76	-34.14	-29.89	-33.17
Getin	-3.65	109.82	733.73	109.34	68.74	-76.91	80.65	41.68	-656.25	-65.68
PKO BP	-15.39	-11.46	-15.96	-28.54	-43.37	-58.45	-60.02	-49.91	-45.71	-41.49

Source: own study.