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The Impact of Corporate Social Responsibility on the Company's Financial Performance

Anastasiya Potapova ✉
Researcher, Mediacom, Moscow, Russia,
anastpot2512@gmail.com, ORCID

Zhen Wang

PhD, Professor, School of Economics and Management, China University of Petroleum (Beijing), Beijing, China,
wangzhen@cup.edu.cn

Alina Steblyanskaya

Associate Professor, School of Economics and Management, Harbin Engineering University, Harbin, China,
alina_steblyanskaya@hrbeu.edu.cn, ORCID

Abstract

This article empirically evaluates the impact of CSR behaviour on the financial indicators of 286 companies from Brazil, Russia, India, and China over six years from 2013 to 2018. Company information and CSR ratings were retrieved from the Bloomberg and RobetaSAM databases, and hypotheses were proposed based on a literature review. We constructed various analytical models that differ in dependent variables to better evaluate of distinct CSR metrics through different regression methods. Analyzed factors include: (1) the presence of women on the board; (2) the presence of a company in CSR ratings, and (3) various cultural aspects of the society where companies operate.

Our results support the conclusions of related research in this field of study. Among other consequences, our analysis indicates that CSR significantly influences financial performance, although this is also contingent on external factors. A company's presence in the CSR rating scale has a more substantial impact on profitability and market capitalization indicators than the actual score itself. CSR information disclosure has some effect on ROA and ROE, and the presence of women in the board of Directors showed a slight positive effect on market capitalization. Further, a high level of 'power distance' (i.e. the ostensible alienation of the general citizenry from political authority sources) in the society where company operates harms the relationship between the rating score and financial performance.

Introduction

Recent decades have seen a substantial rise in the popularity of corporate social responsibility (CSR) concept within both the business and scientific communities. There is also an emphasis on the research contributing to company CSR reporting, CRS definition and connections with financial result [1]. When it comes to decision-making, however, companies apply the principles of profit-maximisation and costs minimisation. But what should they do if the company's position concerning its impact on society and the environment influences its financial performance? The company's image and its recognition by rating agencies greatly influence the way investors, creditors, and employees perceive it [2]. Therefore, it is necessary to implement social, environmental, and managerial strategies in the corporate management's decision-making procedure. This necessity applies especially to those companies operating in the economic sectors which most adversely affect the environment or form a certain public sentiment. They comprise extractive industries, pharmacology, various industries that leave toxic emissions, and other sectors. However, the companies which operate in the above sectors and directly impact the environment and social medium, are not the only ones that preoccupy themselves with social responsibility. This is because CSR can directly and indirectly contribute towards a company's financial success. Investors perceive CSR as a positive signal from the company of a lower level of risk and a higher level of stability, not least because a socially responsible company has a lower probability of becoming a party to legal action [3].

Consumers are increasingly likely to question the products they purchase, their carbon footprint, the manufacturer's background, and a manufacturer's perceived level of goodwill. For example, suppose negative criticism is published about a company from environmental organisations, trade unions, or former employees. In that case, sales tend to fall because consumers are often reluctant to support a company with a perceived low level of social responsibility. CSR has several directions of influence upon a company's financial indicators.

F. Perrini draws on the assumption that corporate social disclosure can be considered as the most direct expression of the companies' attitudes and behaviors regarding social responsibility. If companies want to obtain their stakeholders' high-level reputation, they must show that they are interesting in continual, long-term improvement [4]. In developed countries, the trend towards more responsible investment and consumption has been increasing for many decades. For example, to attract investments and contribute towards building a positive reputation, companies disclose CSR information in non-financial reports, and participate in annual CSR evaluations carried out by rating agencies. In most cases, disclosure of CSR information is not mandatory. However, disclosure is necessary for a company to build up a 'sustainability rating' to strengthen its attractiveness.

It should be noted that the majority of CSR-related economic studies evaluate the same economic effects as studies that examine the implementation of sustainable development strategies or sustainable development goals (SDG). We will discuss this similarity in more detail below.

Theoretical Analysis of the Relation between CSR and Corporate Financial Indicators: Review of Existing Studies

The literature of CSR may be divided into three parts: 1 – study of the relation between CSR and financial indicators; 2 – detecting the influence on various CSR metrics (such as the level of information disclosure, and the impact of sustainability ratings on the corporate indicators); 3 – consideration of the cultural characteristics of the country in the analysis of CSR metrics and corporate performance.

CSR Influence on Corporate Performance

A large number of the research on CSR is dedicated to its relation with corporate financial indicators. The majority of such papers use data from developed countries and publicly traded companies. This topic is highly relevant for advanced economies in particular because a wide range of data is available for such companies. The methodologies of the considered papers are generally very similar. The authors study the influence of various CSR metrics on such financial indicators as return on assets or return on equity (ROA/ROE), market capitalisation, and Tobin's Q [5; 6].

The findings of the Aparna Bhatia and Binny Makkar study show that there is significant positive impact of international listing, industry, board size and board independence on CSR disclosure [7].

Profitability ratios are indicators of corporate fund management effectiveness and show the benefit of using assets and capital investments. The market capitalization level indicates the company's market value, which is also an important indicator for an investor showing stability and success. On this basis, we will use the profitability ratios and market capitalisation as dependent variables in our paper. To measure CSR, various indicators may be used, such as the CSR information disclosure score, as well as different sustainability ratings which will be described in detail. It should be noted that the most typical control variables included in the papers we investigated are those responsible for company size, financial leverage, and the rate of company growth. In addition, the authors used the percentage of women on the board of directors, capital expenditures and some other indicators as indicators of the company's stability.

The variable responsible for company size is the most frequently used control variable. Researchers most often choose the logarithm of the total assets as the indicator reliable for company size [8; 9]. This is because company size influences the existence of the company's resources, which

cover non-operating expenses related to sustainable development activity. Also, company size influences the level of awareness of mass media about its operations. The more attention the company gets, the more resources its management is ready to create a positive reputation, including implementing CSR strategies. Companies with stable opportunities for growth are more likely to plan their activity with an eye toward a long-term perspective and invest in their reputation – and a steady increment in profit signals the company's business solvency and its opportunity to develop beyond operating activity. This informs the model by establishing a profit growth rate variable [10]. Regarding the papers' results considered in this subsection, it should be noted that the researchers studying this topic draw controversial conclusions. For example, some research concludes that the CRS implementation into company operations is a risk and an unnecessary set of expenses. Other research, on the contrary, obtains proof of the positive influence of CSR strategies on the corporate financial indicators. In this section of the review, we consider both points of view, and conclude about the reasons for such controversial results. It should also be noted that some authors emphasise that no influence of CSR metrics on financial indicators was revealed [11].

The authors of earlier note that high costs of CSR implementation often did not yield a positive tangible result because the market was not ready to perceive CSR as an essential characteristic for financial indicators. When there is no demand for social responsibility, the company has no incentive to invest [12; 13]. Therefore, the main question pertains to the practicality of such expenses concerning the obtained results. They also point out that more considerable expenses entailed by socially responsible behaviour cause deterioration in terms of competitiveness. As long as the funds are redistributed in favour of non-operating activity, the amounts used for the principal company activities are reduced [8]. However, this means that companies that do not invest in social responsibility think in terms of short-term prospects, choosing cost reduction in the current period. As a result, financial performance looks good in the short term, but worse over a longer interval because the benefits which may be obtained by a positive reputation and consumer confidence are absent [14].

Later papers reveal that together with the growth of public interest in CSR, the engagement of companies increases, and sustainable development strategies have become desirable (and mandatory in some cases) for businesses in various countries. Control of company's operations related to CSR plays an essential role in attracting large conscious investments due to creating a positive reputation and perception by society (for example, [10]). Holding the trust of consumers and shareholders allows a company to remain stable even in case of an economic decline; and establish business relationships with companies committed to similar values. Also, authors [15] assert in their paper that companies with a high level of social responsibility tend to surpass their competitors which have no CSR strategies over the long term. Additionally, according to the papers by Al-

buquerque et al. and Kim et al. [16; 17] the satisfaction of customers, employees and investors does not simply guide the company along the paths of growth, but also reduces its financial risks. This means that from an investor's point of view, a company investing in CSR is more attractive for investment due to a lower probability of judicial proceedings, scandals related to the environment, or misbehaviour towards customers or employees. A proactive social attitude from a company influences management decisions, leading them to the optimal level of riskiness that maximises the company value. Harjoto and Laksmana [18], come to this conclusion in their paper, emphasizing that CSR strategies may help a company avoid excessive risk acceptance or aversion, which positively impacts the investors' welfare. However, Fatemi et al. [19] in their paper point out that although under certain circumstances investments in CSR activity result in an increase in company value for shareholders, there is a chance that funds will be diverted from operations related to protection against competitors with the result in adverse consequences for the company.

The divergence of the research results may be due to various reasons. In the first instance, the choice of CSR metrics, financial indicators, and errors of measurement influence the results. Difficulties in obtaining and verifying information play their part too. As long as CSR activity in most countries and industries is left to company management' discretion (as well as information disclosure requirements), the systematisation of information for analysis may differ substantially from paper to paper. Besides this, as stated above, both company management and investors are changing their opinions on CSR, towards more awareness and understanding of its necessity. Therefore, the research conducted in the early 2000s evaluates corporate social responsibility as an activity diverting funds from the main corporate business and impairing the company's performance. The study from the past four years, on the other hand, addresses the positive effects of CSR and points out not just an understanding of the necessity of such effects, but also of legislative solutions for the implementation of elements of quality control of corporate non-financial activity. Considering all factors defining the positive or negative sign of the influence produced by CSR on corporate indicators, we expect to find a positive relation between CSR metrics and corporate financial performance.

Relation of CSR Information Disclosure with Financial Indicators

The second part of our paper is dedicated to studying the information on CSR strategies applied by companies, the level of its disclosure in non-financial reports, and the extent to which it corresponds to the facts. Standards of information disclosure differ not just for various countries, but also for the industry sectors in which companies operate. However, some standardised indicators are disclosed each year by companies in their annual reports, and in separate sustainability reports [20]. These indicators include the amount of various waste types per unit,

participation in charitable endeavours and environmental projects, staff training costs, research and development, percentage of women on the board of directors, and other indicators [21]. The level of information disclosure and its reliability in such reports varies depending on the industry sector, company size, frequency of its mentioning by mass media, the level of development of political institutions in the country, and other factors [22]. Often companies state only that information that makes a positive impression, while failures are omitted from the reports. However, the research by [23] shows that such a behavioural model may result in drastic consequences for the company, such as adverse publicity, a buyers' strike, and an outflow of sales revenues. There is a popular point of view among scientists that companies engaging in greater social responsibility are more likely to actively disclose such information, as not doing so may cause shareholders' distrust. On the contrary, companies with low CSR levels are more likely to conceal information, avoiding the outflow of investments [24]. This is in line with the results of other research [25]. Point out that companies use CSR information disclosure as an instrument of influence on its perception by investors, furnishing only positive information, and avoiding negative details of the performed work. CSR information provided in the reports is among the risks and opportunities assessment tools for investors. For this reason, managers approach the preparation of reporting to demonstrate only positive results [26; 27]. It also means that companies intend to disclose information on CSR strategies only if such processes have improved financial indicators [28; 29].

Here, we can conclude that information disclosure does not eliminate contradictions related to corporate social responsibility and its implementation in corporate operations. A high level of CSR information disclosure does not necessarily signify that socially responsible behaviour will result in good corporate performance. On the contrary, companies, especially the large ones and those covered by mass media, should assess their risks when publishing any information. Excessive information and its concealment may cause a collapse in investors' confidence and financial losses. Moreover, discrepancies between disclosure and performance may arouse suspicion of unscrupulousness, and the same may happen in case of an absence of information when performing CSR activities. On the other hand, a high level of social responsibility, supported by high quality and verified disclosure, may result in positive financial indicators.

Many researchers use the disclosure score as a measure for CSR information disclosure in their models. They may be general or individual for each aspect: environmental, social or managerial. For example, analysts of the Bloomberg database, rating agencies or independent appraisers assign disclosure scores to companies based on assessment of the quantity and quality of the information disclosed in reports related to corporate social responsibility strategies. The information disclosure scores are only one aspect of the assessment of the way companies perform CSR activities. However, in aggregate (taking into consideration

such indicators as the amount of hazardous waste per unit, participation in charitable endeavours and environmental projects, staff training costs, etc.) the information on disclosure offers an opportunity to evaluate the social responsibility level of a company comprehensively. However, analysis of such data often requires unique prerequisites that an investor a customer often lacks, e.g. knowledge of the nuances of CSR, and the industry sector within which the company operates. This makes it necessary to have outside evaluations performed by independent rating agencies and auditors. Such evaluations consider all CSR indicators at once (including the information disclosure level) and become a basis for creating ratings and sustainability indexes that are more convenient tools for evaluating CSR.

Companies strive to get into sustainable development ratings to obtain consumer confidence and attract new investments. For this purpose, companies spend funds not just for information disclosure, but also for its verification by auditors [30], which is an essential step toward recognition by rating agencies. Those papers which study the interrelations between CSR ratings and corporate financial indicators analyse the data on the companies which have various sustainability indices, such as the Dow Jones Sustainability Indices, FTSE4Good Index, the MSCI ACWI ESG Leaders Index, RobecoSAM Sustainability Yearbook, and other local indexes related to certain markets [5]. The ratings and sustainability indexes listed above are widely used as CSR metrics, *inter alia* in most papers considered at the beginning of section 1.1. Most commonly, the information analysed involves whether the company is included in a rating, and whether its score is stated in the Bloomberg or Thomson Reuters databases and is publicly available. It is rather convenient to include the rating scores into regression and analyse its influence on financial indicators, which is also an argument in favour of using the rating as a CSR metric in the majority of papers on this topic. One of the most popular ratings are the indices of the Dow Jones Sustainability Indices family. This tool is very convenient for most researchers, because the family comprises one global index, and individual regional indices related to various regions of Europe, Asia, North America, and South America. However, we cannot use it for our purposes, because it does not comprise a separate index for BRIC countries. Therefore, this paper uses the popular rating of sustainable development RobecoSAM, which evaluates various companies from different countries. The methodology of forming the applied rating is described in more detail in the section dedicated to variables.

Based on our literature analysis we put forward the following hypotheses:

Hypothesis 1. If a company is in the sustainability rating, this has a positive impact on its financial indicators.

This hypothesis was proposed based on the literature review described above and implies that we expect companies represented in the chosen sustainability rating to show better financial performance than their competitors who are not in the rating. The competitors from our sample

have no CSR strategy, or fail to disclose information about it. There are also companies that are involved in CSR but disclose an insufficient amount of information for getting in the sustainable development rating. Making the selection is described in greater detail below.

Even though a hypothesis is made regarding a positive relation, it is impossible to assume faultlessly that the hypothesis will be confirmed, as the selection made for this paper consists of companies operating in emerging markets. According to previous research on the topic, the outcome of the analysis depends more on the chosen rating and some unobservable factors representative of the considered markets but not included in the models.

Hypothesis 2. There is a relation between the sustainability rating score and corporate financial indicators.

This hypothesis is a more detailed development of the previous assertion. If the first hypothesis compares the financial performance of socially responsible companies with that of their competitors, Hypothesis 2 is proposed to correlate companies' indicators inside the rating. For our analysis, we chose the sustainability rating RobecoSAM which assesses companies from 0 to 100 points. This process will be described in detail in the section dedicated to methodology. On this basis, we generated the hypothesis in order to define how the rating scores influence the corporate performance, and to what extent a company with a higher rating is more financially successful. To verify this hypothesis, we will include in the analysis only the companies from the sustainable development rating.

Hypothesis 3. There is a positive relationship between indicators of CSR information disclosure and the company value.

As was considered in one of the literature review sections a rather important aspect of social responsibility is information disclosure. Therefore, we assume that there is a positive dependence of the company profitability indicators and company capitalisation on the rating score related to the disclosure of sustainable development information. When verifying this hypothesis, we will use the rating score related to general CSR information disclosure assigned to the company by analysts of the Bloomberg database as an explanatory variable.

The next section of the paper is dedicated to the research studying how the cultural characteristics of the country where a company operates may influence the relation between CSR ratings and financial performance.

Relation of CSR ratings to corporate financial performance taking into consideration the cultural characteristics of a country

The influence of ratings in the actual circumstances of developed markets has been actively studied for a long time, and we have considered the papers dedicated to it in sections 1.1 and 1.2. As mentioned above, the conclusions made by researchers are controversial. However, suppose in developed countries this controversy is most commonly

explained by the factors related to corporate intrinsic characteristics, the specific nature of the selection, or the choice of CSR metrics. In that case, the situation is quite different in emerging countries.

As long as the CSR concept is related not so much to companies' behaviour as to the impact they exert on society and the environment, it is crucial when analysizing consider the context in which a company operates. On the one hand, in countries with underdeveloped institutions and more prominent corrupt practices, CSR may take a different turn from developed countries, and become a lobbying and manipulation tool [31]. On the other hand, the concept of CSR is relatively new for emerging markets and the benefits it implies are not always entirely comprehensible for managers and investors. However, in recent years an increased awareness of such markets has been observed [32]. It is also necessary to consider the fact that companies in emerging markets differ due to a weaker corporate management structure. First of all, it means that managers have a more comprehensive range of powers, enabling them to make decisions for their advantage. It is a potential hazard for shareholders' welfare, because it may reduce the efficiency of use of equity and borrowed capital, and decrease the company value [33]. Papers on this topic are usually focused on one region, country or group of countries [10; 15; 34].

All the characteristic features of emerging markets listed above entail the necessity to study which characteristics of individual cultures are correlated with some societal problems. As the authors of some papers written in recent years point out, the country's cultural characteristics are guidelines to understanding what is considered desirable in a certain society. As such, they profoundly influence the creation of the relation between CSR and corporate financial performance and the concept of CSR itself [35]. Moreover, the cultural values are decisive in the behaviour of consumers, investors, and managers, shaping their convictions as regards a certain situation [36]. The authors also conclude that decision-making, following CSR strategy and the cultural values of concerned parties, results in better financial performance than ignoring such values.

The most popular tool for measuring cultural characteristics used by the authors of the studied papers is the six-dimension model of cultural differences developed by Geert Hofstede and co-authors [37]. According to Karolyi [38] the explanatory power of the Hofstede model is greater than that of other similar tools such as the World Values Survey (*WVS Database*) and some others and for this reason it is more popular and more widely used. In this paper we also used the Hofstede model which evaluates the cultural characteristics of a country through six dimensions, which are power distance, individualism and collectivism, uncertainty avoidance, masculinity and femininity, long-term and short-term orientation, and restraint and indulgence [37]. Further, these measurements will be considered in general, and extracts from characteristics of the countries analysed in this paper (Brazil, Russia, India and China) will be presented. The specific values of each dimension of the considered countries are represented in Figure 1.

Figure 1. Score of measurement of cultural differences for each country
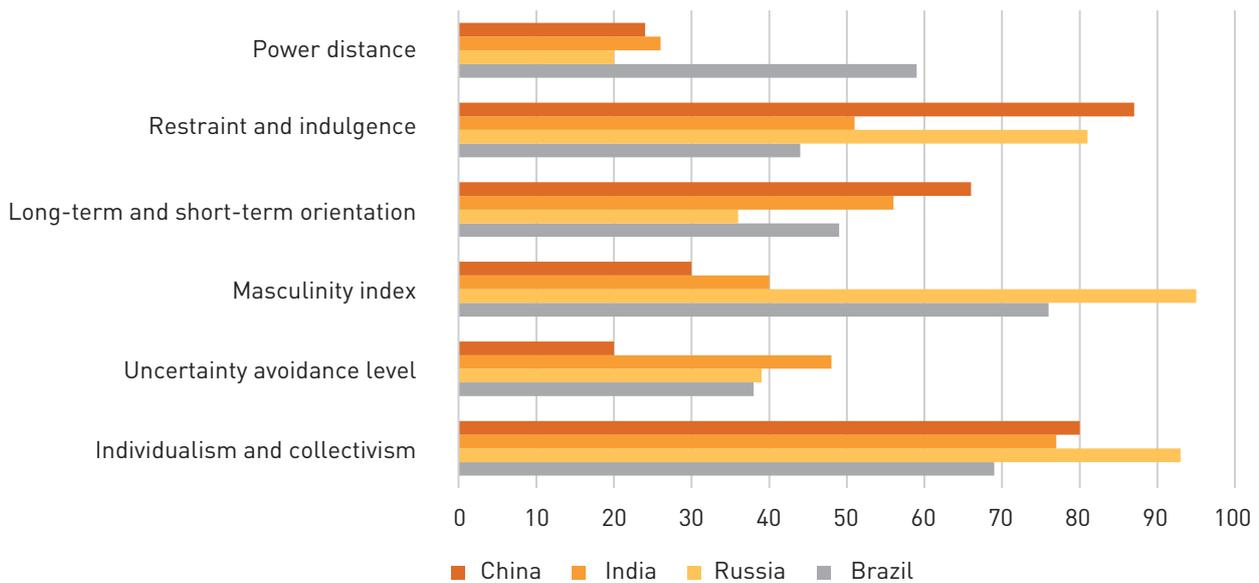
Source: 'Country Comparison', Hofstede insights.

The first component of the model is *power distance*, i.e. the extent to which members of society with less power accept and acknowledge unequal power sharing. A high level of power distance indicates highly developed hierarchical systems, widespread bureaucracy, and underdeveloped democracy in the country. This indicator is exceptionally high in Russia and China. All the four countries are characterised by a high level of the centralised authority' acceptance, which is concentrated in the hands of the upper segment of population, this inequality perceived as normal.

The next dimension of the model characterises the *ability* of culture to satisfy the *immediate wants and personal desires* of members of society. Those cultures that have a high evaluation such as Brazil, prioritize in living, the ability to be merry, and positive thinking despite hardships. It gives them a sense of a more positive vision of the future. The restrained societies, like China, Russia and India, are prone to control their true desires, pessimism, and a perception of their leisure and joy as something prohibited and wrong. Such overcontrol/excessive control position makes members of society have a negative mindset for the future and feel that they are unable to influence their own lives.

The *short-term and long-term orientation of the society* is defined by the extent to the societies look more to the past and traditions of its nation (short-term orientation) or is more interested in the future than in the present or past (long-term orientation). Among the four sample countries, Brazil and India have a small score in this dimension, due to the religious cultures of these countries and their traditionalism. On the other hand, China and Russia, are pragmatic societies that demonstrate a high level of adaptability to situations.

The next aspect of the model is responsible for the division of emotional roles between the sexes. In other words, the higher the *masculinity index* of the society, the more it appreciates traditionally masculine values and the more

it strives to establish strict rules and laws. For example, in India and China, respect towards a person is contingent upon his/her success and power, which is characteristic of a masculine type society. Brazil shows no distinct manifestation of gender, while Russia belongs to the feminine type of society, because dominating behaviour is accepted from a superior, but it is not typical among people of the same level.

The next element of the model is the *uncertainty avoidance level,* which is responsible for how tolerant members of society are to unexpected deviations from the usual course of life. The higher this level, the more the society tries to exercise control events with customs, regulatory standards, and laws, although nevertheless it is open to changes. Russia and Brazil show a high level of this dimension because these societies have a pressing need for rules and the development of legal systems to structure their live, resulting in the creation of complex bureaucratic procedures. China and India, meanwhile, demonstrate endurance of eventualities and the ability to adapt to any circumstances.

The next dimension is *individualism versus collectivism,* which is defined by the extent to which individual members of a society attach more importance to their personal goals and desires than to public interests and welfare. Three of these four countries are prone to collectivism for various reasons, such as strong family connections (Brazil), a high self-awareness of the nation as a whole (Russia), or the collectivist foundation of the society (China). India combines the features of individualism through religion (in which each person is responsible for his/her own lot) and of collectivism due to a high preference of group affiliation, in which it is customary to act while taking into consideration the general welfare [37].

The papers in this section more often make an allowance for industrial and cultural differences when analysing the relation between CSR metrics and financial indicators.

The research we have considered presents conclusions that national peculiarities influence how a board of directors takes decisions, how a company assumes risks, and how a company participates in CSR strategies. Veenstra and Shi [36], in their inter-country analysis also conclude that a high level of individualism and indulgence in the country results in a negative relation between CSR and financial performance, while a long-term orientation and power distance yield a reverse effect. However, the influence of dimensions on the relation between CSR and financial indicators varies enormously depending on the data used for analysis. Halkos and Skouloudis [41], in their paper, come to a conclusion that the higher the level of uncertainty avoidance in a culture, the less the influence of CSR in corporate financial performance. Long-term orientation and a high indulgence, on the contrary, facilitate a positive influence of CSR strategies on indicators. However, this contradicts previous research, which reveals a significant influence of masculinity, individualism, and a high-power distance index on the level of CSR implementation.

Based on an analysis of the papers considered in this section we propose the following hypothesis:

Hypothesis 4. Cultural peculiarities of a country influence the relation between the CSR rating assigned to the company and its financial performance.

Based on previous papers in which similar analysis tools have been used, we expect both a positive and negative effect from various aspects of the Hofstede model. It is impossible to predict the influence, which a particular element of the model exerts on creating the studied relation. The results of our model may both confirm the conclusions of previous papers and opposite yield results. Based on the preliminary analysis of country differences, we assume that a high bureaucratisation and hierarchy in the societies under consideration may have the most significant impact, because a poor performance of institutions reduces the proactivity of members of society and interest in following global trends. Thus, it is crucial to verify this hypothesis to understand which aspects of the cultural peculiarities model result in a different influence of CSR on the corporate financial performance in the BRIC countries analysed.

Methodology and Database

Research Model

In a generic form, the model is as follows:

$$ROA_{i,t} \text{ / } ROE_{i,t} \text{ / } Marketcap_{i,t} = \beta_0 +$$
$$+ \beta_1 \cdot CSR_{presence_{it}} \text{ / } CSR_{score_{it}} \text{ / } ESG\,disclosure_{it} +$$
$$+ \beta_2 \cdot Total\_assets_{it} + \beta_3 \cdot D \text{ / } E_{ratio_{it}} +$$
$$+ \beta_4 \cdot Growth\_rate_{it} + \beta_5 \cdot Diversity\,of\,board_{it} +$$
$$+ u_i + \varepsilon_{it} \qquad\qquad , \quad (1)$$

where:

ROA is the natural logarithm of return on assets;

ROE is the natural logarithm of return on equity;

Marketcap is the natural logarithm of market capitalisation;

CSR_presence is the presence of a company in the sustainable development rating (1 – the company is presented in the rating, 0 – the company is not presented in the rating);

CSR_score is the score of the sustainable development rating RobecoSAM;

Total_assets is the natural logarithm of the total corporate assets;

D/E ratio is debt to equity ratio;

Growth_rate is the profit growth rate of the company;

Diversity of board is the percentage of women on the board of directors;

u_i is unobservable individual effects;

ε_{it} is residual disturbance.

The majority of variables are presented as logarithms. We did this to approximate the regression residual distribution to the normal value and to avoid inadequate models.

Description of the Selection

In this paper we use data concerning companies operating in Brazil, Russia, India and China collected using the Bloomberg database for six years from 2013 to 2018. The data was collected in two stages. At the first stage we collected information on the companies presented in the RobecoSAM rating. Then we chose competitors for companies from each industry sector commensurable in terms of size, country and primary business, which, however, are not presented in the sustainability rating. The majority of competitor companies are either not involved in CSR or fail to meet all criteria necessary to get into the rating. Some of them have no score concerning information disclosure.

The Bloomberg database, presents complete information on financial indicators necessary to build a model, and various aspects of CSR strategies are evaluated. After downloading the data, the selection comprised eleven sectors following the global industry classification standards of Bloomberg (GICS). The next stage of data processing was the elimination of observations related to the companies from the financial sector, because their activity structure and reports preparation differ drastically from other sectors which could cause errors and adversely impact the research findings [8].

Apart from that, the data was purged of empty values that were replaced with a mean value of the variable for each company. Thus, the final selection consists of 286 companies, which provides 1,716 observations. A breakdown of companies by their countries and industry sectors is represented in **Appendix 1**. Figure 2 shows the breakdown of companies by countries.

Figure 2. Breakdown of companies in the selection by countries
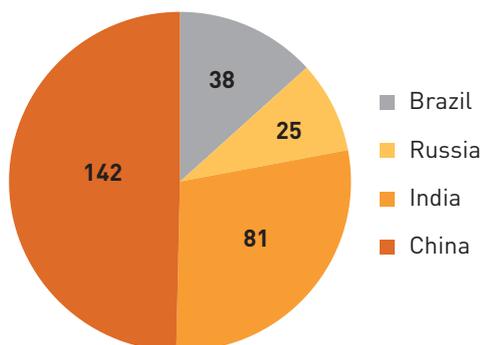
Source: the authors' calculations.

As we can see, most companies operate in the Chinese market and the smallest number of companies operate in the Russian market. The diversity of industry sectors in the Russian economy presented in the rating is the most meagre of the four countries. This may stem from the fact that the sustainable development concept has been developing in Russia recently. China and India have much more companies implementing it actively in their operations.

Hypotheses 1, 3, and 4 will be tested through the full selection. As long as the testing of Hypothesis 2 requires elimination from the selection of those companies not included in the RobecoSAM rating, it will be conducted using a separate sub-selection. This is necessary to reveal the influence of the rating score only on the financial performance of the companies in the rating.

Description of Variables and Descriptive Statistics

Before we proceed to our analysis of indicators of variables, let us consider the methodology for creating the sustainability rating.

As mentioned above, there are different methods of measuring corporate social responsibility. For our research, we chose the sustainability rating RobecoSAM as our CSR metrics system. RobecoSAM assigns points to companies from 0 to 100 based on whether their operations comply with those sustainable development parameters that influence company competitiveness. These comprise such indicators as the amount of hazardous waste per unit, participation in charitable endeavours and environmental projects, staff training costs, research and development, the percentage of women on the board of directors, support of minorities, the level of sustainable development information disclosure in the annual non-financial reports, and other information. The methodology applied to devising the rating is as follows. Over 7,500 companies across the globe take part in the annual corporate sustainability assessment (SAM) where they are evaluated against the criteria of CSR. Only those companies implementing CSR strategies as well as providing reports verified by an independent auditor are granted admittance to participation in the assessment. SAM considers industry characteristics, so the rating takes into account the specific character of the industry sector in which the company operates, and its susceptibility to CSR. This is one of the reasons that the rating was chosen: as long as the score initially reflects industry differences, the model will not be overloaded with variables (*Ranking | SAM Sustainability Yearbook*).

In order to verify hypotheses 1 and 2 we use the indicators of presence in the rating and the score assigned to the company, respectively, as explicative variables. To test Hypothesis 3, we chose the CSR information disclosure score (given to the company by analysis of the Bloomberg database) as an explicative variable. There are four kinds of such scores: the general disclosure score, and the scores related to disclosure of social, environmental and governance aspects. In this paper, where we are interested in more than a single component, the general disclosure score will be used in the model.

Descriptive Statistics

In this section we present descriptive statistics of the variables used in the analysis. To conducts a preliminary analysis, we provide descriptive statistics for the whole sample, and an analysis of indicators made separately for the companies included in the sustainable development rating, and for their competitors.

Table 1. Descriptive statistics, complete selection

	Number of observations	Mean	Standard deviation	Minimum	Maximum
ROA	1,716	.076	.077	−.49	.61
ROE	1,716	.014	.018	−1.07	1.23
Market cap (in millions of US dollars)	1,716	11,516.78	32,895.00	58.54	493,659.56
Rating	1,716	14,49	20,68	0	87
Assets (in millions of US dollars)	1,716	14,153.75	40,868.50	49.38	408,465.76

	Number of observations	Mean	Standard deviation	Minimum	Maximum
Leverage	1,716	1.48	3.74	–41.58	68.25
Growth rate (in %)	1,674	11	12	–149	99
ESG disclosure	1,394	30.57	15.24	0.83	72.73
Women on board (in %)	1,411	9.87	9.48	0	50

Source: the authors' calculations.

Table 1 above presents the descriptive statistics of the complete sample. There is a large spread of values for each indicator. For the variables of market capitalisation and total assets, this spread is explained by the diversity of the selection. We analysed large corporations and small companies because comparability of companies by size was not a precondition whenselecting. Also, well-marked differences in values are mitigated during analysis using transforming variables into logarithms.

ROA and ROE in the selection are alternatively positive and negative. Despite a wide spread between the minimum and maximum the mean values for both variables are positive: 7.5% for ROA and 14% for ROE, which is indicative of the selected companies' competitive ability and attractiveness for investors. The fact that return on equity is twice as large as the return on assets shows that on average, the companies from the selection use not only their equity capital, but borrowed funds as well (and it follows that the greater the borrowed funds, the higher the ROE and lower the ROA).

The financial leverage values confirm the assumption that companies from the selection have large amounts of borrowed funds. We use the ratio of borrowed funds to equity capital as the leverage variable. This ratio shows the extent to which a company finances its activity using borrowed funds (or its own funds) and is indicative of the ability of the equity capital to cover all undischarged debts in case of an economic crisis. The regulatory value for this variable is the interval from 1 to 2; however, the value depends on the industry sector capital intensity. For some sectors, this value may substantially exceed 2. In our case, we consider a wide spread between the minimum and maximum values of the financial leverage variable as the indicators related to the volatility of the markets we are analysing. A more detailed analysis of the selection showed that the majority of observations are in the interval of 0 to 10, and the threshold values of the variable are related to sudden drastic changes in the equity capital. As long as this data was collected from an official source and these values are not an error of measurement, we assume that they are related to external economic influences, or internal company challenges that have been subsequently resolved. Therefore, we decided not to eliminate these values as outlying data, and keep them in the analysis.

After we have considered the main control variables and analysed their values through the complete selection, we will compare descriptive statistics of two sub-selections:

companies included in the RobecoSAM rating, and their competitors not presented in the rating.

The main difference revealed in the two sub-selections relates to the mean values for the variables of market capitalisation and total assets. On average, the capitalisation of the companies in the rating is 5–6 times greater than that of their competitors not present in the rating. The second sub-selection of companies also comprises large companies, however their number is much smaller. The observed distribution of values confirms that large corporations are involved in CSR much more, and as long as they have more significant financial opportunities, they are more likely to meet the criteria of ratings agencies. Thus, even after preliminary analysis, we can assert that a larger company size contributes towards overcoming barriers to entry into the sustainability rating.

Figure 3 illustrates the dynamics of the financial leverage indicator for two sub-selections. The mean value of the rated is at the level of the indicator's standard value (equal to 1.5) while the competitor companies' values are subject to more significant variations (in the range of 0.85 to 2) with every year. Thus, we can draw the conclusion here that companies not presented in the rating are, on average, more subject to sudden changes in the capital structure.

Figure 3. Dynamics of mean values of the financial leverage for two sub-selections of companies: those that are rated, and their competitors

Source: the authors' calculations.

The mean values of return on assets for the companies from the rating are a little higher than those of the competitors, and both sub-selections show approximately the same dynamics of the indicator, which is represented in Figure 4.

Figure 4. Dynamics of mean values of return on assets for two sub-selections of companies: those that are rated, and their competitors
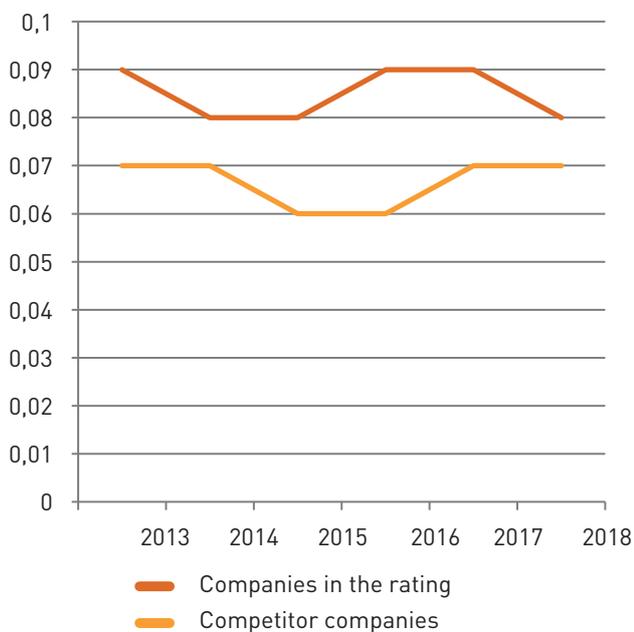
Source: author's own calculations.

Figure 5. Dynamics of mean values of return on equity for two sub-selections of companies: those that are rated, and their competitors
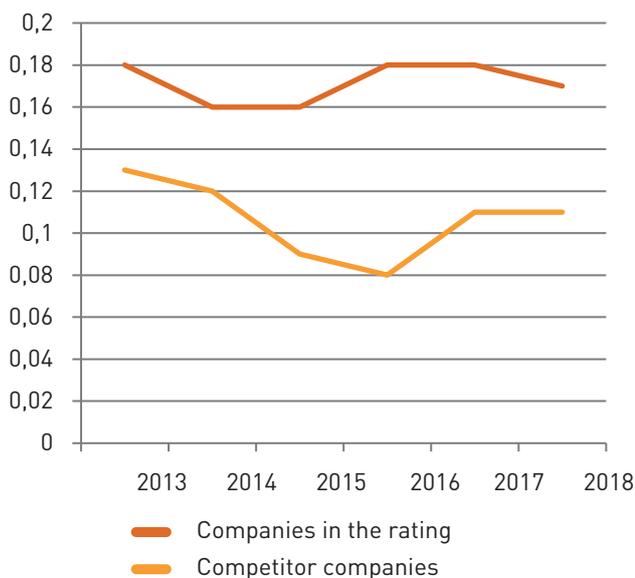
Source: the authors' calculations.

As for return on equity, this indicator is more volatile for competitor companies, and this may stem, as stated above, from drastic changes in the capital structure characteristics of less stable companies, especially in emerging markets (see the dynamics of the indicator in Figure 5). However, as a general

matter, we can draw the conclusion that companies presented in the rating show, on average, higher performance indicators and are less subject to changes in their capital structure.

Research Results

When verifying each hypothesis, we constructed three specifications of the model, which differ in dependent variables. This allows for evaluating which financial indicator is most subject to the influence of CSR metrics. In this chapter, all model specifications were assessed using three methods: pooled regression, regression with fixed effects, and regression with random effects. Based on these test results we chose the adequate models for verification of each hypothesis.

Hypothesis 1. The presence of a company in the sustainability rating influences its financial performance.

In order to verify this hypothesis, we need to establish whether a company yields better results than its competitors who are not included in the rating. For an explanatory variable to verify the hypothesis, we used a categorical variable of the company's presence in the rating, which is 1 or 0. As long as the variable of presence in the rating is time-invariant, it is impossible to assess its coefficients using the regression with fixed individual effects. For this reason, we constructed two models for each specification: the pooled one and the model with fixed effects. Before we interpret the assessment results, it is necessary to choose a more adequate model and test for potential problems, e.g. multicollinearity, heteroscedasticity, and autocorrelation. In order to choose from the two models, we conducted the Breusch-Pagan test, the zero hypothesis for which states that there is no random individual effect. We conducted the test for three models specifications and the zero hypothesis is rejected for each at a 1% significance level. This means that we choose the regression with random individual effects. The model is presented as follows:

$$ROA_{i,t} \, / \, ROE_{i,t} \, / \, Marketcap_{i,t} = \beta_0 +$$
$$+ \beta_1 \cdot CSRpresence_{it} + \beta_2 \cdot Total\_assets_{it} +$$
$$+ \beta_3 \cdot D \, / \, E_{ratio_{it}} + \beta_4 \cdot Growth\_rate_{it} + u_i + \varepsilon_{it} .$$

The next step involves testing for errors in the regression. In order to verify the regression for multicollinearity we calculated VIF coefficients (variance inflation factor). The factor values do not exceed the classical extreme value, which equals 6, which implies no multicollinearity in the model. In view of specific features of the selection (such as missing data), it is impossible to conduct tests for heteroscedasticity and autocorrelation and correct the model with fixed effects appropriately. Therefore, we assume that coefficient evaluations are not distorted.

See in Table 2 the results of three models specifications with random effects. It is impossible to assess the adequacy of the models with random effects using the determination coefficient (R^2) because they are evaluated by the generalised squares method. The fact that all three models show high values of the Wald statistic (over 2,000) is indicative of the models' adequacy and significance.

Table 2. Results of the random effects models assessment

	Market cap	ROA	ROE
CSR presence	0.6996***	0.3419***	0.3042***
Size	0.5383***	−0.0965***	−0.0665***
Leverage	−0.2385***	−0.3314***	0.0140
Growth	0.1448***	0.5546***	0.5748***
_cons	3.2135***	1.1874***	1.7462***
Number of observations	1,604	1,495	1,493
R^2	–	–	–

* p<0.05;** p<0.01;*** p<0.001.

Source: the authors' calculations.

It is evident that in all specifications, the variable of presence in the rating (CSR presence) is significant at a 0.1% significance level and has a positive effect on the financial performance variables. Therefore, the influence on return on assets and equity is approximately the same (0.3419 and 0.3042 respectively) while the influence of presence in the rating on market capitalisation is twice as much. This may stem *inter alia* from specific features of the used selection, namely a large capitalisation of companies in the rating, unlike that of the competitors. The corporate size and growth rate variables are significant in all specifications at a 0.1% significance level. However, the financial leverage variable does not influence on return on equity. The substantive interpretation of the models states that the presence of a company in the RobecoSAM rating has a positive impact on the corporate financial performance, especially on the amount of market capitalisation. Thus, the *hypothesis* of a positive influence of presence in the sustainable development rating on financial performance is *confirmed*.

Hypothesis 2. There is a relation between the sustainability rating score and corporate financial performance.

In order to verify this hypothesis, we used the sub-selection which comprises only those companies presented in the sustainable development rating. This is necessary to evaluate the distinct influence of the rating score on corporate financial performance. The major question is whether the rating leaders surpass companies with a lower score.

When verifying this hypothesis, we constructed three regressions for each model specification, and then conducted tests to make our choice. The Wald test, which zero hypothesis states that the model contains no unobservable individual effects, showed for all three dependent variables that the regression with fixed effects describes data better than the pooled regression. The Breusch-Pagan test indicates that we choose the letter between the pooled regres-

sion and regression with random effects. In order to make our choice between the models with fixed effects and random effects, we conducted the Hausman test and chose the regression with fixed effects.

The final model with fixed effects is as follows:

$$\frac{\frac{ROA_{i,t}}{ROE_{i,t}}}{Marketcap_{i,t}} = \beta_0 + \beta_1 \cdot CSR_{score_{it}} + \beta_2 \cdot Total\_assets_{it} +$$

$$+\beta_3 \cdot \frac{D}{E_{ratio_{it}}} + \beta_4 \cdot Growth_{rateit} + \beta_5 \cdot Diversity\ of\ board_{it} +$$

$$+u_i + \varepsilon_{it}.$$

Similarly, to the verification of Hypothesis 1, after choosing the adequate model, we conducted tests to reveal various errors in the model. VIF values for all three specifications are within the normal value, which is indicative of multicollinearity. We conducted the Wald test for heteroscedasticity, which was revealed foall three specifications. We also carried out the Wooldridge test for the first-order autocorrelation. We do not conduct the test for spatial autocorrelation because it may emerge only if the number of years exceeds the number of studied companies. The Wooldridge test showed autocorrelation in all specifications of the model. In order to eliminate these problems, we applied White's heteroscedasticity corrections and Rogers's adjustments for heteroscedasticity and autocorrelation. However, it is evident from Table 3 below that in spite of modifications, the coefficients of the variables preserve their significance levels and signs. Therefore, we can assume that the initial model with fixed effects appropriately evaluates the available data, and the existing errors do not change the evaluation results. So, we consider the model with fixed effects as the adequate one.

See the final results of the assessment below:

Table 3. Results of the assessment: rating score influence on financial performance

	Market cap	ROA	ROE
Rating	0.0093**	0.0097**	0.0078*
Size	0.7572***	–0.2597***	–0.1959***
Leverage	–0.1437***	–0.3005***	0.0147
Growth rate	0.1350***	0.4456***	0.4631***
Women on board	0.0106***	–0.0002	–0.0023
_cons	1.6278***	2.9584***	3.2523***
Number of observations	861	812	811
R²	0.3575	0.5430	0.5434

* p<0.05;** p<0.01;*** p<0.001.

Source: the authors' calculations.

Table 4. Results of thr assessment: the influence of the CSR information disclosure score on financial performance

	Market cap	ROA	ROE
ESG Disclosure	0.0062*	0.0074***	0.0074***
Size	0.6245***	–0.2091***	–0.1556***
Leverage	–0.2483***	–0.3080***	0.0087
Growth rate	0.1187***	0.5005***	0.5177***
Women on board	0.0065**	0.0005	–0.0013
_cons	2.7647**	2.2884***	2.6334***
Number of observations	1,295	1,206	1,204
R²	0.3076	0.5648	0.5664

* p<0.05;** p<0.01;*** p<0.001.

Source: the authors' calculations.

As we see from Table 3, neither a significant influence of diversity of the board of directors on return on assets and equity was found, nor the influence of the financial leverage variable on return on equity. The models show that the rating score has a minor positive impact on market capitalisation and return on assets at a 1% significance level, and even less influence on return on equity at a 5% significance level. The signs before control variables and their significance did not change compared to the model, which verifies Hypothesis 1. A substantive interpretation of the results states that in spite of a positive impact of the rating score on financial performance, a higher rating does not imply that a company will surpass the firms with a lower sustainable development rating score. Thus, the results partly confirm the proposed hypothesis on existence of the dependence between the rating score and financial performance.

Hypothesis 3. There is a positive relation between CSR information disclosure indicators and the company value.

The essence of this hypothesis is in the verification of the extent to which disclosure of the CSR information by a company in the annual non-financial reports influences financial performance. When we verified this hypothesis, we used the total score of CSR information disclosure as the dependent variable, assigned to each company by an analyst of the Bloomberg database. As long as the variable is time variant the choice of the model is similar to that of Hypothesis 2. Based on the Wald, Breusch-Pagan and Hausman tests we chose the model with fixed effects as the most adequate one. The final model is as follows:

$$\frac{\begin{array}{c}ROA_{i,t}\\ROE_{i,t}\end{array}}{Marketcap_{i,t}} = \beta_0 + \beta_1 \cdot ESG\,disclosure_{it} +$$

$$+ \beta_2 \cdot Total_{assets_{it}} + \beta_3 \cdot \frac{D}{E_{ratio_{it}}} + \beta_4 \cdot Growth_{rateit} +$$

$$+ u_i + \varepsilon_{it}.$$

VIF calculation revealed no multicollinearity in any of the specifications. We discovered the first-order autocorrelation and presence of heteroscedasticity by applying the White and Wooldridge tests. Similar to the verification of the previous hypothesis, we used the White correction and Rogers's adjustment. In a similar vein to the previous hypothesis, the assessment of models after correction did not influence the sign and significance of the coefficients with influence on ROA and ROE. The significance of the disclosure score coefficient in the specification with market capitalisation decreased to 5% when corrections were applied. Such results may indicate that errors in the model, where the dependent variable is market capitalisation, influence the results, and it is necessary to choose the model with corrections as the most adequate one. Consequently, the influence of the disclosure score on market capitalisation is of low significance. The results of the assessment of the final models are presented below in Table 4. We chose as the adequate model for specification with market capitalisation the model with White corrections, for ROA and ROE – the model with fixed effects without corrections.

The model assessment results show a significant but low influence of the disclosure score on return on assets and equity. This result is rather logically sound because a high level of information disclosure does not imply a high level of social responsibility. In our selection some companies have a disclosure score but have no score of the sustainable development rating. As discussed in the first chapter of this paper, disclosure may contain errors and distortions and therefore is not a reliable indicator as the rating score. Nevertheless, the obtained result confirms a higher financial performance of the companies with high disclosure than that of the companies without disclosure. However, a high information disclosure score does not entail rapid growth of return on capital.

At the same time, the influence of this indicator on market capitalisation is low and almost insignificant. This result may be interpreted substantively from the point of view

that the disclosure score is assigned to all companies which one way or the other have CSR, and disclose information about despite their size, publicity in mass media, or reputation in the society. Therefore, there is almost no influence of this score on the amount of capitalisation. Moreover, the signs of the control variables' coefficients and their significance in comparison to models (2) and (3) have not changed.

Thus, we can conclude that the hypothesis on the positive relation between the disclosure score and the company' s financial performance is not rejected.

Hypothesis 4. Cultural peculiarities of a country influence the relation between CSR rating assigned to a company and its financial performance.

To verify the hypothesis that influence of country's cultural peculiarities on the creation of the relation between the CSR rating and financial performance exists, we used model (3) as the base. So, we studied the connection between the rating score and financial performance. Since the model with fixed effects was considered the most adequate one when verifying Hypothesis 2, we applied it again. In order to define which dimensions of the Hofstede model influence the studied dependence, we added variables of the intersection of the rating score with each dimension of the cultural peculiarities' model. We will further consider the results of models assessment for each specification, taking into account the cultural dimension.

Influence on the Relation Between the Rating Score and Return on Assets

When verifying the hypothesis, we found the influence of two out of six dimensions on the model results where return on assets, power distance, and indulgence are the dependent variable. See in Table 5 the results of an assessment of the models with cultural dimensions and model (3) without considering cultural differences. It gives a graphical representation of how the influence of rating on ROA changed.

Table 5. Influence of cultural dimensions on the relation between CSR rating and return on assets assessment results

	No cultural dimension	Power Distance	Indulgence
Rating	0.0097**	−0.2353***	0.0395***
Size	−0.2597***	−0.1680***	−0.1789***
Leverage	−0.3005***	−0.3310***	−0.3216***
Growth rate	0.4456***	0.5092***	0.5082***
Women on board	−0.0002	0.0007	0.0005
c.Rating#c.Power_dist		0.0031***	
c.Rating #c.indulgence			−0.0011**
_cons	1.6278***	2.0250***	2.1445***
Number of observations	861	1,224	1,224
R²	0.3575	0.5731	0.5665

* p<0.05;** p<0.01;*** p<0.001.

Source: the authors' calculations.

It should be noted that when the power distance index was added to the basic model, the influence of the rating score on return on assets remained significant, but reversed its sign. The fact that the sign of influence of the CSR rating on financial performance reversed as a result of adding the power distance variable to the model may be indicative of the fact that a high level of hierarchy and bureaucratisation in the considered countries results in the situation that a company's rating score does not increase its competitive ability. This result is predictable in the case of emerging-economy countries. On the other hand, adding to the model the second dimension – indulgence level – altogether raised the influence of the rating score (from 0.0097 to 0.0384), and preserved the significance level. These results align with previous research considered in the literature review, which emphasises that a high level of

this dimension gives members of society a more positive view of prospects.

Influence on the Relation Between the Rating Score and Return on Equity

Similarly, let us consider the assessment results of the models in which the return on equity is the dependent variable. As in verifying previous hypotheses, we did not include the financial leverage variable in the model due to the absence of a significant influence on the regression explanatory power. As in the case with ROA, one by one we added to the basic model variables of the intersection of the rating score with cultural dimensions. The assessment results show that the relation between the rating and ROE is under the influence of the same two dimensions that impact on return on assets: power distance and indulgence.

Table 6. Results of assessment of influence of cultural dimensions on the relation between CSR rating and return on equity

	No cultural dimension	Power Distance	Indulgence
Rating	0.0078*	−0.2158***	0.0354***
Size	−0.1959***	−0.1104**	−0.1203**
Leverage	0.0147	−0.0130	-0.0045
Growth rate	0.4631***	0.5254***	0.5246***
Women on board	−0.0023	−0.0011	−0.0013
c.Rating#c.Power_dist		0.0028***	
c.Rating #c.indulgence			−0.0010**
_cons	3.2523***	2.3658***	2.4751***
Number of observations	811	1,222	1,222
R^2	0.5434	0.5707	0.5652

* $p<0.05$;** $p<0.01$;*** $p<0.001$.

Source: the authors's calculations.

It is evident from Table 6 that taking the influence of cultural differences into account in the model increases significance of the variable of the rating score. The power distance index has the same effect upon the relation between the rating score and ROE as the link between the rating and ROA. The substantive interpretation of the results states that the higher the power distance in a country, the less the influence of the company's presence in the sustainable development rating on its financial performance. The influence of indulgence is also similar to that of the previous dimension. The higher the country's score for this dimension, the stronger is the influence of the company's presence in the rating on return on equity.

The potential impact of cultural dimensions *on the relation between the rating score and market capitalisation* was verified by applying the same principle as for profitability ra-

tios. However, not a single dimension of the Hofstede cultural model showed a significant influence. For this reason, the results of corresponding regressions are not presented in this section. We conclude that there is no influence of cultural differences of countries on the creation of the relation between the RobecoSAM rating score and market capitalisation.

Thus, based on the analysis, we can conclude that the hypothesis of the influence of cultural differences on corporate financial performance is confirmed. Therefore, the results of the models align with previous papers. The power distance index has the most significant impact. This may stem from the following. If the index is high, the society accepts the hierarchy and bureaucracy of the governmental system, which gives rise to a weakening of personal responsibility. Weak personal responsibility, in its turn, re-

duces the importance of CSR for the society. Hence, the greater the power distance, the less the society members need and understand the CSR concept.

The fact that indulgence positively affect the relation between the rating score and profitability ratio may be attributable to the inverse logic. The freer members of society are to express their desires and interests, the greater each individual' personal responsibility for the implementation of such interests. It also shapes a more positive attitude to the future prospects of management and investors. This indirectly results in an easier integration of CSR strategies into conventional business operations.

Conclusions

Our analysis showed that despite the limitations caused by volatility and imperfection of emerging markets, CSR influences corporate financial performance, which is in line with the results of such authors as Cho et al. [10], Yan et al. [15] and Peng [33]. A company's presence in the CSR rating scale has a more substantial impact on profitability and market capitalisation indicators than the actual rating score itself. Therefore, we may postulate that investors and consumers perceive presence in the rating as a positive signal, while the response to the quantitative indicator of the rating is weaker. Also, based on a partial confirmation of Hypothesis 3 we can conclude that CSR information disclosure is not an indicator that defines corporate financial efficiency, although it has some impact on return on assets and return on equity.

Our research proves the conclusions of the Nina and Valdemar Smith and Nina Metter Verner, that had the proportion of women in top management jobs tends to have positive effects on firm performance. The presence of women on the board of directors showed no significant influence on profitability indicators; however, a slight positive effect of this indicator on the amount of market capitalisation was discovered.

Adding cultural differences to the model revealed the influence of two out of six dimensions on the relation between the CSR rating score and profitability indicators. Our analysis showed that a high level of power distance, which entails such problems as a complex hierarchical governmental system, corruption, reduction of personal responsibility, and acceptance of centralised authority, all harm the relation between the rating score and financial performance. When power distance dimension was added to the model, the sign of the coefficient of the rating score variable changed from positive to negative. The second dimension, which influences the studied dependence, is indulgence. As mentioned above, a high score of this dimension characterises members of society as positive-minded and able to satisfy their need for joy and fun. Such behaviour entails a calmer perception of the future and an ability to have a positive attitude towards changes. Therefore, the obtained result, represented by a positive influence of this dimension on the relation between CSR and profitability indicators, is expected and logically sounds. Thus, all the hypotheses we have proposed were entirely or partially confirmed (none were rejected).

The available corporate sustainability reporting guidelines, even the best ones, still have some lacks concerning non-financial coefficients disclosure. We sure that need to test more non-financial indicators on the corporate financial performance. We actively look for the new inter-linking issues and dimensions between CSR and income, in order to gain new insights with a view to reducing conflicts among issues.

Acknowledgements

Abbreviations used in the Study:

CSR – corporate social responsibility;

GICS – global industry classification standards of Bloomberg;

SDG – sustainable development goals;

ROA – return on assets;

ROE – return on equity;

Tobin's Q – measures whether a firm or an aggregate market is relatively over- or undervalued.

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Appendixes

Appendix 1. Breakdown of Companies by Countries

Country	Brazil	Russia	India	China	Total
Communication services	2	2	3	15	**22**
Discretionary consumer goods	5	1	8	30	**44**
Fast-moving consumer goods	4	3	10	7	**24**
Power industry	2	6	3	8	**19**
Health care	4	0	20	9	**33**
Industry	4	2	8	25	**39**
Materials	7	6	19	26	**59**
Information technology	0	0	6	16	**22**
Utilities	10	5	4	6	**25**
Total	38	25	81	142	286

Appendix 2. Description of Variable

Variable	Description	Resource
Ln_markcap	Natural logarithm of corporate market capitalisation	Bloomberg
Ln_roa	Natural logarithm of return on assets (net profit/total assets)	Bloomberg
Ln_roe	Natural logarithm of return on equity (net profit/equity)	Bloomberg
CSR presence	Presence of a company in the RobecoSAM rating	Bloomberg
Rating	Score assigned to a company by the RobecoSAM rating	Bloomberg
ESG disclosure	General score of CSR information disclosure assigned by Bloomberg analysts	Bloomberg
Size	Natural logarithm of corporate total assets	Bloomberg
Leverage	Natural logarithm of corporate financial leverage (long-term liabilities/equity)	Bloomberg
Growth rate	Corporate profit growth rate	Bloomberg
Women on board (div_board)	Percentage of women on the board of directors	Bloomberg
Power_dist	Power distance index	Hofstede insights
Indulgence	Indulgence	Hofstede insights