

St. Petersburg University
Graduate School of Management



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Board composition and CSR disclosure impact on company performance: Evidence from the Banking industry

Master Thesis by the 2nd year student
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ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ

Я, Толоконников Илья Владиславович, студент второго курса магистратуры направления «Менеджмент», заявляю, что в моей магистерской диссертации на тему «*Влияние состава совета директоров и раскрытия информации о КСО на результаты деятельности компании: доказательства из банковской отрасли*», представленной в службу обеспечения программ магистратуры для последующей передачи в государственную аттестационную комиссию для публичной защиты, не содержится элементов плагиата.

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05.06.2020

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05.06.2020

АННОТАЦИЯ

Автор	Толоконников Илья Владиславович
Название ВКР	Влияние состава совета директоров и раскрытия информации о КСО на результаты деятельности компании: доказательства из банковской отрасли
Образовательная программа	Менеджмент
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Научный руководитель	Арай Юлия Николаевна
Описание цели, задач и основных результатов	<p>Цель исследования – выявить влияние состава совета директоров на финансовые и нефинансовые результаты компании с помощью посреднического фактора раскрытия информации о КСО.</p> <p>Задачи:</p> <ol style="list-style-type: none"> 1. Обосновать актуальность исследования; 2. Разработать концептуальную модель; 3. Определить подходящий исследовательский подход, включая сбор данных и анализ данных; 4. Проверить модель на основе эмпирического исследования; 5. Предложить рекомендации для исследователей по дальнейшему развитию темы и для практиков по подходам к раскрытию информации о КСО и составу совета директоров. <p>Основные результаты: Нелинейная модель PLS-SEM, построенная с помощью WarpPLS 6.0, подтвердила несколько гипотез:</p> <ol style="list-style-type: none"> 1. Количество членов совета директоров негативно влияет на раскрытие информации о КСО в отношении окружающей среды и услуг; 2. Количество женщин в совете директоров положительно влияет на раскрытие информации о КСО (в отношении окружающей среды, работников и услуг); 3. Раскрытие информации о КСО в отношении услуг положительно влияет на финансовые результаты; 4. Раскрытие информации о КСО в целом и в частности услуг положительно влияет на нефинансовые результаты; 5. Количество женщин в совете директоров положительно влияет на нефинансовые показатели через посреднический эффект раскрытия информации о КСО. <p>Были даны рекомендации для академического сообщества и бизнеса.</p>
Ключевые слова	Совет директоров; состав совета директоров; КСО; раскрытие информации о КСО; влияние; банк; банковская отрасль

ABSTRACT

Master Student's Name	Tolokonnikov Ilia
Master Thesis Title	Board Composition and CSR Disclosure Impact on Company Performance: Evidence from the Banking Industry
Educational Program	Management
Main field of study	Management
Year	2020
Academic Advisor's Name	Aray Yulia N.
Description of the goal, tasks and main results	<p>The goal of the research is to identify the effects of board composition on company financial and non-financial performance via mediating factor of CSR disclosure.</p> <p>Tasks:</p> <ol style="list-style-type: none"> 1. Justify the relevance of the study; 2. Develop a conceptual model; 3. Identify the proper research approach including data collection and data analysis; 4. Verify the model based on an empirical study; 5. Suggest recommendations for researchers on further development of the topic and for practitioners on approaches to CSR disclosure and board composition. <p>Main results:</p> <p>Non-linear PLS-SEM model was built via WarpPLS 6.0 and proved several hypotheses:</p> <ol style="list-style-type: none"> 1. Size of the board negatively influences CSR disclosure regarding environment and services; 2. Number of women on board positively influences CSR disclosure (regarding environment, employees and services); 3. CSR disclosure regarding services positively influences financial performance; 4. CSR disclosure in general and specifically regarding services positively influences non-financial performance; 5. Number of women on board positively influences non-financial performance via mediating effect of CSR disclosure. <p>Recommendations for academic and business communities were given.</p>
Keywords	Board; board composition; CSR; CSR disclosure; impact; bank; banking industry

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Introduction

The topic of Corporate Social Responsibility (CSR) has become one of the most discussed by management science in the first decades of XXI century. The growing interest is based on changes of business models and viewing of CSR as a source of a competitive advantage, which a company can gain to successfully compete on a market (Blagov, 2015). However, just adopting even the best CSR practices themselves cannot guarantee success to those adopters, and that is why it is important to have a right CSR portfolio and the right extent and depth of CSR disclosure.

CSR disclosure is the information that a company discloses about its environmental impact and its relationship with its stakeholders by means of relevant communication channels (Campbell 2004; Gray et al. 2001). In this research the main focus of CSR disclosure is content disclosed: its volume and meaning.

Relevance of the study

The study is relevant due to three reasons. First of all, during crisis times people expect from business more than during good times, and correct communication with people, who are often the customers, is vital. Right extent of CSR disclosure can help to maintain good relationships with customers and investors, therefore mitigating losses or even improving financial performance.

Secondly, composition of board of directors is a quite popular research topic now. There are many studies proving that diversity among members of board of directors brings significant improvements in company's performance. Therefore, board composition is a tool that can help a company to improve its performance, and the more researches are done in this field the more accurate tool board of directors becomes.

Finally, from the point of view of risk management, expectations of stakeholders and investment decision-making, cost minimization is always an issue in business. Knowing how and where the costs can be reduced without losing or even improving performance is critical to any business. Therefore, right spending on CSR and its further disclosure, which depends on board composition, can help companies to survive crisis times and prosper.

Goal and objectives

The goal of the research is to identify the effects of board composition on company financial and non-financial performance via mediating factor of CSR disclosure. This goal can be reached via completing the following objectives:

1. To justify the relevance of the study;
2. To develop a conceptual model;
3. To identify the proper research approach including data collection and data analysis;
4. To verify the model based on an empirical study;

5. To suggest recommendations for researchers on further development of the topic and for practitioners on approaches to CSR disclosure and board composition.

Subject of the research is the effect of board of directors' composition on bank's performance via CSR disclosure extent. Object of the research is largest world banks by assets in 2018 financial year.

Research gap and research question

While there are many studies about board and CSR activities and disclosure relationships as well as board and performance, CSR disclosure and performance, there is still a little number of researches that studies mediating effect of board composition on performance via CSR disclosure, what can be beneficial for both companies and academics.

Therefore, research question of this work is how does board composition and CSR disclosure influence company performance (financial and non-financial) in the banking industry? In order to answer this research question, the following research hypotheses are made:

H1: Size of the board negatively influences CSR disclosure.

H2: Number of women on board positively influences CSR disclosure.

H3: CEO duality positively influences CSR disclosure.

H4: CSR disclosure positively influences financial performance.

H5: CSR disclosure positively influences non-financial performance.

H6: Size of the board negatively influences financial performance via mediating effect of CSR disclosure.

H7: Number of women on board positively influences financial performance via mediating effect of CSR disclosure.

H8: CEO duality positively influences financial performance via mediating effect of CSR disclosure.

H9: Size of the board negatively influences non-financial performance via mediating effect of CSR disclosure.

H10: Number of women on board positively influences non-financial performance via mediating effect of CSR disclosure.

H11: CEO duality positively influences non-financial performance via mediating effect of CSR disclosure.

1. Theoretical analysis of the influence of board of directors' composition and CSR disclosure on company performance

In this chapter main concepts that are used in this research paper will be clearly defined and analyzed, and current studies on the topic discussed and critically assessed. First of all, researches regarding board composition, its characteristics and influence on company performance will be analyzed. Secondly, corporate social responsibility (CSR) and CSR disclosure will be defined and studied. Finally, conceptual model of the research will be built.

1.1 Board of directors and its impact on company performance

Corporate governance scandals over last few decades and strong demand for accountability and transparency created a great ground for many researches about corporate governance, role of board of directors and board's composition. In this sub-chapter, main direction of researches related to corporate governance with regard to board composition is going to be studied.

1.1.1 Introduction to board of directors

Corporate governance is the system of rules, practices, and processes by which a firm is directed and controlled (Investopedia, 2019). Corporate governance is aiming to balance the interests of company's stakeholders and encompasses every sphere of management. The primary part of corporate governance, that has influence on it, is the board of directors.

A board of directors is a group of individuals elected to represent shareholders or appointed by other board members (Investopedia, 2019). Every public company must have a board of directors, however, some private and non-profit companies have it as well. The main tasks of board of directors include: corporate officer appointments, executive compensation, and dividend policy.

Legislation often requires to have inside and independent members within board of directors. Inside representatives could be major shareholders, founders or executives. Independent directors do not have any ties with the company; usually, they are chosen because of their experience in particular field.

Overall, board of directors as a part of corporate governance can be depicted the following way (see Figure 1.1):

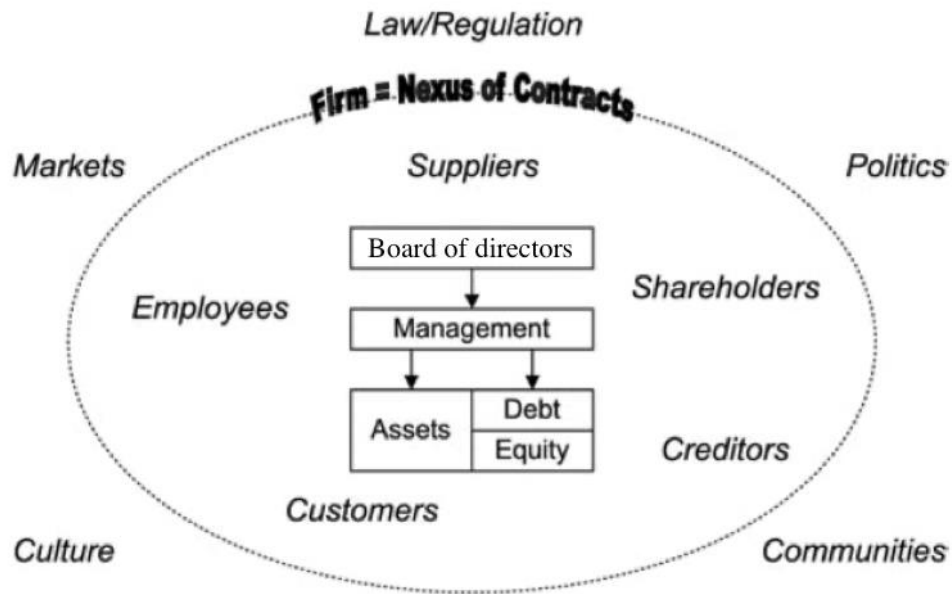


Figure 1.1 Corporate governance
Source: (Gillan, 2006)

1.1.2 Board of directors and its role in a company

Boards of directors have been the subject of extensive conceptualization and empirical research in recent years (Pugliese et al., 2009). Recent literature on boards is basically empirical and focuses on three main questions: (1) the size of the board; (2) its composition and independence; and (3) its internal structure and functioning.

The main results of each research direction are the following: (1) negative influence of board size on firm value, (2+3) the uncertain effect of board independence on firm value and a certain endogenous relationship among director turnover, board features and firm performance.

The relative volume of research devoted to the different board roles reflects the predominance of the control role. Moreover, the academic perspectives relevant to control are particularly wide-ranging, including those of the legal, management, and finance literatures (Johnson, Daily & Ellstrand, 1996).

Researches regarding the ability to fulfill the control role have focused on the role of board composition and amount of independent and dependent members of the board. Directors who are potentially influenced by the CEO vis-a-vis personal, professional, and/or economic relationships may be less effective monitors of firm management. Board decisions are typically decided by majority rule; therefore, it is expected that boards with majority of independent members are more effective in monitoring than are boards with higher proportions of dependent directors (Johnson, Daily & Ellstrand, 1996).

According to (Jizi, 2017), female participation on boards is favorably affecting CSR engagement and reporting as well as the establishment of ethical policies. There are quite many

researches finding that diversity on board of directors brings improvements to company performance or company's CSR activities and their disclosure. However, there are no researches on mediating effect of board of directors' composition on financial and non-financial performance via CSR disclosure (see Table 1.1).

Table 1.1 Relationships studied

Relationship	Studied
Board of directors → Company performance	Yes
Board of directors → CSR activities	Yes
Board of directors → CSR disclosure	Yes
CSR activities → Company performance	Yes
CSR disclosure → Company performance	Yes
Board of directors → CSR disclosure → Company performance	Underexplored

[Source: made by author]

Therefore, studying of such relationship can be beneficial both for academics and business, because in case of success it can provide working frameworks for further research in management science and help business to cut the costs by investing only in the most beneficial aspects of CSR and its disclosure.

Board of directors' characteristics

Among the typical board of directors' characteristics studied in the researches, there are the following (see Table 1.2).

Table 1.2 Board characteristics

Characteristics	Authors
Size of the board	(Jizi, 2017), (Khan, 2010)
Board independence (number of independent directors)	(Jizi, 2017), (Rao, 2016), (Sundarasan, 2015)
CEO duality (CEO of a company is a chairman of its board)	(Jizi, 2017), (Sundarasan, 2015)
Presence of women (number of women on board)	(Jizi, 2017), (Khan, 2010), (Rao, 2016), (Sundarasan, 2015)
Number of non-executive directors	(Khan, 2010), (Sundarasan, 2015)
Number of foreigners	(Khan, 2010), (Rao, 2016)

[Source: made by author]

While some characteristics are quite easy to identify – size of the board, CEO duality, number of women on board – some characteristics are poorly disclosed sometimes, namely they are: board independence, number of non-executive directors and number of foreigners. Therefore, in this research board size, CEO duality and number of women are going to be taken as independent variables.

1.1.3 Board of directors' influence on CSR and its disclosure

As it was mentioned in Table 1.1, studies on relationship of board of directors and CSR activities as well as CRS disclosure exist. (Rao, Tilt, 2016) made a meta-analysis on these topics and found the following researches (see Table 1.3).

Table 1.3 Empirical studies on the effect of board attributes on various types of disclosure, including CSR Reporting (CSRR)

Author	Aim The major aim of the study was to investigate	Method Indicates whether the study is quantitative or qualitative	Board variables The various board attributes included in the study	Findings Indicates whether the relationship is positive (+ve), negative (-ve) or not significant (Not sig)
(Haniffa and Cooke 2005)	Impact of culture and governance on corporate social disclosure (Malaysia)	Quantitative (regression)	1) Non-executive 2) Chair with multiple directorships	1) -ve 2) +ve
(Barako and Brown 2008)	Influence of board representation on CSR reporting (Kenya)	Quantitative (regression)	1) Women directors 2) Independence 3) Foreign nationals	1) +ve 2) +ve 3) Not sig
(Htay et al. 2012)	Governance effect on Social and environmental disclosure (Malaysia)	Quantitative (regression)	1) Board size 2) Independence 3) Board ownership 4) Institutional ownership	1) -ve 2) +ve 3) +ve 4) -ve
(Lorenzo et al. 2009)	Link between characteristics of the board and CSR reporting	Quantitative (regression)	1) Independence 2) Diversity 3) Board activity 4) Chairman reputation	1) +ve 2) +ve 3) Not sig 4) Not sig
(Said et al. 2009)	Relationship between CG characteristics and CSR disclosure (Malaysia)	Quantitative (regression)	1) Board size 2) Audit committee 3) Board independence 4) Government ownership 5) CEO duality	1) Not sig 2) +ve 3) Not sig 4) +ve 5) Not sig
(Khan 2010)	Potential effects of CG elements on CSR disclosure (Bangladesh)	Quantitative (regression)	1) Women directors 2) Non-executives 3) Foreign nationals	1) Not sig 2) +ve 3) +ve
(Ghazali 2007)	Influence of ownership structure on CSR reporting (Malaysia)	Quantitative	Director share ownership	-ve
(Fernandez-Feijoo et al. 2012)	Effect of board gender composition on CSR reporting (22 countries included in KPMG report)	Quantitative	Gender composition	+ve
(Chen and Van Staden 2010)	Relationship between CG and the environmental information disclosure quality (China)	Quantitative (regression)	1) Frequency of director meeting 2) Board independence	1) +ve 2) +ve
(Rao et al. 2012)	Relationship between CG attributes and environmental reporting (Australia)	Quantitative (regression)	1) Independent director 2) Institutional ownership 3) Women directors 4) Board size	1) +ve 2) +ve 3) +ve 4) +ve
(Prado-Lorenzo and Garcia-Sanchez 2010)	Role of the board in disseminating greenhouse gas information disclosure (Global)	Quantitative	1) Board independence 2) Board diversity	1) Not sig 2) Not sig

Author	Aim The major aim of the study was to investigate	Method Indicates whether the study is quantitative or qualitative	Board variables The various board attributes included in the study	Findings Indicates whether the relationship is positive (+ve), negative (-ve) or not significant (Not sig)
(Kent and Monem 2008)	Explanation for companies adopting TBL (Triple Bottom Line) reporting (Australia)	Quantitative (regression)	1) Audit committee meeting 2) Environmental and sustainability committee	1) +ve 2) +ve
(Donnelly and Mulcahy 2008)	Relationship between CG and voluntary disclosure (Ireland)	Quantitative	1) Non-executive 2) Non-exec chairman 3) Ownership	1) +ve 2) +ve 3) Not sig
(Eng and Mak 2003)	Impact of board composition on voluntary disclosure (Singapore)	Quantitative (regression)	1) Board Independence 2) Board share ownership	1) -ve 2) -ve
(Ho and Wong 2001)	Relationship between CG structure and the extent of voluntary disclosure (Hong Kong)	Quantitative (regression)	1) Independence 2) Audit committee 3) CEO duality 4) Family board member	1) Not sig 2) +ve 3) Not sig 4) -ve
(Chau and Gray 2010)	Relationship between CG and the extent of voluntary disclosure (Hong Kong)	Quantitative (regression)	1) Family ownership 2) Independent chairman	1) +ve 2) +ve
(Cheng and Courtenay 2006)	Association between board attributes and level of voluntary disclosure (Singapore)	Quantitative (regression)	1) Board size 2) CEO duality 3) Independence	1) Not sig 2) Not sig 3) +ve
(Huafang and Jianguo 2007)	Effect of board composition on voluntary disclosure (China)	Quantitative (regression)	1) Ownership 2) Independence 3) CEO duality	1) +ve 2) +ve 3) -ve
(Amran et al. 2013)	Role of the board in sustainability reporting quality (Asia Pacific Region)	Quantitative (regression)	1) Board size 2) Independence 3) Women directors	1) Not sig 2) Not sig 3) Not sig
(Jizi et al. 2013)	Role of the board on the quality of CSR disclosure (US)	Quantitative (regression)	1) Board size 2) Independence 3) CEO duality	1) +ve 2) +ve 3) +ve
(Liao et al. 2014)	Impact of board's characteristics on voluntary disclosure of greenhouse gas emission (UK)	Quantitative (regression)	1) Women directors 2) Independence	1) +ve 2) +ve

[Source: Rao, Tilt, 2016]

As it can be seen, there is at least 21 researches that studied influence of board of directors on CSR activities and extent of CSR disclosure. All of them are made in 21st century, and 10 of them were conducted less than 10 years ago. However, the results of all the works are interesting for current research and sometimes are controversial, what highlights the importance to conduct the research in this field in one more industry.

1.1.4 Conclusion

It can be concluded that corporate governance is mainly depended on board composition and many researches show interdependence between board composition and its success. As corporate governance is a system that should balance stakeholders' interests, not only economic, but also social (Buchholtz, Brown & Shabana, 2009), it is assumed that adoption of CSR practices in companies could also relate to characteristics of board composition. In the research the following board of directors' characteristics will be taken as independent variables: board size, CEO duality and number of women on board.

1.2 CSR disclosure and its impact on company performance

In this sub-chapter, firstly, CSR definitions will be given and analyzed. Secondly, CSR disclosure definitions, forms and characteristics will be presented. Thirdly, CSR disclosure impact on financial and non-financial performance will be analyzed.

1.2.1 CSR definition

CSR is quite a new field of management science, and, unfortunately, does not have one clear definition yet. As a result, there are a lot of researches and approaches, who define CSR in their own ways. Therefore, the most important definitions are presented below in the historical order (see Table 1.4).

Table 1.4 CSR definitions

Authors	Definition
(Bowen, 1953)	"The obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action, which are desirable in terms of the objectives and values of our society"
(Friedman, 1962)	"The social responsibility of business is to increase its profits"
(McGuire, 1963)	"Corporation has not only economic and legal obligations, but also certain responsibilities to society which extend beyond these obligations"
(Carroll, 1979)	"Social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time"
(Holme, L., Watts, R., 2001)	"The continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large"
(United Nations Industrial Development Organization, 2019)	"A management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders"
(ISO 26000, 2010)	"The responsibility of an organization for the impacts of its decisions and activities on society and the environment, resulting in ethical behavior and transparency which contributes to sustainable development, including the health and well-being of society; takes into account the expectations of stakeholders; complies with current laws and is consistent with international standards of behavior; and is integrated throughout the organization and implemented in its relations"

[Source: made by author]

As it can be seen, the definition by ISO 26000 is the most comprehensive and focuses on two the most important aspects of CSR: social impact and environmental impact. Therefore, in this research definition of CSR by ISO 26000 will be used, if nothing else is stated.

Also, it is important to highlight that as any tool, benefits of using the tools must be higher than the costs associated with using of it. CSR is not an exception. This can be depicted the following way (see Figure 1.2):

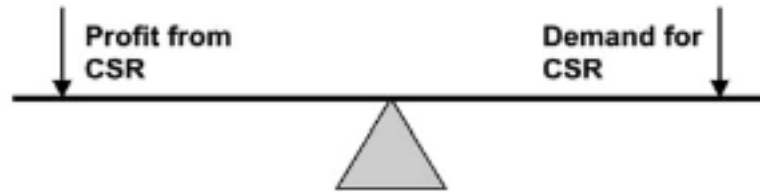


Figure 1.2 Key CSR equilibrium
[Source: McWilliams, Siegel, 2001]

1.2.2 CSR disclosure

CSR disclosure is the information that a company discloses about its environmental impact and its relationship with its stakeholders by means of relevant communication channels (Campbell 2004; Gray et al. 2001). This definition correlates with definition of CSR by ISO 26000 quite well, so it will be used in the further work. In this research the main focus of CSR disclosure is content disclosed: its volume and meaning.

As business information, CSR disclosure should be communicated in effective way. It should be clear, concise, factual and persuasive. To meet these criteria, various standards for CSR reporting were created. In this work some of the most important standards are presented.

CSR Standards

AccountAbility – AccountAbility’s AA1000 Series of Standards – is a global consulting and sustainability standards firm that works with businesses, governments and multilateral organizations to advance responsible business practices and improve long-term performance. Since 1995, AccountAbility has been supporting corporations, nonprofits and governments in embedding ethical, environmental, social and governance accountability in their organizational DNA. AA1000 is an internationally accepted, principles-based framework and guidance that organizations can use to identify, prioritize and respond to sustainability challenges to improve long-term performance. Standards are founded on the following principles:

- Inclusivity – People should have a say in the decisions that impact them.
- Materiality – Decision makers should identify and be clear about the sustainability topics that matter.
- Responsiveness – Organizations should act transparently on material sustainability topics and their related impacts.

- Impact – Organizations should monitor, measure and be accountable for how their actions affect their broader ecosystems (Accountability, 2018).

GRI (Global Reporting Initiative) is an independent international organization that has pioneered sustainability reporting since 1997. *GRI* helps businesses and governments worldwide understand and communicate their impact on critical sustainability issues such as climate change, human rights, governance and social well-being. This enables real action to create social, environmental and economic benefits for everyone. The *GRI* Sustainability Reporting Standards are developed with multi-stakeholder contributions and rooted in the public interest (*GRI*, 2019).

ISO 26000 provides guidance on how businesses and organizations can operate in a socially responsible way. This means acting in an ethical and transparent way that contributes to the health and welfare of society (*ISO 26000*, 2019). *ISO*'s principles are represented in the table below (see Table 1.5).

Table 1.5 *ISO 26000* Core Subjects and Issues

Core subjects	Issues
Organizational governance	N/A
Human rights	1) Due diligence
	2) Human rights risk situations
	3) Avoidance of complicity
	4) Resolving grievances
	5) Discrimination and vulnerable groups
	6) Civil and political rights
	7) Economic, social and cultural rights
	8) Fundamental principles and rights at work
Labour practices	1) Employment and employment relationships
	2) Conditions of work and social protection
	3) Social dialogue
	4) Health and safety at work
	5) Human development and training in the workplace
The environment	1) Prevention of pollution
	2) Sustainable resource use
	3) Climate change mitigation and adaptation
	4) Protection of the environment, biodiversity and restoration of natural habitats
Fair operating practices	1) Anti-corruption
	2) Responsible political involvement
	3) Fair competition
	4) Promoting social responsibility in the value chain
	5) Respect for property rights
Consumer issues	1) Fair marketing, factual and unbiased information and fair contractual practices
	2) Protecting consumers' health and safety
	3) Sustainable consumption

Core subjects	Issues
	4) Consumer service, support, and complaint and dispute resolution
	5) Consumer data protection and privacy
	6) Access to essential services
	7) Education and awareness
Community involvement and development	1) Community involvement
	2) Education and culture
	3) Employment creation and skills development
	4) Technology development and access
	5) Wealth and income creation
	6) Health
	7) Social investment

[Source: based on (ISO 26000, 2010)]

As it can be seen, there are several forms of CSR reporting available for business. Some of them are more popular than other, but a company can also use its own method of CSR reporting and disclosure in annual reports. Also, several frameworks for CSR disclosure exist, and the most famous ones are presented below.

CSR frameworks

Grenelle Act II – the French framework made by French government. It includes 42 components in 19 sub-categories and in 3 general categories. Three general categories are (1) Social reporting, (2) Environmental reporting and (3) Sustainability reporting.

CSRRI – Corporate Social Responsibility Reporting Index – is a tool used in several studies (Khan, 2010; Shafir, 2014) in order to evaluate companies' CSR disclosure extent. It looks like the following: $CSRRI = \sum d_i^x / n_j$, where d_i is the 1, if the item d_i is disclosed and 0 if the item d_i is not disclosed, n_j is the maximum number of items for j th firms $n_j \leq x$, x – number of characteristics. (Khan, 2010) and (Shafir, 2014) used 59 characteristics in 7 general categories: (1) Contribution to health sector, (2) Contribution to education sector, (3) Activities for natural disaster, (4) Other donations, (5) Activities for employees, (6) Environmental issues, (7) Product/service/statements.

AECA's integrated scorecard – the Spanish framework made by Spanish accounting and business administration association. It includes 26 characteristics in 3 general categories: (1) Environmental indicators, (2) Social indicators, (3) Corporate governance indicators.

Therefore, it can be seen that the most reported categories and environmental and social impact. In some cases, social impact is also considered towards company's employees.

Quantitative and qualitative CSR disclosure studies

CSR disclosure studies can be divided into two general categories based on methods how extent of disclosure is studied. The majority of research analyzed uses measures of CSR reporting

quantity, e.g., counting the words or sentences, or checklists with a simple unweighted coding of zero (no disclosure of a special item) and one (disclosure of a special item). This strategy is dominant because of the easy practice and the limitation of bias problems and subjectivity (Velte, 2017).

Empirical research on CSR reporting *quality* is not very common in view of the increased resources of analysis and the bias problem. As there is a lack of objective quality measures for CSR reporting, a variety of methods was used in former studies. Some researchers rely on external ratings to increase the reliability of the measures (Velte, 2017). The researcher creates rating itself or takes it somewhere else and tries to analyze the CSR reports.

In this work a combined method of CSR disclosure extent evaluation is going to be used. The rating system with clear quantifiable meanings (number of sentences, presence of tables, pictures) will be created and the researcher will evaluate the content depending on the meaning (general words or specific information).

1.2.3 CSR disclosure and company performance

CSR is considered as a competitive advantage of the firm, so it should have an impact on company's performance. CSR disclosure is also an instrument that in case of right and effective communication can help an organization to gain a competitive advantage, increasing its performance, both financial and non-financial.

Impact of CSR disclosure on financial performance of firm was studied in the following researches: (Gallardo-Vázquez, 2014) and (Bernal-Conesa, 2017). The positive correlation was between CSR disclosure extent and several indicators: Revenue (Sales), Return on Assets (ROA) and Profitability (ROE). Among non-financial performance there was a positive correlation with Reputation (Famiyeh, 2016). The most used financial indicators are presented below (see Table 1.6).

Table 1.6 Financial indicators

Financial indicators	Authors
Profitability (ROE)	(Bernal-Conesa, 2017), (Famiyeh, 2016), (Jizi, 2017), (Khan, 2010), (Rao, 2016), (Said, 2009), (Shafir, Rashid, 2014), (Sundarasan, 2015)
Revenue (Sales)	(Bernal-Conesa, 2017), (Famiyeh, 2016), (Ionel-Alin, 2012)
Return on Assets (ROA)	(Jizi, 2017), (Said, 2009)
Return on Investments (ROI)	(Famiyeh, 2016)
Market share	(Famiyeh, 2016), (Bernal-Conesa, 2017)

[Source: made by author]

Therefore, in this research Profitability (ROE), Revenue (Sales) and Return on Assets (ROA) will be used in order to measure financial performance of the banks. Regarding non-financial performance indicators, reputation is used in several studies as an indicator. In this

research, brand rating as a benchmark of reputation will be used (in the following chapter it will be discussed in details).

1.2.4 Conclusion

It can be concluded that CSR disclosure can help a firm to gain competitive advantage and improve its financial and non-financial performance. While there are many CSR disclosure concepts and frameworks, there is still a question with indicators for measurement in general fields of social and environmental disclosure.

Moreover, while CSR disclosure on financial performance has been widely studied, quite a few researches focus on CSR disclosure and non-financial performance, using a vague indicator of reputation. Therefore, it is interesting to study a mediating role of CSR disclosure between board of directors' composition and companies' performance both financial (ROE, ROA, Sales) and non-financial.

1.3 Research model

In this sub-chapter, first of all, research model structure will be defined. Secondly, research hypotheses will be explained and stated. Thirdly, conceptual model of the research will be provided.

1.3.1 Research model structure

As it was mentioned in Figure 1, studies on relationship of board of directors, which is part of corporate governance, and CSR activities exist. (Rao, Tilt, 2016) made a meta-analysis on this topic and found the following researches (see Table 1.7).

Table 1.7 Studies on the link between Corporate Governance (CG)/board of directors and CSR

Author	Aim The major aim of the study was to investigate	Method Indicates whether the study is quantitative or qualitative	Corporate governance (CG) variables The various CG/board attributes included in the study	Findings Indicates whether the relationship is positive (+ve), negative (-ve) or not significant (Not sig)
Jamali et al. (2008)	Interrelationships between CG and CSR (Lebanon)	Qualitative (interviews)	CG	+ve (CG - necessary pillar for CSR)
Ingle (2008)	Board's attitude towards CSR (New Zealand)	Qualitative + quantitative (focus groups, discussion sessions and survey)	Board's attitude to CSR	-ve
Rose (2007)	Personal ethics and CSR at board level (US)	Experimental study	Directors' decisions: 1) Shareholder value/ law 2) Personal ethics/ CSR	1) +ve 2) -ve
Wise and Mahboob Ali (2008)	Link between CG and ethical business processes (CSR) (Bangladesh)	Qualitative (case studies)	Overall corporate governance	+ve

Author	Aim The major aim of the study was to investigate	Method Indicates whether the study is quantitative or qualitative	Corporate governance (CG) variables The various CG/ board attributes included in the study	Findings Indicates whether the relationship is positive (+ve), negative (-ve) or not significant (Not sig)
Shahin and Zairi (2007)	Role of CG in CSR	Theoretical study	CG	+ve (CG drive excellence in CSR)
Hung (2011)	Directors' roles in CSR (Hong Kong)	Quantitative (regression)	Directors' concern for stakeholders	+ve
Kemp (2011)	Boards' role in CSR (Australia)	Qualitative (interviews)	Board	+ve (Board is major player in CSR)
Ayuso and Argandoña (2007)	Whether diverse stakeholders on board will promote CSR activities within the firm	Review paper	Diverse stakeholder on board	+ve
De Graaf and Herkströter (2007)	How CSP (Corporate Social Performance) institutionalised within the governance structure (Netherlands)	Theoretical paper	CG	+ve (CG influences CSP)
Ricart et al. (2005)	How CG integrates sustainable development thinking into them (DJSI)	Qualitative (case study)	CG	+ve CG plays major role in sustainable development
Kakabadse (2007)	How boards around the world view CSR	Theoretical paper	Board's view	+ve CSR is becoming board's agenda
Wang and Dewhirst (1992)	Examined boards of directors' stakeholder orientation (US: South-West States)	Quantitative (mail survey - questionnaire)	Board's stakeholder orientation	+ve
Hemingway and Maclagan (2004)	Whether personal values drive CSR	Theoretical paper	Personal values	+ve (managers personal values drive CSR)
Jo and Harjoto (2012)	Causal effect of CG on CSR	Quantitative (regression)	CG	+ve (CG causes CSR)

[Source: Rao, Tilt, 2016]

As it can be seen, there is at least 14 researches that studied the relationship between board of directors and CSR activities. Most of them (13) are made in 21st century, and 3 of them were conducted less than 10 years ago. However, the results of all the works are interesting for current research and suggest variables to study. As a result, the research model will consist of three general blocks: (1) Board of directors' composition, (2) CSR disclosure and (3) Performance.

Board of directors

In order to conduct the research, the following characteristics of the board of directors will be studied:

- Board size – number of directors on board, units;
- Presence of women – number of women on board, units;
- CEO duality – CEO is also a chairman of the board, yes or no.

CSR disclosure

After a deep analysis of several CSR disclosure standards and frameworks, it was decided to make a new framework, combining indicators from already existing ones with taking into account banking industry specifics. ISO 26001, AECA’s integrated scorecard, Grenelle Act II and CSRRI’s fields and indicators were used and combined in order to make the framework.

As a result, the new framework consists of 3 general CSR disclosure aspects: (1) Environment, (2) Employees, (3) Service. The Environment aspect includes the following 4 characteristics:

- Environmental protection activities;
- Sustainable resource use;
- Energy efficiency;
- Waste reduction.

The Employees aspect consists of the following 5 characteristics:

- Equal treatment;
- Diversity of employees;
- Trainings and development;
- Health and safety conditions at work;
- Policy against discrimination.

And the Service aspect has the following 3 characteristics:

- Education and awareness;
- Consumer data protection and privacy;
- Improvement of customer service.

In order to evaluate extent of CSR disclosure in annual CSR reports of the banks, the Likert-based scale implemented and tested by (Janggu, 2014) was modified and used. It consists of 6 points with the following characteristics (see Table 1.8).

Table 1.8 CSR disclosure scale

Points	Description
0	No disclosure
1	General mention in 1-2 sentences
2	Brief description in 3-5 sentences
3	Detailed description in 6+ sentences with photos or justification
4	Brief description in 3-5 sentences including cost incurred and photos or graphs
5	Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs

[Source: made by author]

Performance

In order to conduct the research, the following financial indicators will be studied:

- Profitability (ROE);
- Revenue (Sales);

- Return on Assets (ROA).

For non-financial indicators the brand rating by Brand Finance agency will be used in order to be as objective as possible. Brand rating by Brand Finance is derived from the Brand Strength Index which benchmarks the strength, risk and future potential of a brand relative to its competitors on a scale ranging from D to AAA. It is conceptually similar to a credit rating. (Brandirectory, 2020). More detailed it is described in Chapter 2.

1.3.2 Research hypotheses

On the one hand, several studies show that the larger the board of directors, the less CSR information is disclosed. Boards of directors with small numbers of directors benefit from low levels of communication breakdown and good coordination, resulting in better monitoring and control of management (Ahmed et al., 2006; Dey, 2008).

On the other hand, there are also studies that show the positive relationship between size of the board and extent of CSR disclosure (Ntim & Soobaroyen, 2013; Esa, Anum, & Gazali, 2012). Boards with limited numbers of directors might suffer from high workload and responsibilities, which might hinder their monitoring role (Beiner et al., 2004).

In terms of CSR, boards are responsible for setting firms' CSR agendas and encouraging CSR disclosure to communicate their response to societal needs (Jamali et al., 2008; Li et al., 2010). The size of the board reflects the firm's complexity and consequently is affected, among other factors, by its industry and size (Krishnan, Visvanathan, 2009; Pathan, 2009). In this study it is suggested that larger boards are less efficient than smaller ones due to lack of management control. Therefore, the first hypothesis is the following:

H1: Size of the board negatively influences CSR disclosure

Board diversity is believed to be associated to CSR reporting and social performance (Sicilian, 1996; Ibrahim, Angelidis, 1994). Gender diversity seems to enhance the supervising process (Melero, 2011), and should improve the performance of companies that are seeking growth (Krishnan, Parsons, 2008; Dwyer et al., 2003). It is found that women are more concerned with ethical behavior (Ford, Richardson, 1994) and environmental concerns (Diamantopoulos et al., 2003; Mainieri et al., 1997).

Studies have also found that women are more comfortable with community activities, while men are more comfortable with profitable activities (Betz et al., 1989; Bernardi, Arnold, 1997). Thus, the presence of women on board increases the welfare activity, and is likely to report their activities to the public. Studies show that women on the board would be effective, and have greater CSR rating (Betz et al., 1989; Bernardi, Arnold, 1997). In this regard, women participating in the board of directors are expected to encourage higher CSR initiatives and disclosures.

The presence of women in the board of directors may compel the board to meet the stakeholders' expectations, thus the execution of CSR and its disclosure is more viable (Daily, Dalton, 2003). Moreover, it is considered, that women have more empathy, what leads to better CSR disclosure. Therefore, the second hypothesis is:

H2: Number of women on board positively influences CSR disclosure

In line with the agency theory perspective, the level of CSR involvement and reporting is likely to be influenced by managers' private interests (Jizi, 2017). The appointment of CEOs as chairs of the board is generally determined by either their successful career records or controlling a significant proportion of shares (Hermalin, Weisbach, 1998). Therefore, CEO role duality could indicate managerial power. This might influence inside directors, as they might accept decisions not in favor of shareholders' interest to avoid confrontation with their chairman-CEO (Dey, 2008).

If a chairman-CEO tends to use CSR disclosure merely to maintain external relationships or greenwash the firm's reporting, rather than engaging in and reporting on effectual social and environmental activities, he or she will not be able to reflect the quality of the firm's CSR involvement through its CSR disclosure. As powerful CEOs can protect their human capital against short-term oriented investors and manage their risk not only through investment and finance strategies (Barry et al., 2011; Laeven, Levine, 2009; Pathan, 2009), but also through higher level transparency and CSR involvement (Ghoul et al., 2011; Gill, 2008; Salama et al., 2011; Scholtens, 2008), CEO duality is expected to have positive influence over CSR reporting.

Moreover, CEO duality is argued to be beneficial because it provides a unified command structure and consistent leadership direction, thereby enhancing decision-making, rapid implementation of operational decisions, and company performance (Vo, 2010). A competing view is that a person who is simultaneously CEO and Chair is more likely to advance personal interests to the detriment of the company (Haniffa & Hudaib, 2006). In this study it is suggested that presence of CEO duality positively influences CSR disclosure extent due to better understanding of CSR as a strategic tool of a company. Therefore, the third hypothesis is:

H3: CEO duality positively influences CSR disclosure

The positive relationship between CSR disclosure and financial performance is theorized by the 'social impact hypothesis' (Preston, O'Bannon, 1997), which is derived from instrumental stakeholder theory (Freeman, 1984; Cornell, Shapiro, 1987; Donaldson, Preston, 1995), the proponents of which argue that satisfying the needs of different groups of stakeholders will result in enhanced financial performance on the grounds of greater effectiveness and efficiency. In

contrast, ignoring the interests of stakeholders might negatively affect corporate financial performance (Platonova, et al 2018).

The positive association between CSR disclosure and financial performance can also be explained by ‘good management theory’, which is in essence another articulation of stakeholder theory. ‘Good management theory’ implies better relationships with key stakeholders that in turn will result in improved performance (Waddock, Graves, 1997).

Financial performance, measured by financial indicators, is a reflection how company’s products and services are valued among consumers and customers. Based on CSR reports, investors can make decisions whether to invest in a company or not to invest, as well as consumers based on CSR information provided can decide to purchase or not to purchase company’s products and services. Therefore, the fourth hypothesis is:

H4: CSR disclosure positively influences financial performance

Company’s non-financial performance can be viewed as a degree of trust, which customers have toward a company. Because of this, usually non-financial performance is measured by reputation or brand trust. Transparent disclosure of CSR information could influence on company’s reputation (Famiyeh, 2016).

Socially responsible firms indirectly benefit from the implementation of CSR practices through the improvement in company goodwill which enhances the image of the firm (Beurden, Gössling, 2008). (Dyer, Chu, 2003) found that good reputations lead to lower contracting and monitoring costs because suppliers are less concerned about contractual hazards when transacting business with high-reputation firms.

(Kotha, et al., 2001) similarly interpret good corporate reputation as an investment which helps to reduce transaction costs and increase sales by reducing buyer-supplier exchange uncertainty. Firms with high reputation are also able to attract capital and strategic partners easily and capture new markets without difficulties. (Fombrun, Van Riel, 2004) posit that a good reputation helps launch new products and enter new markets, by influencing consumers when choosing the same product in offered pallet of different market players.

Good reputation increases customer loyalty and provides an indicator of product quality when consumers are faced with a choice between competing products (Shapiro, 1983). Therefore, the fifth hypothesis is:

H5: CSR disclosure positively influences non-financial performance

Based on above described hypotheses, the hypotheses on mediating effect of board characteristics on financial and non-financial performance are made. Mediating effect also known

as indirect effect shows the presence of indirect relationship between variables. Therefore, hypotheses on mediating effect of board characteristics on financial performance are the following:

H6: Size of the board negatively influences financial performance via mediating effect of CSR disclosure

H7: Number of women on board positively influences financial performance via mediating effect of CSR disclosure

H8: CEO duality positively influences financial performance via mediating effect of CSR disclosure

Finally, the hypotheses on mediating effect of board characteristics on non-financial performance are the following:

H9: Size of the board negatively influences non-financial performance via mediating effect of CSR disclosure

H10: Number of women on board positively influences non-financial performance via mediating effect of CSR disclosure

H11: CEO duality positively influences non-financial performance via mediating effect of CSR disclosure

Research hypotheses will be used in order to find and study the relationships between above mentioned block of research model (see Table 1.9).

Table 1.9 Research hypotheses

Hypotheses	Theoretical Background
H1: Size of the board negatively influences CSR disclosure	(Khan, 2010), (Jizi, 2017), (Ahmed et al., 2006), (Dey, 2008), (Ntim & Soobaroyen, 2013), (Esa, Anum, & Gazali, 2012), (Beiner et al., 2004), (Jamali et al., 2008), (Li et al., 2010), (Krishnan, Visvanathan, 2009), (Pathan, 2009)
H2: Number of women on board positively influences CSR disclosure	(Jizi, 2017), (Khan, 2010), (Rao, 2016), (Sundarasan, 2015), (Sicilian, 1996), (Ibrahim, Angelidis, 1994), (Melero, 2011), (Krishnan, Parsons, 2008), (Dwyer et al., 2003), (Daily, Dalton, 2003)
H3: CEO duality positively influences CSR disclosure	(Jizi, 2017), (Sundarasan, 2015), (Dey, 2008), (Barry et al., 2011), (Laeven, Levine, 2009); (Pathan, 2009), (Ghoul et al., 2011), (Gill, 2008), (Salama et al., 2011), (Scholtens, 2008), (Vo, 2010), (Haniffa & Hudaib, 2006)
H4: CSR disclosure positively influences financial performance	(Jizi, 2017), (Preston, O'Bannon, 1997), (Platonova, et al 2018), (Waddock, Graves, 1997).

Hypotheses	Theoretical Background
H5: CSR disclosure positively influences non-financial performance	(Famiyeh, 2016), (Beurden, Gössling, 2008), (Dyer, Chu, 2003), (Kotha, et al., 2001), (Fombrun, Van Riel, 2004)
H6: Size of the board negatively influences financial performance via mediating effect of CSR disclosure	(Khan, 2010), (Jizi, 2017), (Ahmed et al., 2006)
H7: Number of women on board positively influences financial performance via mediating effect of CSR disclosure	(Jizi, 2017), (Khan, 2010), (Rao, 2016), (Sundarasan, 2015)
H8: CEO duality positively influences financial performance via mediating effect of CSR disclosure	(Jizi, 2017), (Sundarasan, 2015)
H9: Size of the board negatively influences non-financial performance via mediating effect of CSR disclosure	(Khan, 2010), (Jizi, 2017), (Ahmed et al., 2006)
H10: Number of women on board positively influences non-financial performance via mediating effect of CSR disclosure	(Jizi, 2017), (Khan, 2010), (Rao, 2016), (Sundarasan, 2015)
H11: CEO duality positively influences non-financial performance via mediating effect of CSR disclosure	(Jizi, 2017), (Sundarasan, 2015)

[Source: made by author]

1.3.3 Conceptual model

Based on the theoretical frameworks, there are two possible conceptual models that can be built. Model 1 will have all board of directors' characteristics indicated while CSR disclosure is represented in general aspect (see Figure 1.3).

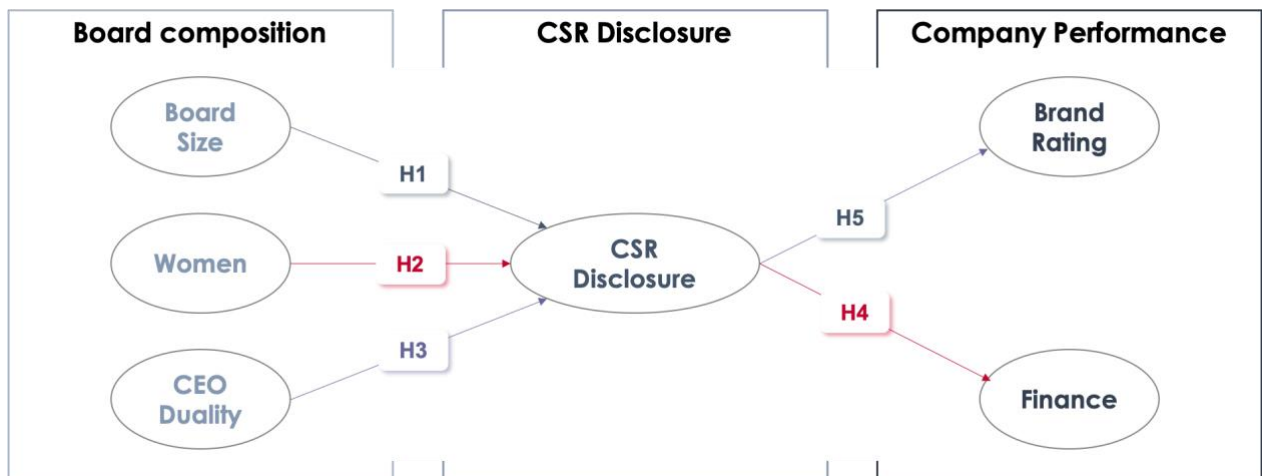


Figure 1.3 Model 1

[Source: made by author]

Model 2 will have all board of directors' characteristics indicated and CSR disclosure aspects represented by groups (see Figure 1.4).

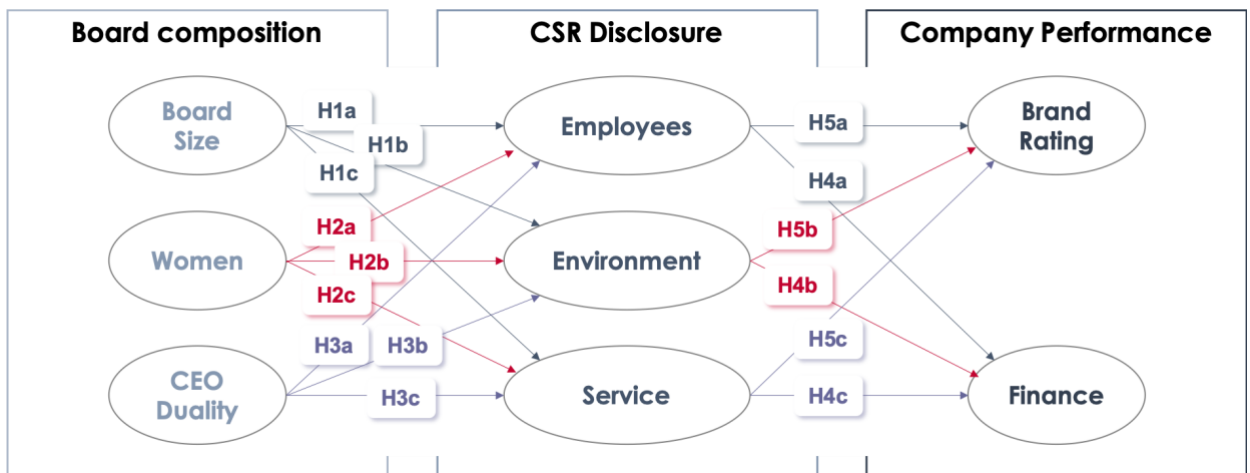


Figure 1.4 Model 2
[Source: made by author]

1.4. Summary of Chapter 1

In the first chapter concepts of board of directors, its composition, CSR and CSR disclosure were defined and analyzed. Moreover, research framework for further work was created and theoretical conceptual research model in several versions was built.

Among characteristics of the board of directors, board size, number of women on board and CEO duality will be taken into consideration. CSR disclosure framework evaluates 3 general aspects of CSR – Environment, Employees, Service – with 14 specific characteristics via 6-point Likert-based scale. Financial performance indicators will be represented by Profitability (ROE), Return on Assets (ROA) and Sales (revenue), while non-financial indicator will be brand rating by Brand Finance agency. Finally, five research hypotheses were introduced, and three conceptual research models were built.

In the Chapter 2 research methods will be determined, data collection framework will be developed and data analysis method will be determined.

2. Development of research design for analysis and collection of data from banking industry

In this chapter the process of the development of the research design will be conducted. First of all, determination of research methods for the further research will be done and justified. Secondly, data collection framework will be developed and explained.

2.1 Determination of research method

In this sub-chapter research method will be chosen and justified for the further usage. First of all, purpose of the research will be determined in order to choose the appropriate research method. Secondly, based on research method chosen, research model for the current study will be determined.

2.1.1 Determining the purpose of the research

In order to determine research method, data collection strategy and data analysis method it is vital to clarify the purpose of the research. There must be a strong relationship between the purpose of the research and the research question that is “How does board composition and CSR disclosure influence company performance (brand rating and financial performance) in the banking industry?”.

Therefore, the purpose of the study that is “to identify the effects of board composition on company brand rating and financial performance via mediating factor of CSR disclosure” correlates with the research question quite well, and type of the research depending on purpose can be chosen. According to (Saunders, 2009), there are three types of purpose: exploratory, descriptive and explanatory.

According to (Robson, 2002), *exploratory* studies are used to find out what is happening; to seek new insights; to ask questions and to assess phenomena in a new light. There are three principal ways of conducting exploratory research: (1) a search of the literature; (2) interviewing ‘experts’ in the subject; (3) conducting focus group interviews (Saunders, 2009). It is mostly used for qualitative studies.

Descriptive studies are used to portray an accurate profile of persons, events or situations (Robson, 2002). Descriptive research is effective to analyze non-quantified topics and issues. However, descriptive studies cannot test or verify the research problem statistically. This type of studies is associated with observational studies. It often uses observations, case studies and surveys as data collection methods (Research Methodology, 2019).

Explanatory research (also known as causal research) studies a situation or a problem in order to explain the relationships between variables (Saunders, 2009). This type of research focuses on an analysis of a situation or a specific problem to explain the patterns of relationships

between variables (Research Methodology, 2019). Explanatory research need research hypotheses, which can be statistically tested, not just research question as exploratory and descriptive studies do.

Considering these definitions, it is clear that in order to answer the research question and test hypotheses only explanatory type of research is applicable. As a result, only quantitative methods of data collection and analysis must be used.

2.1.2 Determining the research model

In order to determine the research method and data collection strategy of the study, the model called “the research “onion” by (Saunders, 2009) is going to be used (see Figure 2.1)”:

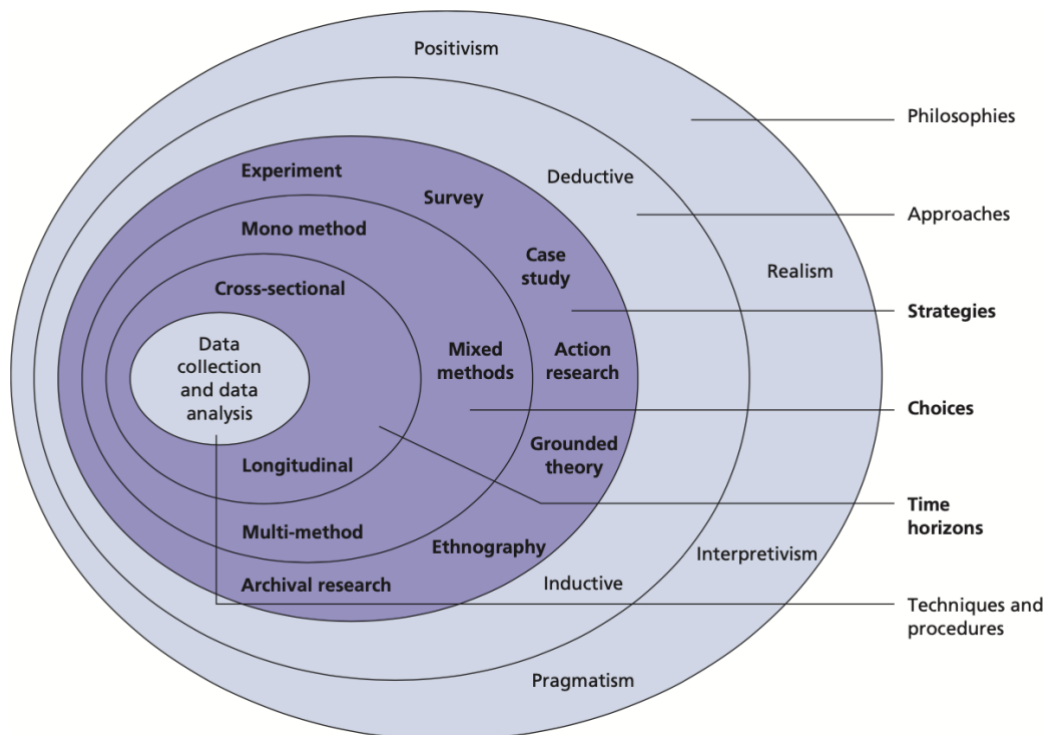


Figure 2.1 Research "onion"
[Source: Saunders, 2009]

According to (Saunders, 2009), there are the following research strategies (see Table 2.1):

Table 2.1 Research strategies

Research strategy	Definition	Purpose	Usage
Experiment	An operation or procedure carried out under controlled conditions in order to discover an unknown effect or law, to test or establish a hypothesis, or to illustrate a known law (Merriam-Webster, 2019)	To study causal links; whether a change in one independent variable produces a change in another dependent variable (Hakim 2000)	Tend to be used in exploratory and explanatory research to answer ‘how’ and ‘why’ questions
Survey	An investigation about the characteristics of a given population by means of collecting data from a sample of	The data collected using a survey strategy can be used to suggest possible reasons for particular	Tends to be used for exploratory and descriptive research; used to answer who,

Research strategy	Definition	Purpose	Usage
	that population and estimating their characteristics through the systematic use of statistical methodology (OECD, 2019)	relationships between variables and to produce models of these relationships	what, where, how much and how many questions
Case study	A strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence (Robson, 2002)	To gain a rich understanding of the context of the research and the processes being enacted (Morris and Wood, 1991)	Answers to the question ‘why?’, ‘what?’ and ‘how?’; most often used in explanatory and exploratory research
Action research	An approach in which the action researcher and a client collaborate in the diagnosis of the problem and in the development of a solution based on the diagnosis (Bryman, A. & Bell, E., 2011)	The purpose of the research: research in action rather than research about action (Coghlan & Brannick, 2007)	Used in quantitative and qualitative studies, but rarely due to high complexity
Grounded theory	Inductive methodology that provides systematic guidelines for gathering, synthesizing, analyzing, and conceptualizing qualitative data for the purpose of theory construction (ScienceDirect, 2019)	To formulate, test and reformulate prepositions until a theory is developed (Research Methodology, 2019)	Used in qualitative research, which are mostly exploratory, but rarely due to high complexity
Ethnography	A qualitative research method, in which a researcher - an ethnographer - studies a particular social/cultural group with the aim to better understand it (SAGE, 2017)	To describe and explain the social world the research subjects inhabit in the way in which they would describe and explain it	Used only in qualitative research
Archival and documentary research	A research method that involves seeking out and extracting evidence from archival records that may be held either in collecting institutions or in the custody of the organization (Definitions, 2019)	Generally, answer the questions that focus upon the past and changes over time	Tends to be used for exploratory, descriptive or explanatory studies

[Source: based on Saunders, 2009]

Based on (Saunders, 2009) research methods, their definitions, purposes as well as usage and the object of current study – annual reports and annual CSR reports 2018 – it is logical to conclude, that archival and documentary research, which makes use of administrative records and documents as the principal source of data, is the best research strategy for conducting the study.

2.2 Methodology of data collection

In this sub-chapter choice of the banking industry for conducting the research will be explained, framework for CSR disclosure evaluation will be presented and sources of information will be disclosed and justified.

2.2.1 Choice of banking industry

The industry for the research was chosen based on seven critical criteria that are the following: (1) presence of a brand rating assigned, (2) presence of multinational enterprises more than 50%, (3) industry was partly studied previously, (4) most companies are Joint Stock Companies (JSCs), as the result they are obliged to submit financial reports, (5) industry is not in crisis, so the companies have money they can spend on CSR and its disclosure, (6) the industry has a proficient CSR disclosure practices, (7) companies are presented in different databases (such as Bloomberg and Forbes). As a result, among five initial industries (Oil & Gas, Aviation, Chemical, FMCG, Banking, Telecommunications), only Banking industry suits all criteria.

First of all, banking industry is one of the most reported industries in the world. Due to the fact that most banks are joint stock companies, they are obliged to publish financial reports. Secondly, banking industry is one with the highest profit margin, so the banks have funds for both CSR activities and CSR disclosure. Thirdly, big banks are usually studied by several trustworthy media sources such as Forbes and Bloomberg, so there is a low chance of providing wrong numbers, and in case information is missing it can be found in another source.

2.2.2 CSR Disclosure evaluation

Based on four models mentioned in Chapter 1, it was decided to make a new framework, combining indicators from already existing ones with taking into account banking industry specifics. ISO 26001, AECA's integrated scorecard, Grenelle Act II and CSRRI's fields and indicators were used and combined in order to make the framework. As a result, the new framework consists of 3 general CSR disclosure aspects: (1) Environment, (2) Employees, (3) Service. It includes 12 indicators. (see Table 2.2).

Table 2.2 CSR Indicators

Indicator	ISO 26001	AECA's integrated scorecard	Grenelle Act II	CSRRI	Authors
Environmental protection activities	+		+	+	(Khan, 2010), (Mehdi, 2017)
Sustainable resource use	+	+			(Möller, 2015), (Chen, 2015)
Energy efficiency;		+	+		(Chen, 2015), (Mehdi, 2017)
Waste reduction		+	+		(Chen, 2015), (Mehdi, 2017)
Equal treatment	+		+		(Möller, 2015), (Mehdi, 2017)
Diversity of employees		+		+	(Chen, 2015) (Khan, 2010), (Mehdi, 2017)
Trainings and development	+	+	+	+	(Chen, 2015), (Möller, 2015), (Khan, 2010),

Indicator	ISO 26001	AECA's integrated scorecard	Grenelle Act II	CSRRI	Authors
					(Mehdi, 2017)
Health and safety conditions at work	+		+	+	(Möller, 2015), (Khan, 2010), (Mehdi, 2017)
Policy against discrimination	+		+		(Möller, 2015), (Mehdi, 2017)
Education and awareness	+			+	(Möller, 2015), (Khan, 2010)
Consumer data protection and privacy	+		+	+	(Möller, 2015), (Khan, 2010), (Mehdi, 2017)
Improvement of customer service		+		+	(Chen, 2015), (Khan, 2010)

[Source: made by author]

In order to evaluate extent of CSR disclosure in annual CSR reports of the banks, the Likert-based scale implemented and tested by (Janggu, 2014) was modified and used. It consists of 6 points with the following characteristics (see Table 2.3).

Table 2.3 CSR disclosure evaluation scale

Points	Description
0	No disclosure
1	General mention in 1-2 sentences
2	Brief description in 3-5 sentences
3	Detailed description in 6+ sentences with photos or justification
4	Brief description in 3-5 sentences including cost incurred and photos or graphs
5	Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs

[Source: made by author]

As a result, CSR disclosure evaluation framework looks like the following way (see Figure 2.2):

#	Criteria	Scale					
		0	1	2	3	4	5
1	Environment	Environmental protection activities					
2		Sustainable resource use					
3		Energy efficiency					
4		Waste reduction					
5	Employees	Equal treatment					
6		Diversity of employees					
7		Trainings and development					
8		Health and safety conditions at work					
9		Policy against discrimination					
10	Service	Education and awareness					
11		Consumer data protection and privacy					
12		Improvement of customer service					

Figure 2.2 CSR disclosure evaluation framework

[Source: made by author]

2.2.3 Sources of information

In order to gather all the information needed, first of all, the measurement of trust and reputation toward a company was the critical point. As a result of research, brand rating by Brand Finance agency, which publishes information on the industries and their ratings yearly, was decided to be taken as a non-financial indicator, which helps to judge about company reputation.

Brand Finance is a British brand valuation and strategy consultancy agency founded in 1996 (Brand Finance, 2019). It seems to be a trustworthy source of information due to several reasons. Firstly, Brand Finance is impartial and independent because they do not create or own brands and have no vested interest in particular outcomes of a project. As a result, their recommendations are independent, and their reports are objective and unbiased (Brand Finance, 2019).

Secondly, Brand Finance has high technical standards because their work is peer-reviewed by the big four audit practices (Ernst & Young, Deloitte, PricewaterhouseCoopers, KPMG) and accepted by tax authorities and regulatory bodies around the world such as the IRS, HMRC and ATO. They are one of the few companies certified to provide brand valuations that are fully compliant with ISO 10668, the global standard on monetary brand valuations. Moreover, they often act as expert witnesses in court cases (Brand Finance, 2019).

Thirdly, Brand Finance practices are transparent. They work openly, collaboratively, flexibly, and always reveal the details of modelling and analysis. As a result, it is not a problem to understand what lies behind ‘the number’, which appears in the reports (Brand Finance, 2019).

Finally, Brand Finance employs functional experts with marketing, research and financial backgrounds, what results in a unique combination of skills and experience and helps to reach as objective as possible results (Brand Finance, 2019).

Brandirectory by Brand Finance is the largest brand value database in the world. Brand Finance puts 5,000 of the world’s biggest brands to the test every year, evaluating which are the strongest and most valuable. These brand value rankings have been certified by the Marketing Accountability Standards Board (MASB) through the Marketing Metric Audit Protocol (MMAP), the formal process for validating the relationship between marketing measurement and financial performance (Brandirectory, 2020).

Brand Finance has a profound brand valuation methodology. In this case, they define “brand” as the “trademark and associated intellectual property including the word mark and trademark iconography” (Brandirectory, 2020).

Brand Finance calculates brand value using the Royalty Relief methodology that determines the value a company would be willing to pay to license its brand as if it did not own it.

This approach involves estimating the future revenue attributable to a brand and calculating a royalty rate that would be charged for the use of the brand (Brandirectory, 2020).

There are seven steps of brand rating evaluation:

1. Calculate brand strength on a scale of 0 to 100 based using a balanced scorecard of a number of relevant attributes such as emotional connection, financial performance and sustainability, among others. This score is known as the Brand Strength Index (BSI).
2. Determine the royalty rate range for the respective brand sectors. This is done by reviewing comparable licensing agreements sourced from Brand Finance's extensive database of license agreements and other online databases.
3. Calculate royalty rate. The brand strength score is applied to the royalty rate range to arrive at a royalty rate. For instance, if the royalty rate range in a brand's sector is 0-5% and a brand has a brand strength score of 80 out of 100, then an appropriate royalty rate for the use of this brand in the given sector will be 4%.
4. Determine brand specific revenues estimating a proportion of parent company revenues attributable to each specific brand and industry sector.
5. Determine forecast brand specific revenues using a function of historic revenues, equity analyst forecasts and economic growth rates.
6. Apply the royalty rate to the forecast revenues to derive the implied royalty charge for use of the brand.
7. The forecast royalties are discounted post tax to a net present value which represents current value of the future income attributable to the brand asset (Brandirectory, 2020).

As a result, the process of brand value evaluation looks like the following way (see Figure 2.3):

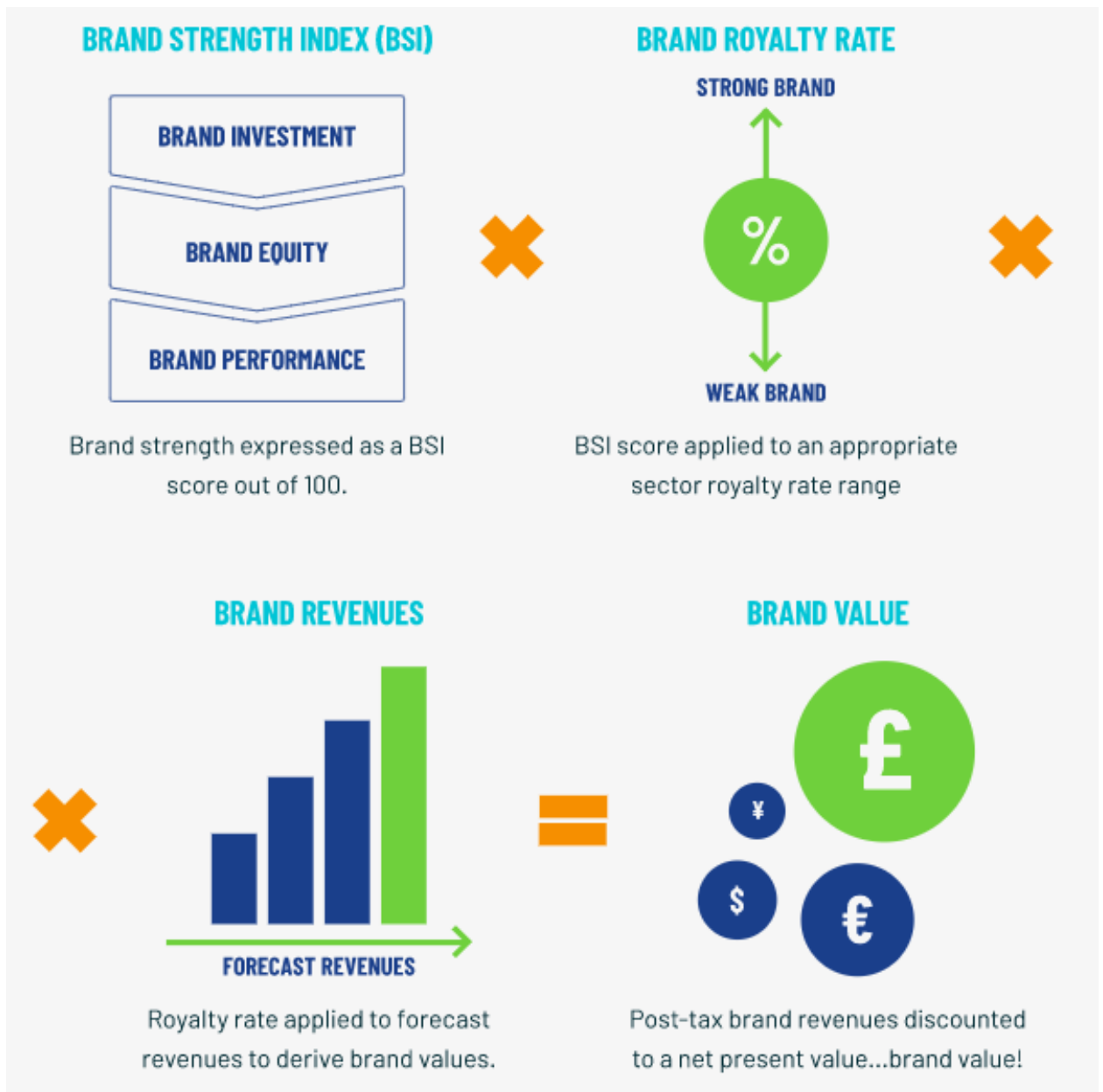


Figure 2.3 Brand Value evaluation process
 [Source: (Brandirectory, 2020)]

This approach is favored by tax authorities and the courts because it calculates brand values by reference to documented third-party transactions. Also, it can be done based on publicly available financial information, and it is compliant with the requirement under the International Valuation Standards Authority and ISO 10668 to determine the fair market value of brands (Brandirectory, 2020).

As a result, Brand Rating is derived from the Brand Strength Index, which benchmarks the strength, risk and future potential of a brand relative to its competitors on a scale ranging from D to AAA, making it conceptually similar to a credit rating (Brandirectory, 2020). The list of ratings, their meaning and coding in this work looks the following way (see Table 2.4):

Table 2.4 Brand Ratings

Brand Ratings	Meaning	Coding
AAA+	Extremely strong	9
AAA		8
AAA-		7
AA+	Very strong	6
AA		5
AA-		4
A+	Strong	3
A		2
A-		1
BBB+	Average	N/A
BBB		
BBB-		
BB+		
BB		
BB-		
B+		
B		
B-	Weak	N/A
CCC+		
CCC		
CCC-		
CC+		
CC		
CC-		
C+		
C	Failing	N/A
C-		
DDD+		
DDD		
DDD-		
DD+		
DD		
DD-		
D+		
D		
D-		

[Source: (Brandirectory, 2020)]

The main sources of information on board characteristics, financial performance indicators (Sales, ROE, ROA) and CSR disclosure were annual reports for financial year 2018 and annual CSR reports for year 2018 of 101 largest global banks. The banks were listed according to volume of assets they have according to Brand Finance's Banking 500 2018 report. Annual reports and CSR reports were directly downloaded from the banks' official websites.

In annual reports the following information was searched via finding option: location of headquarters, number of employees, number of board of directors' members, number of women on board of directors, presence or lack of CEO duality, sales, ROE and ROA.

In cases when information on Sales was not available in USD (for example, Chinese banks publish financial reports in RMB, while German banks publish financial reports in EUR), in order to standardize the data all Sales were converted to the same currency – USD. To be more objective in converting different currencies to USD, Forbes database was used to establish Sales in USD.

As a result, all the information needed was collected. Search for the above-mentioned information and collection of it in one database for 101 banks took about 124 hours.

In case of CSR reports search via finding option was unavailable because the data needed was not a characteristic itself. In order to evaluate the CSR disclosure via the framework, all CSR reports were read by the researcher without using any software. Reading, evaluating and collection of the information in one database for 101 banks took about 305 hours.

The final database looks like the following way (see Figure 2.4).

No	Company Characteristics			Board Characteristics			Financial Performance		
	Name	Country	# employees	board size	# women	CEO duality	Profitability /ROE	Sales, \$ B	ROA
1	ICBC	China	449,296	21	2	yes	13.79%	\$175.90	1.11%
2	China Construction Bank	China	345,971	14	2	yes	14.04%	\$150.30	1.13%
No	Company Characteristics			CSR Criteria					
	Name	Country	Education and awareness	Consumer data protection and privacy	Improvement of customer service	Environmental protection activities	Sustainable resource use	Energy efficiency	Waste reduction
1	ICBC	China	1	1	1	5	5	5	2
2	China Construction Bank	China	3	3	3	3	3	3	3
No	Company Characteristics			CSR Criteria					Brand rating
	Name	Country	# employees	Equal treatment	Diversity of employees	Trainings and development	Health and safety conditions at work	Policy against discrimination	
1	ICBC	China	449,296	1	2	3	5	1	9
2	China Construction Bank	China	345,971	1	3	3	1	2	8

Figure 2.4 Database
[Source: made by author]

The author understands the limitations of the research, which result from the methods and sources of information chosen. Among them are possibly wrong currency exchange rates, resulting (brand rating) variable based on one source of information, mistakes made during the evaluation of CSR reports. However, these limitations could not spoil the results of the study too critically.

2.3. Determination of data analysis method

In this sub-chapter the determination of appropriate methods for analysis of gathered data will be discussed. Step-by-step, it will be described: the justification for choosing SEM-Method; the rationale to use PLS-SEM methods; prerequisite of using the non-linear PLS-SEM model. Based on appropriate method for analysis, conclusion will be drawn regarding software for analysis.

2.3.1 Foundation for choosing SEM-Methods

Structural equation modelling (SEM) is a group of well-known and highly used methods for data analysis. Its popularity is based on the methods' ability to evaluate the measurement of latent variables and relationship between them that meets demand of researchers to test complex theories and concepts (Hair et al., 2014).

The goal of SEM analysis is to determine the extent to which the theoretical model is supported by sample data. In order to fulfil this goal several basic types of models can be used such as: regression, path and confirmatory factor models (Schumacker and Lomax, 2004).

There are several reasons why SEM methods could be used for current research (Schumacker and Lomax, 2004; Steenkamp and Baumgartner, 2000):

- SEM methods allow analysis of complex relationship between multiple variables – this research is going to address relationship between 8 variables, where three of them are mediating factors;
- Compared to other modeling techniques, SEM models are focused on explaining phenomena rather than on predicting specific outcome variables – the goal of the current research, to identify the effects of the board composition on company performance via mediating factor of CSR disclosure, can be reached using SEM methods;
- SEM methods take measurement error into account, enabling greater validity and reliability of observed scores;
- SEM methods have matured over past years and now many programs allow to proceed with complex analysis without deep mathematic or programming knowledge.

All things considered, it should be confirmed that SEM methods are relevant for the current study.

2.3.2 Foundation for choosing PLS-SEM method

There are two widely used SEM methods: (1) covariation-based structural equation modelling (CB-SEM), (2) partial-least-squares structural equation modelling (PLS-SEM).

CB-SEM method should be used when a strong theory leads to the model development and researchers trying to prove that empirical data fit the theoretical model (Richter et al., 2016). On the other hand, PLS-SEM intends to research contexts that are simultaneously data-rich and theory-skeletal (Hair et al., 2014).

Recently, PLS-SEM became more popular than CB-SEM, mainly due to the fact that PLS-SEM provides similar results as CB-SEM without forcing restrictive assumptions on the data (Hair et al, 2019). PLS-SEM is used in various field of management researches (Table 2.5).

Table 2.5 CB-SEM usage

Business discipline	Reference	Period	Number of studies
Marketing	Hair et al, 2012	1981 – 2010	204
Strategic management	Hair et al, 2012	1981 – 2010	37

Business discipline	Reference	Period	Number of studies
Management information systems	Ringle et al, 2012	1992 – 2001	65
Management information systems	Hair et al, 2017	2010 – 2014	57
International business	Richter et al, 2016	1990 – 2013	45
Human resource management	Ringle et al, 2019	1985 – 2014	114
Operations management	Peng and Lai, 2012	2000 – 2011	42
Supply Chain management	Kaufmann and Gaeckler, 2015	2002 – 2013	75
Accounting	Lee et al, 2011	2005 – 2011	20
Tourism	do Valle and Assaker, 2016	2000 – 2014	44
Hospitality and tourism	Usakli and Kucukergin, 2018	2000 – 2017	206

[Source: Sarstedt et al, 2019]

According to Hair et al (2012), top three reasons for PLS-SEM usage in field of strategic management are: non-normal data (59%), small sample size (46%), formative indicators (27%).

According to Hair et al. (2019), researchers should select PLS-SEM in the following situations (the *italic* text highlights situations that are relevant for the current research):

- when the analysis is concerned with testing a theoretical framework from a prediction perspective;
- *when the structural model is complex and includes many constructs, indicators and/or model relationships;*
- *when the research objective is to better understand increasing complexity by exploring theoretical extensions of established theories (exploratory research for theory development);*
- *when the path model includes one or more formatively measured constructs;*
- *when the research consists of financial ratios or similar types of data artifacts;*
- *when the research is based on secondary/archival data, which may lack a comprehensive substantiation on the grounds of measurement theory;*
- *when a small population restricts the sample size (e.g. business-to-business research); but PLS-SEM also works very well with large sample sizes;*
- *when distribution issues are a concern, such as lack of normality;*
- *when research requires latent variable scores for follow-up analyses.*

Based on the above-highlighted prerequisites, it seems rational to use PLS-SEM method.

2.3.3 Foundation for choosing the non-linear PLS-SEM method

Non-linear PLS-SEM model provides opportunity to get unbiased and efficient estimates for the effects and relationships that are non-linear by the nature (Rondan-Cataluna, 2015). In WarpPLS 6.0 it is possible to set customized inner model that includes both linear and non-linear relationships. Foretell the findings of Chapter 3, customized settings will be used with the majority of relationships as non-linear.

2.3.4 Foundation for choosing the WarpPLS 6.0. software

With increasing accessibility of IT, researchers have numerous ways to conduct PLS-SEM. Nowadays, conducting PLS-SEM does not require programming knowledge. Moreover, user-friendly applications are available with limited free of charge period that allows researchers to test technical capabilities of the software.

As it was mentioned before, this research implies usage of non-linear PLS-SEM, therefore the choice of the software for analysis was limited. Widely used PLS-Graph and SmartPLS applications, unfortunately, could not test non-linear models. Therefore, decision was made to use WarpPLS 6.0 due to several reasons: (1) it can analyze the non-linear relationship; (2) it is easy to use software with trial period of 3 months; (4) developers of WarpPLS 6.0 prepared detailed guide that helps to create and test models as well as perform the analysis of the results.

2.3.5 Description of the criteria to analyze the model results

According to Hair et al., (2019), there are three blocks that should be considered in PLS-SEM analysis (Figure 2.5).

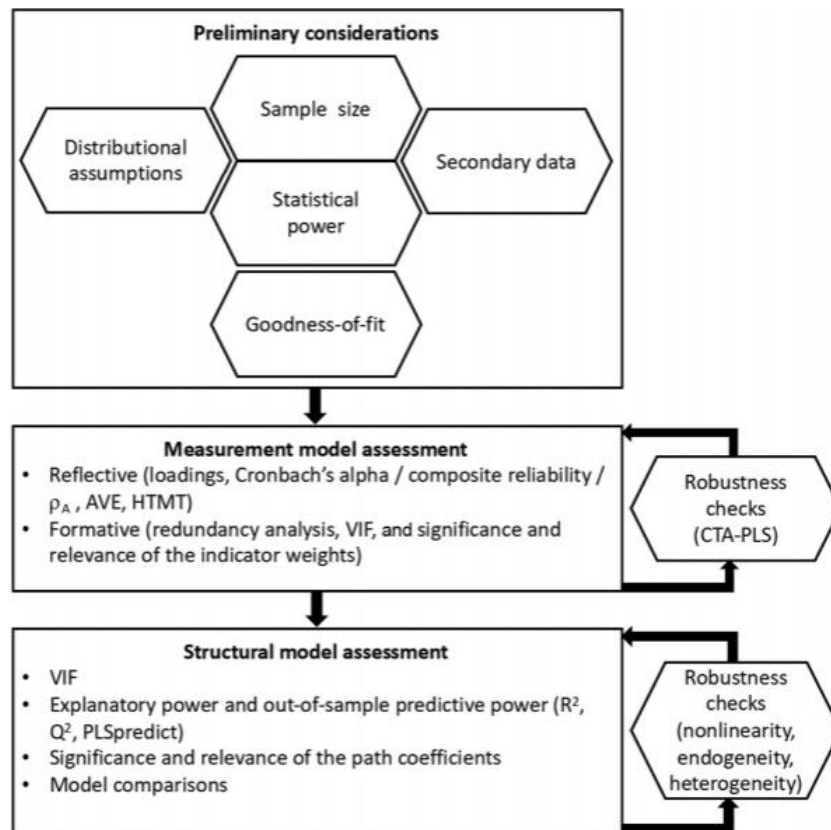


Figure 2.5 Aspects and statistics to consider in a PLS-SEM analysis [Source: Hair et al, 2019]

Preliminary considerations include 5 major points:

- *sample size* – even though PLS-SEM algorithms provide opportunity to get valid results with small sample, scholars misused this opportunity and damaged reputation of PLS-SEM to some extent (Marcoulides et al, 2009). WarpPLS 6.0 has special tool that estimates sample size that is needed to provide reliable results. As available sample size is limited to the number of companies with open information regarding its brand evaluation, the tool will help to prove that this number of observations is sufficient to draw conclusion.
- *distribution assumptions* – while PLS-SEM shows a higher robustness in situations with non-normal distribution of data, it is better to prepare data set for modeling. In WarpPLS 6.0, there is a special step, where data is corrected and standardized.
- *goodness-of-fit* – while PLS-SEM relies less on the concept of model fit (comparing to CB-SEM), it is impossible to use properly standard model fit assessment (Haier et al, 2019). WarpPLS 6.0 calculates metrics that help to check robustness.

How to interpret results of PLS-SEM model

There are two types of constructs to use in PLS-SEM model: formative and reflective. A reflective latent variable is a construct that includes indicators that are expected to be highly

correlated with the latent variable (WarpPLS User Manual, 2019). For example, elements of the model that describe CSRI are expected to be highly connected to each other. Foretell only one variable from CSRI is going to be reflective. Additionally, all variables that are based on single indicator are going to be reflective (as correlation will be equal to 1). It is acceptable approach for PLS-SEM models (Ringle et al, 2012).

The following criteria are used for the robustness check of reflective latent variables (Table 2.6).

Table 2.6 Robustness check of reflective latent variables

Name of criteria	Target value
Cronbach's alpha	greater or equal to 0.7
Composite reliability	greater or equal to 0.7
AVE	equal to or greater than 0.5
Full collinearity VIFs	should be equal to or greater than 3.3., or 5.0 (conservative), or 10.0 (less conservative)

[Source: prepared by author based on WarpPLS User Manual]

A formative latent variable is a construct that includes indicators that are expected to measure certain attributes of the latent variable (WarpPLS User Manual, 2019). For example, the latent variable Financial Performance is formative variable, because Profit, Sales and ROA estimates only attributes of financial performance of banks.

The following criteria are used for the robustness check of formative latent variables (Table 2.7).

Table 2.7 Robustness check of formative latent variables

Name of criteria	Target value
Significance and relevance of the indicator weights	p-value less than 0.05
VIFs	should be less 2.5

[Source: prepared by author based on WarpPLS User Manual]

The indices for analysis of the model results are presented in Table 2.8.

Table 2.8 Model fit and quality indices

Name of criteria	Target value
Average path coefficient (APC)	P<0.05
Average R-squared (ARS)	P<0.05
Average adjusted R-squared (AARS)	P<0.05
Average block VIF (AVIF)	acceptable if ≤ 5 , ideally ≤ 3.3
Average full collinearity VIF (AFVIF)	acceptable if ≤ 5 , ideally ≤ 3.3
Tenenhaus GoF (GoF)	small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36

Name of criteria	Target value
Sympson's paradox ratio (SPR)	acceptable if ≥ 0.7 , ideally = 1
R-squared contribution ratio (RSCR)	acceptable if ≥ 0.9 , ideally = 1
Statistical suppression ratio (SSR)	acceptable if ≥ 0.7
Nonlinear bivariate causality direction ratio (NLBCDR)	acceptable if ≥ 0.7

[Source: prepared by author based on WarpPLS User Manual]

Several criteria will be used to accept or reject statistical hypotheses and interpret the results (Table 2.9):

Table 2.9 Criteria for testing hypotheses

Criteria	Comment	Target values
P-value	It is used to accept or reject the null hypothesis. If the p-value is significant, H ₀ suggesting no effect exists will be rejected.	<ul style="list-style-type: none"> • p-value > 0.05 – ns (not significant); • p-value ≤ 0.05 – *; • p-value ≤ 0.01 – **; • p-value ≤ 0.001 – ***;
Path-coefficient	It is used for interpretation of the relationship between variables	No recommendation on the target values
Size effect of path coefficient	It is used for interpretation of the relationship between variables	<ul style="list-style-type: none"> • lower than 0.02 – too weak to be treated as relevant; • between 0.02 and 0.15 – moderate effect; • between 0.15 and 0.35 – high.

[Source: prepared by author based on WarpPLS User Manual]

2.4 Summary of Chapter 2

In the second chapter the process of the development of the research design was explained in details. The research is explanatory and requires quantitative research methods in order to answer the research question and test the hypotheses. The research method of the study is determined as archival and documentary research, because the documents from the past are going to be studied.

The development of research framework was also discussed and explained. Banking industry was chosen because of seven critical factors. CSR disclosure evaluation framework was developed, showed and justified. Moreover, sources of information were disclosed and justified.

Finally, determination of data analysis method was conducted and critically assessed. As a result, the further study will be conducted via WarpPLS 6.0 software, using PLS-SEM analysis.

In the Chapter 3 descriptive statistics will be presented, construction of the model will be made, analysis of the model will be conducted and results of the research will be discussed.

3. Data analysis and development of recommendations for board of directors and CSR disclosure practices in banking industry

In this chapter data analysis and development of implications is conducted. First of all, sample and detailed descriptive statistics are presented and discussed. Secondly, analysis of the models is made and hypotheses are tested after what they become either accepted or rejected. Finally, results of the current study are presented and discussed with their practical managerial implications, academic value for other researchers and limitations.

3.1 Sample and descriptive statistics

In this subchapter sample and descriptive statistics are going to be presented. To be specific, distribution by countries, number of employees, board size, number of women on board, presence of CEO duality, profitability, ROA, sales, brand rating and CSR disclosure will be shown. As it was already mentioned, the sample consists of 101 banks.

3.1.1 Distribution by countries

The 101 banks in the sample come from 29 countries. In order to find specific numbers, see Figure 3.1. The minimum value is 1, which also a mode of the sample – it appears 7 times. The maximum value is 17, and it appears two times.

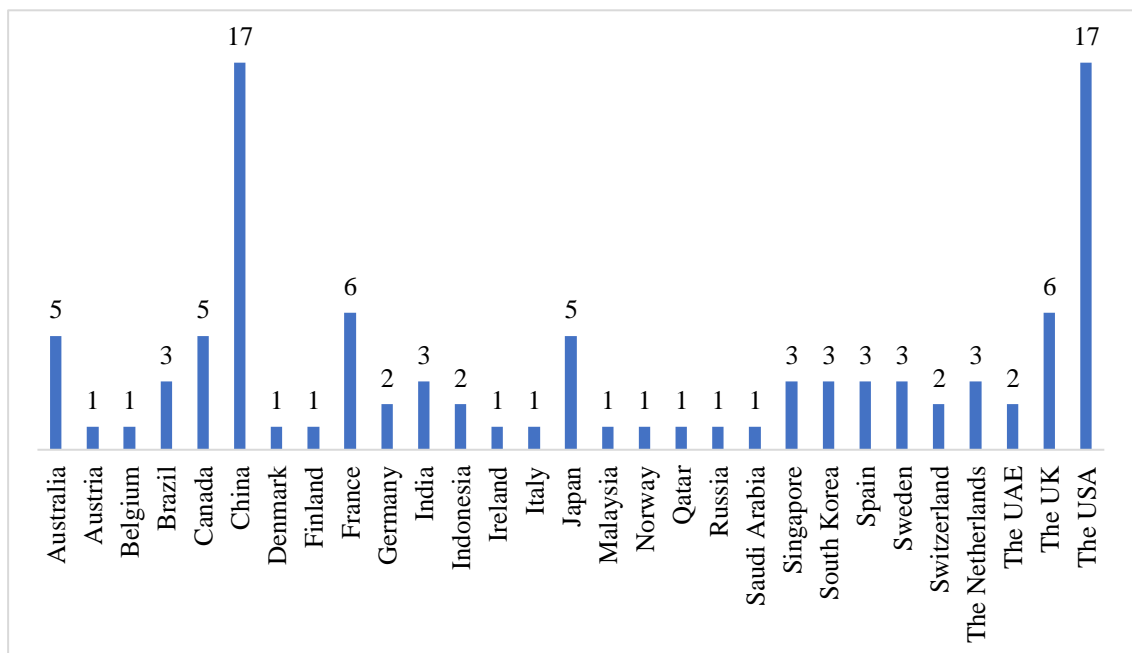


Figure 3.1 Distribution of banks by countries, units
[Source: made by author]

Also, it is convenient to see these countries highlighted in the world map (see Figure 3.2).

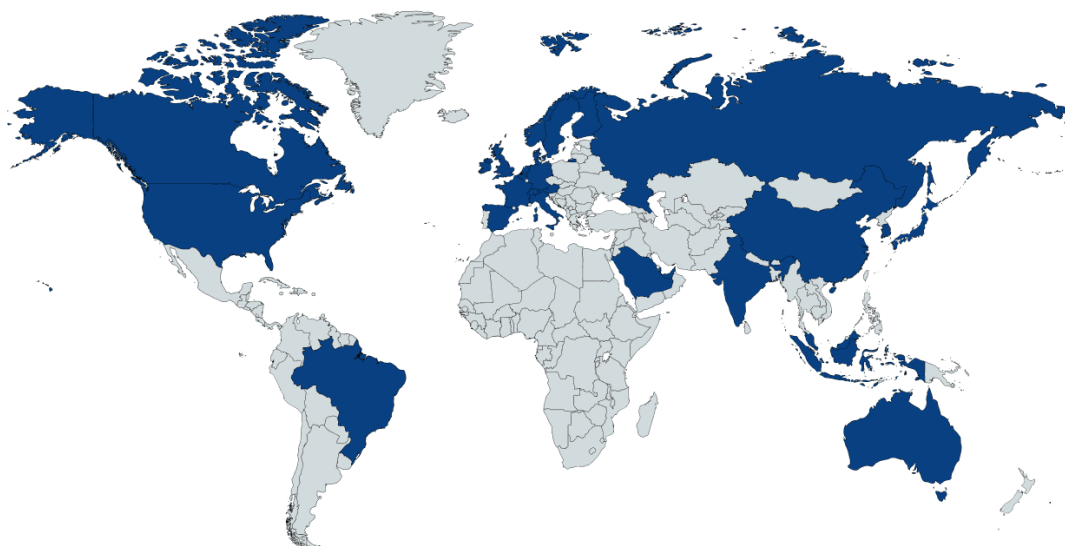


Figure 3.2 Countries with banks from sample
[Source: made by author]

3.1.2 Distribution by number of employees

The minimum number of employees in the sample is 170. The maximum number of employees in the sample is 473 691. The average number of employees per bank in the sample is 79 108 (mean). The median value is 47 397. Consequently, the distribution of employees in the sample is positively skewed because the mean is greater than the median. The distribution of banks by number of employees looks the following way (see Figure 3.3).

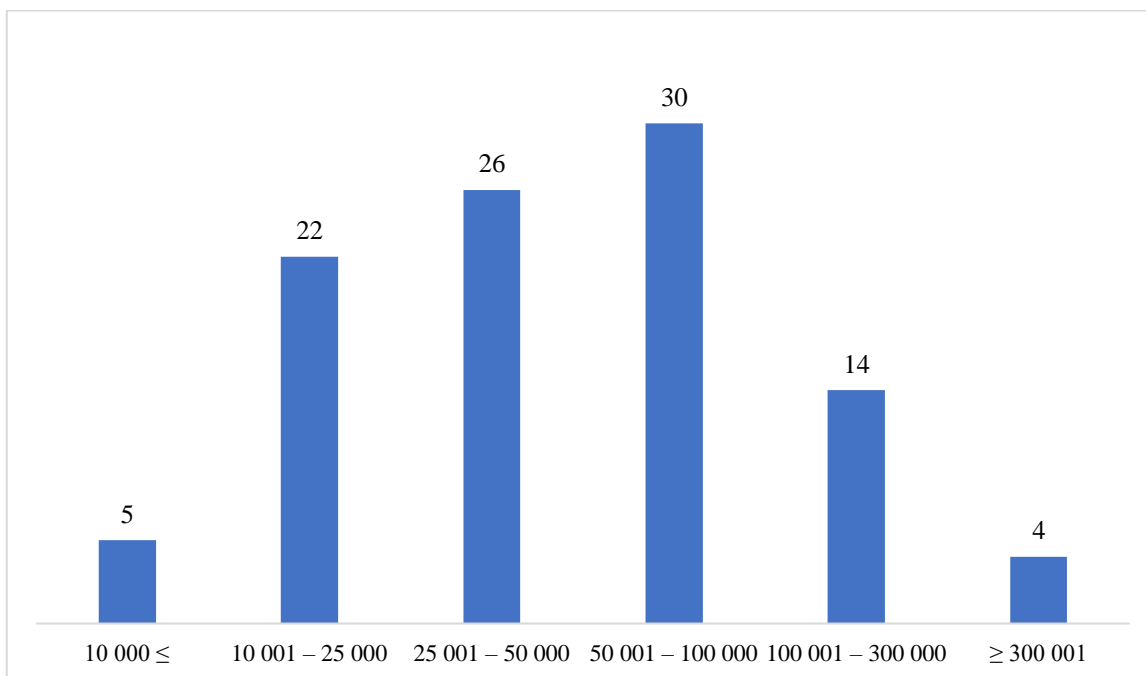


Figure 3.3 Employees distribution
[Source: made by author]

3.1.3 Distribution by board size

The minimum number of directors on board of directors in the sample is 7. The maximum number of directors on board of directors in the sample is 29. The average number of directors on

board of directors in the sample is 13,67 (mean). The median value is 13. The mode values are 10, 12 and 14 – they appear 12 times each. Consequently, skewness mostly does not exist in the distribution by board size. Graphically it can be presented the following way (see Figure 3.4).

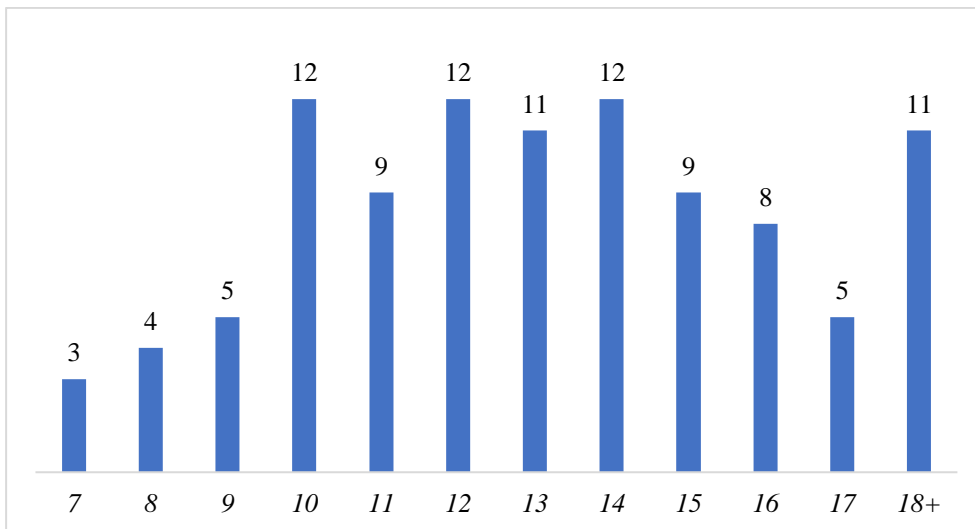


Figure 3.4 Board size distribution
[Source: made by author]

3.1.4 Distribution by number of women on board

The minimum number of women directors on board of directors in the sample is 0. The maximum number of women directors on board of directors in the sample is 11. The average number of women directors on board of directors in the sample is 3,30 (mean). The median value is 3. The mode value is 3 – 21 cases. Consequently, skewness mostly does not exist in the distribution by number of women on board. Graphically it can be presented the following way (see Figure 3.5).

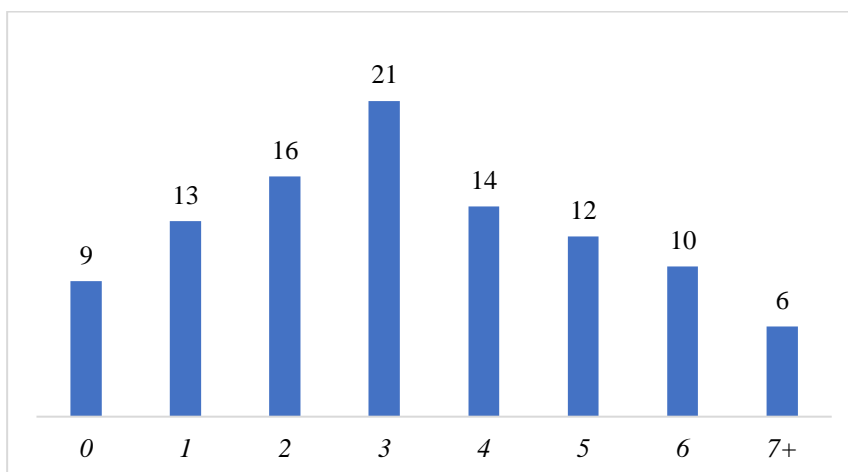


Figure 3.5 Women on board distribution
[Source: made by author]

3.1.5 Distribution by CEO duality

CEO duality is coded as “yes” or “no” based on presence of this phenomenon in a bank. As a result, the distribution looks like the following way (see Figure 3.6). Only quarter of banks in the sample has CEO duality.

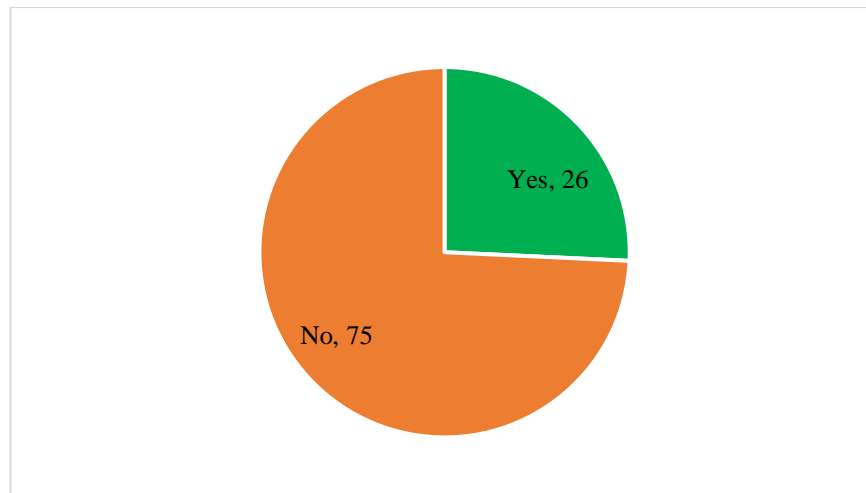


Figure 3.6 CEO duality distribution
[Source: made by author]

3.1.6 Distribution by profitability

The minimum value of profitability in the sample is 0,39%. The maximum value of profitability in the sample is 25,00%. The average value of profitability in the sample is 12,04% (mean). The median value is 11,80%. There are 14 modes, and these mode values are 6,70%, 7,90%, 8,20%, 8,80%, 9,80%, 11,40%, 11,50%, 11,70%, 12,40%, 12,67%, 13,00%, 13,40%, 16,00%, 19,00% – they appear 2 times each. Graphically profitability distribution can be presented the following way (see Figure 3.7).

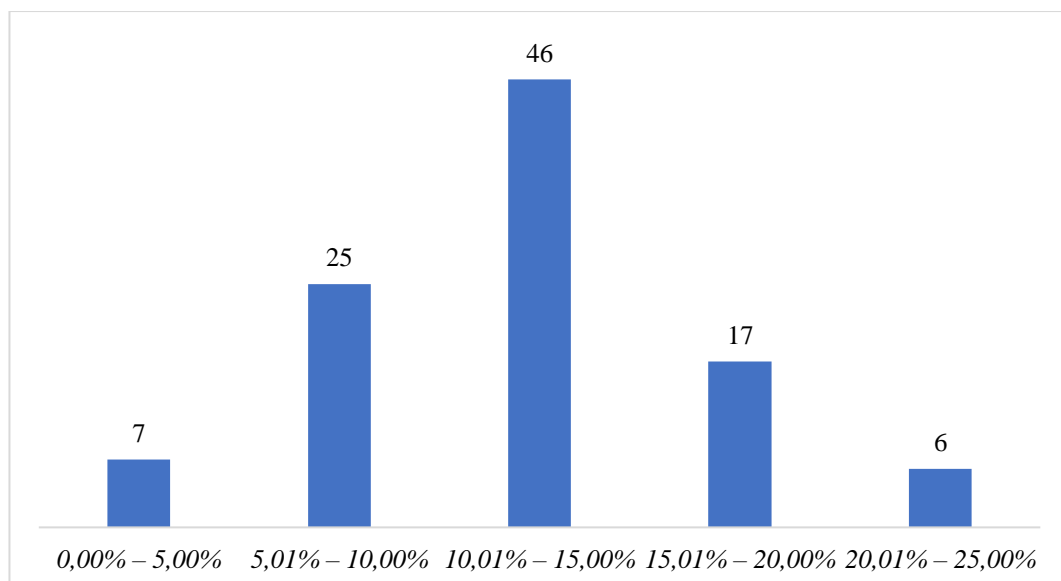


Figure 3.7 Profitability distribution
[Source: made by author]

3.1.7 Distribution by ROA

The minimum value of ROA in the sample is 0,02%. The maximum value of ROA in the sample is 4,00%. The average value of ROA in the sample is 0,99% (mean). The median value is 0,88%. There are 4 modes, and these mode values are 0,50%, 0,81%, 0,88%, 0,94% – they appear 3 times each. Graphically profitability distribution can be presented the following way (see Figure 3.8).

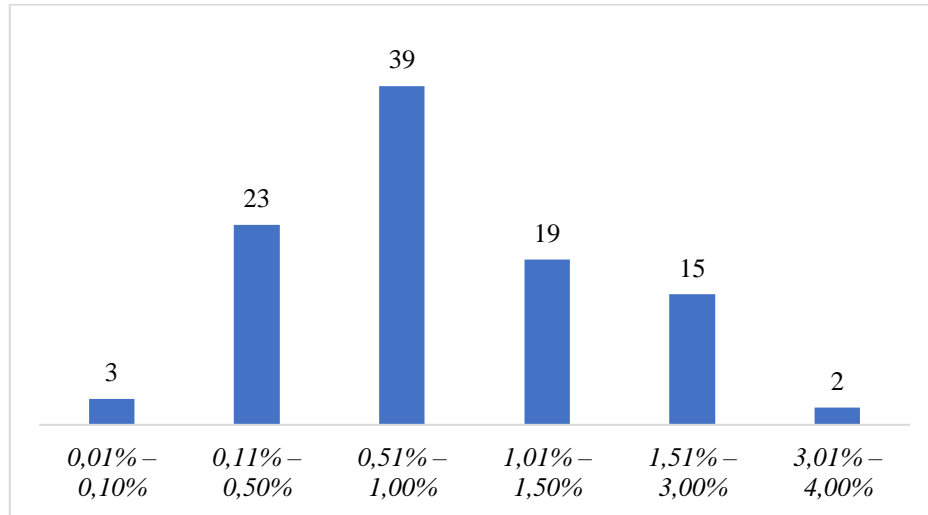


Figure 3.8 ROA distribution
[Source: made by author]

3.1.8 Distribution by Sales

The minimum value of sales in the sample is \$2,30 B. The maximum value of sales in the sample is \$175,90 B. The average value of sales in the sample is \$37,57 B (mean). The median value is \$25,78 B. Consequently, the distribution of sales in the sample is positively skewed because the mean is greater than the median. Graphically sales distribution can be presented the following way (see Figure 3.9).

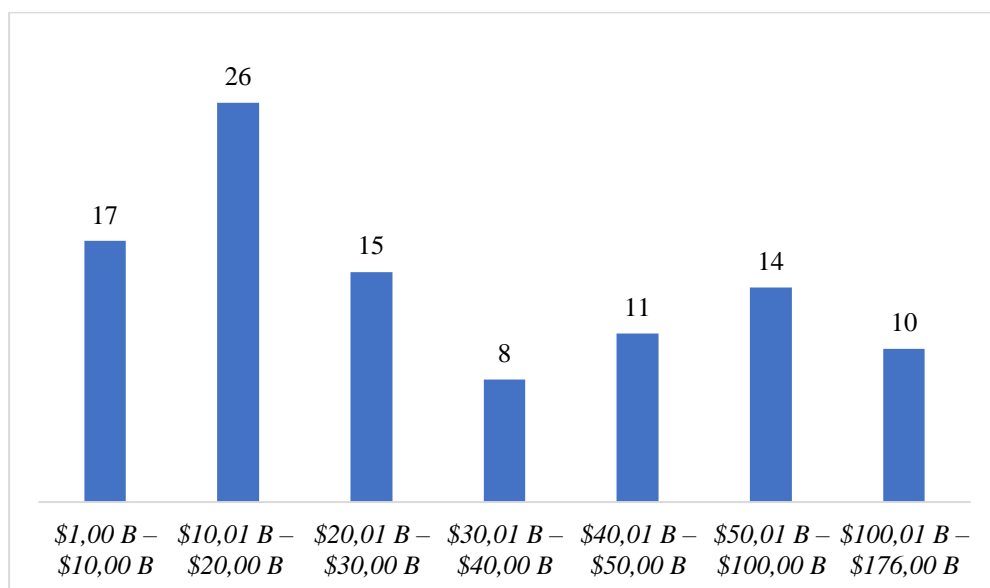


Figure 3.9 Sales distribution
[Source: made by author]

3.1.9 Distribution by Brand rating

The minimum value of brand rating in the sample is 1 (A-). The maximum value of brand rating in the sample is 9 (AAA+). The average value of brand rating in the sample is 5,77 (mean). The median value is 6 (AA+). The mode value is 5 (AA) – 26 cases. Graphically brand rating distribution can be presented the following way (see Figure 3.10).

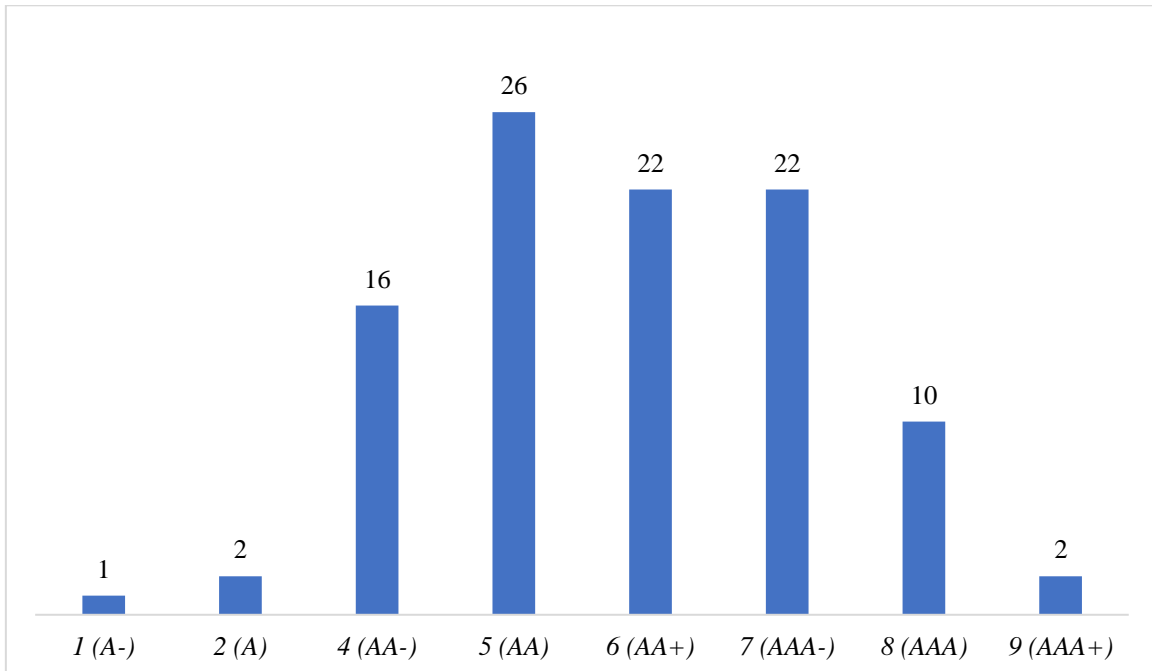


Figure 3.10 Brand rating distribution
[Source: made by author]

3.1.10 Distribution by CSR disclosure

1. Environmental factors

1.1. Environmental protection activities

The minimum value of environmental protection activities is 3 (“Detailed description in 6+ sentences with photos or justification”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of environmental protection activities is 4,24 (mean). The mode value is 5 – it appears 44 times. Graphically environmental protection activities distribution can be presented the following way (see Figure 3.11).

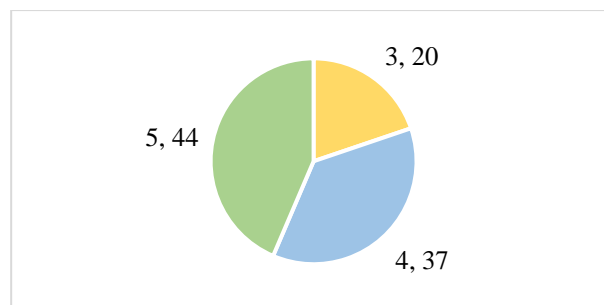


Figure 3.11 Environmental protection activities distribution
[Source: made by author]

1.2. Sustainable resource use

The minimum value of sustainable resource use is 2 (“Brief description in 3-5 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of sustainable resource use is 3,85 (mean). The mode value is 4 (“Brief description in 3-5 sentences including cost incurred and photos or graphs”) – it appears 40 times. Graphically sustainable resource use distribution can be presented the following way (see Figure 3.12).

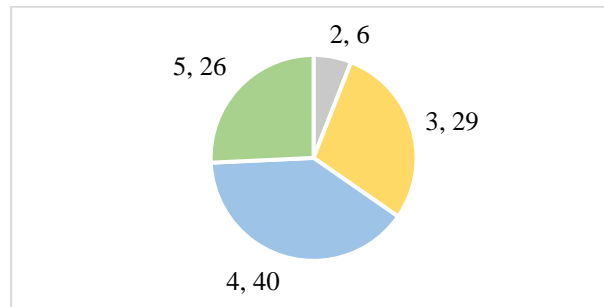


Figure 3.12 Sustainable resource use
[Source: made by author]

1.3. Energy efficiency

The minimum value of energy efficiency is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of energy efficiency is 2,83 (mean). The mode value is 3 (“Detailed description in 6+ sentences with photos or justification”) – it appears 30 times. Graphically energy efficiency distribution can be presented the following way (see Figure 3.13).

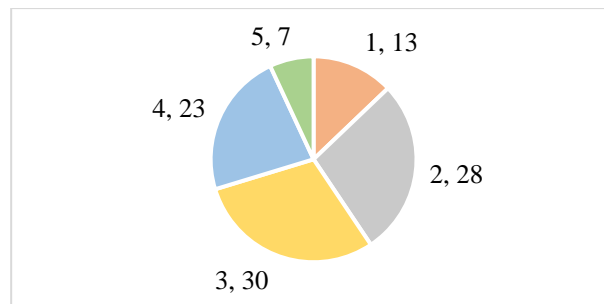


Figure 3.13 Energy efficiency distribution
[Source: made by author]

1.4. Waste reduction

The minimum value of waste reduction is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of waste reduction is 2,38 (mean). The mode value is 2 (“Brief description in 3-5 sentences”) – it appears 36 times. Graphically waste reduction distribution can be presented the following way (see Figure 3.14).

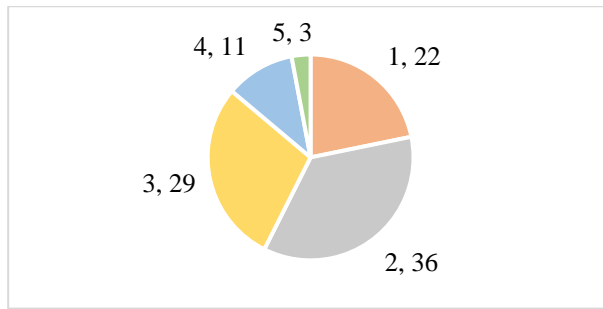


Figure 3.14 Waste reduction
[Source: made by author]

2. *Employees related factors*

2.1. *Equal treatment*

The minimum value of equal treatment is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of waste reduction is 3,57 (mean). The mode value is 4 (“Brief description in 3-5 sentences including cost incurred and photos or graphs”) – it appears 38 times. Graphically equal treatment distribution can be presented the following way (see Figure 3.15).

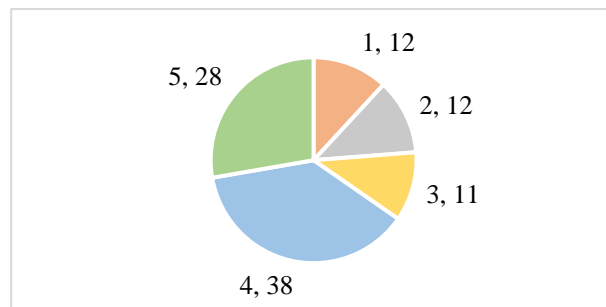


Figure 3.15 Equal treatment distribution
[Source: made by author]

2.2. *Diversity of employees*

The minimum value of diversity of employees is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of diversity of employees is 3,90 (mean). The mode value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”) – it appears 46 times. Graphically diversity of employees distribution can be presented the following way (see Figure 3.16).

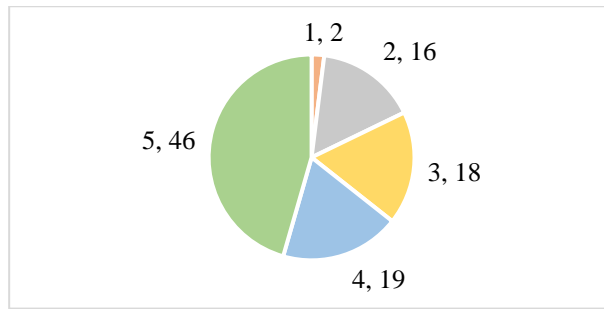


Figure 3.16 Diversity of employees distribution
[Source: made by author]

2.3. Trainings and development

The minimum value of trainings and development is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of trainings and development is 3 (mean). The mode value is 3 (“Detailed description in 6+ sentences with photos or justification”) – it appears 56 times. Graphically trainings and development distribution can be presented the following way (see Figure 3.17).

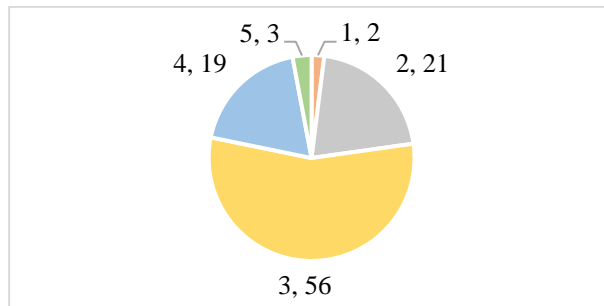


Figure 3.17 Trainings and development distribution
[Source: made by author]

2.4. Health and safety conditions at work

The minimum value of health and safety conditions at work is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of health and safety conditions at work is 2,69 (mean). The mode value is 2 (“Brief description in 3-5 sentences”) – it appears 39 times. Graphically health and safety conditions at work distribution can be presented the following way (see Figure 3.18).

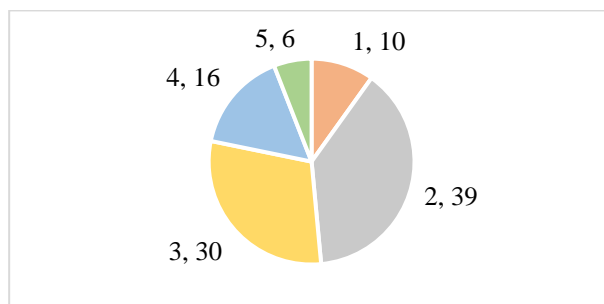


Figure 3.18 Health and safety conditions at work distribution
[Source: made by author]

2.5. Policy against discrimination

The minimum value of policy against discrimination is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of policy against discrimination is 3,50 (mean). The mode value is 5 – it appears 30 times. Graphically policy against discrimination distribution can be presented the following way (see Figure 3.19).

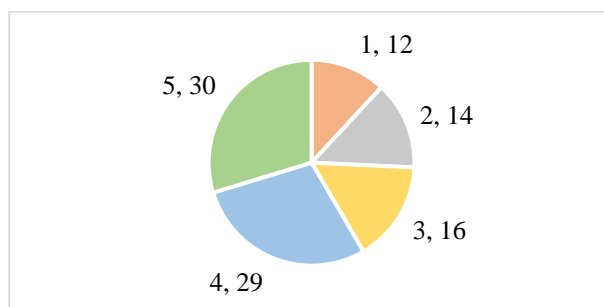


Figure 3.19 Policy against discrimination distribution
[Source: made by author]

3. Service related factors

3.1. Education and awareness

The minimum value of education and awareness is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of education and awareness is 2,30 (mean). The mode value is 2 (“Brief description in 3-5 sentences”) – it appears 41 times. Graphically education and awareness distribution can be presented the following way (see Figure 3.20).

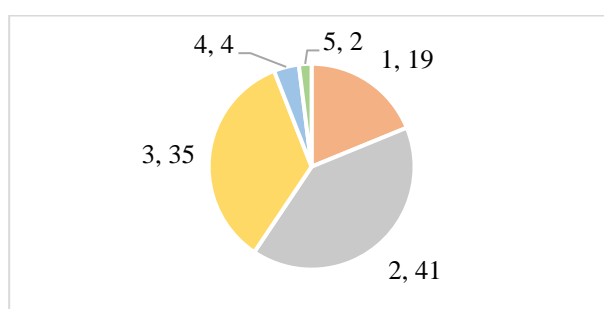


Figure 3.20 Education and awareness distribution
[Source: made by author]

3.2. Consumer data protection and privacy

The minimum value of consumer data protection and privacy is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of consumer data protection and privacy is 3,65 (mean). The mode value is 5 – it appears 35 times. Graphically consumer data protection and privacy distribution can be presented the following way (see Figure 3.21).

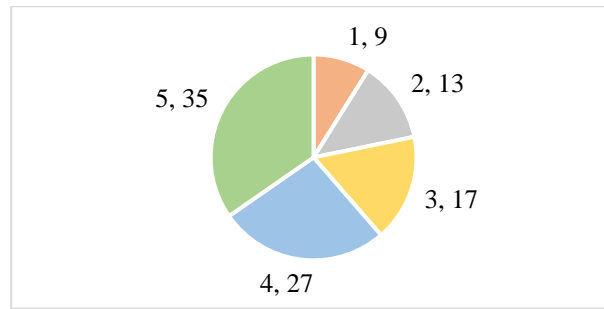


Figure 3.21 Consumer data protection and privacy
[Source: made by author]

3.3. Improvement of customer service

The minimum value of improvement of customer service is 1 (“General mention in 1-2 sentences”). The maximum value is 5 (“Detailed explanation of activities with cost involved in 6+ sentences with photos or graphs”). The average value of improvement of customer service is 2,41 (mean). The mode value is 2 (“Brief description in 3-5 sentences”) – it appears 46 times. Graphically improvement of customer service distribution can be presented the following way (see Figure 3.22).

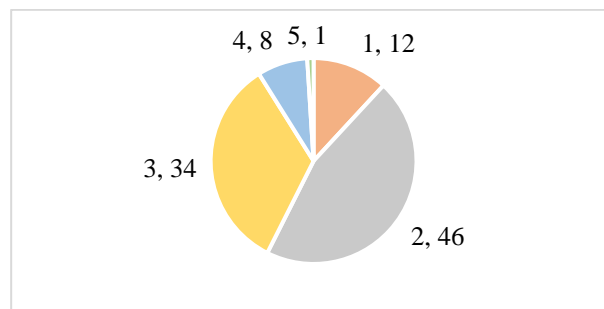


Figure 3.22 Improvement of customer service distribution
[Source: made by author]

3.1.11 Conclusion

All things considered, it can be stated that the sample consists of different units. In some cases the distribution is normal, while in other cases distribution is skewed. This is a limitation of the research; however, it should not affect the further study.

3.2 Analysis of the model

In this subchapter analysis of the research model is going to be presented in details. First of all, detailed step by step approach to conduct PLS-SEM model analysis will be shown. Secondly, outer and inner models are going to be discussed. Thirdly, models’ fit and quality indices will be tested. Finally, conclusions about hypotheses tested are going to be made.

3.2.1 Step by step approach to conduct PLS-SEM model

WarpPLS 6.0 helps to conduct structural equation modeling analysis using various methods, including PLS-SEM. The analysis is conducted through five steps.

Step 1. Create a project file to save work. In WarpPLS 6.0 it is impossible to start analysis without creating a file for the project. Luckily, WarpPLS 6.0 creates automatically file in required format and guides users through the analysis.

Step 2. Read the raw data used in the SEM analysis. The source of the data could be a file in xls, xlsx or txt format. The file must have the names of the variables in the first row and the values associated with those variables in the following rows. A file import wizard will appear and guide through the raw data uploading process. If data does not fit to the rules, warning message appears, and the process is stopped. User should correct the file with raw data and proceed with the step again.

Step 3. Pre-process the data for the SEM analysis. In this stage the raw data is checked for a few problems and corrected automatically, after that the data will be standardized. The problems that are checked during this step are: missing values, checking zero variance, identical column names, rank problems. Typically, standardized data range if from -4 to 4.

Step 4. Define the variables and links in the SEM model. In WarpPLS 6.0 there is a graphical interface, where you can interactively define a SEM model as a graph. In order to define SEM model, user should define the latent variables and links. In this stage user can define what type of latent variable is used: reflective or formative. The links could be direct or moderating. Direct links show relation between latent variables, while moderating links show relation between latent variables and direct links. In the current work only direct links will be used.

Step 5. Perform/view SEM analysis/model. In case if user does not select any specific option for the inner and outer model, the program uses default settings. These settings should be changed before the start of Step 5. The default settings are: PLS regression for outer model, Warp3 algorithm for inner model. Initially, step should be done with standard settings and then can be re-done to adjust settings. After proceeding with 5 steps user can explore details of the model: view general results, path coefficients and p-values, indicator loadings, standard errors and etc.

3.2.2 Outer and inner models

In PLS-SEM analysis, there are two types of models: (1) the inner model is the part of the model that describes the relationships among the latent variables that make up the model; (2) the outer model is the part of the model that describes the relationships among the latent variables and their indicators (Kock, 2020).

First of all, the approach to outer model should be discussed. The data for current research has no missing values or any other problems, however it was standardized. Initially all model's variables were defined as reflective. After proceeding with PLS-SEM analysis of the indicator weights and statistics was displayed (Table 3.1). Some of the indicators were not fitting to the

overall patten for latent variable. For example, for latent variable Employees, in general, VIF is higher than 2.5, however Emp3 and Emp 4 shows VIF less than 2.5 and has poor p-value.

Table 3.1 Matrix of indicator weights

Indicators	Employees	Environment	Service	Brand Rating	Financial results	Type	P-value	VIF
Emp1	(0.26)	0.00	0.00	0.00	0.00	R	0.003	4.20
Emp2	(0.26)	0.00	0.00	0.00	0.00	R	0.003	5.35
Emp5	(0.27)	0.00	0.00	0.00	0.00	R	0.002	5.87
Emp3	(0.18)	0.00	0.00	0.00	0.00	R	0.034	1.63
Emp4	(0.23)	0.00	0.00	0.00	0.00	R	0.009	2.15
Env2	0.00	(0.30)	0.00	0.00	0.00	R	<0.001	2.59
Env3	0.00	(0.30)	0.00	0.00	0.00	R	<0.001	2.52
Env4	0.00	(0.29)	0.00	0.00	0.00	R	0.001	2.26
Env1	0.00	(0.27)	0.00	0.00	0.00	R	0.002	1.81
Ser1	0.00	0.00	(0.43)	0.00	0.00	R	<0.001	1.59
Ser2	0.00	0.00	(0.39)	0.00	0.00	R	<0.001	1.33
Ser3	0.00	0.00	(0.42)	0.00	0.00	R	<0.001	1.49
Profitability	0.00	0.00	0.00	0.00	(0.54)	F	<0.001	1.88
ROA	0.00	0.00	0.00	0.00	(0.54)	F	<0.001	1.89
Sales	0.00	0.00	0.00	0.00	(0.06)	F	0.262	1.01

[Source: made by author]

Based on VIF, the new type of latent variables was defined as following:

- Board Size – reflective variable based on 1 indicator;
- Women on Board – reflective variable based on 1 indicator;
- CEO Duality – reflective variable based on 1 indicator;
- Employees – reflective variable based on 5 indicators;
- Environment – formative variable based on 4 indicators;
- Service – formative variable based on 3 indicators;
- Brand Rating – reflective variable based on 1 indicator;
- Finance – formative variable based on 3 indicators.

Moreover, after careful revision of p-values for loading of each indicator in respective latent variables it was defined to eliminate several indicators:

- G1 and Y3, Y4 because of the VIF value was not fitting to the pattern of latent variable type;
- Sales should be eliminated due to low p-value.

Due to these changes values of robustness check coefficient were improved (Table 3.2).

Table 3.2 Comparison of the coefficients of the latent variables

Initial configuration	Employees	Environment	Service	Financial results
Composite Reliable	0.92	0.92	0.85	0.69
Cronbach's Alpha	0.88	0.87	0.73	0.43
AVE	0.69	0.73	0.65	0.56
New configuration	Employees	Environment	Service	Financial results

Composite Reliable	0.97	0.92	0.85	0.91
Cronbach's Alpha	0.95	0.87	0.73	0.81
AVE	0.91	0.80	0.65	0.84
Improvement, in%	Employees	Environment	Service	Financial results
Composite Reliable	6%	1%	0%	32%
Cronbach's Alpha	8%	0%	0%	89%
AVE	32%	9%	0%	50%

[Source: made by author]

Secondly, the settings for inner model should be defined. In order to customize inner modeling settings, the relationship among variables should be checked. Based on the results of the initial analysis we adjust setting of inner model for connection between CEO Duality and variables representing CSR disclosure (Table 3.3).

Table 3.3 Linear and non-linear relationships among latent variables

	Board size	Women on Board	CEO Duality	Employees	Environment	Service
Employees	Warped	Warped	Linear			
Environment	Warped	Warped	Linear			
Service	Warped	Warped	Linear			
Reputation				Warped	Warped	Warped
Finance				Warped	Warped	Warped

[Source: made by author based on the analysis result]

To sum up, the analysis of latent variables' coefficients has confirmed that outer model for non-linear PLS-SEM was developed in a right way; moreover, relationship between latent variables were checked and defined accordingly. Therefore, it is expected that model will provide reliable results.

3.2.3 Models fit and quality indices

In order to get full overview of relationship between board composition, CSR disclosure and company performance, two models were built. Even though overall concept of modeling is based on the rule "from particular to general", the results will be presented in reverse order.

General model. It is the model, where influence of board composition components on company performance (brand rating and finance) via mediating variable of CSR disclosure was evaluated (Figure 3.23).

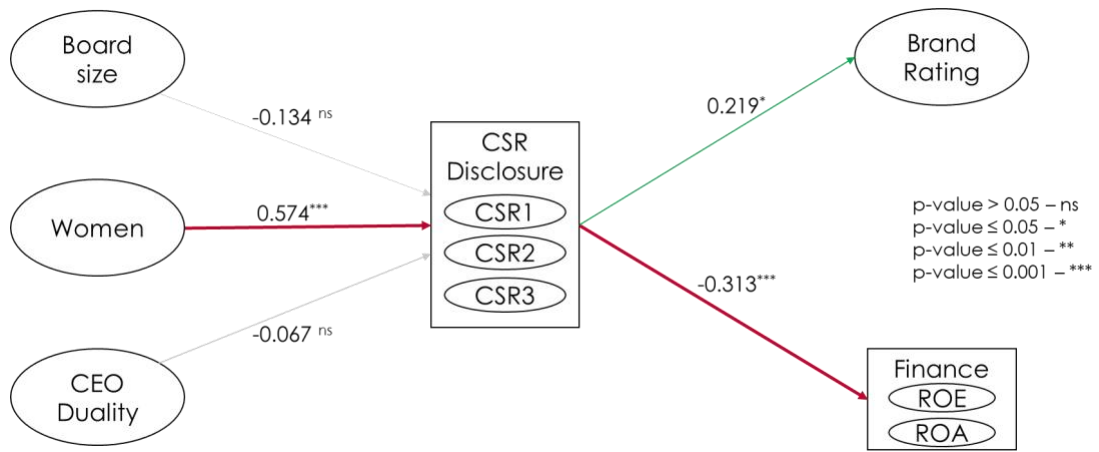


Figure 3.23 Model 1
[Source: made by author]

Quality indices of the model are described below (see Table 3.4). In general, this model shows good quality and all relationships are significant.

	Value	Significance criteria	Result
Average path coefficient (APC)	0.261	P<0.001	Significant
Average R-squared (ARS)	0.179	P<0.015	Significant
Average adjusted R-squared (AARS)	0.166	P<0.021	Significant
Average block VIF (AVIF)	1.040	acceptable if ≤ 5, ideally ≤ 3.3	Accepted
Average full collinearity VIF (AFVIF)	1.443	acceptable if ≤ 5, ideally ≤ 3.3	Accepted
Tenenhous GoF (GoF)	0.405	small ≥ 0.1, medium ≥ 0.25, large ≥ 0.36	Large
Sympson's paradox ratio (SPR)	1	acceptable if ≥ 0.7, ideally = 1	Accepted
R-squared contribution ratio (RSCR)	1	acceptable if ≥ 0.9, ideally = 1	Accepted
Statistical suppression ratio (SSR)	1	acceptable if ≥ 0.7	Accepted
Nonlinear bivariate causality direction ratio (NLBCDR)	1	acceptable if ≥ 0.7	Accepted

[Source: made by author]

The mediating effect of board characteristics on financial and non-financial performance has different power. Despite the researches proving direct strong influence of board characteristics on performance and CSR disclosure separately, the current model showed very low mediating effect of board characteristics on performance via CSR disclosure.

No size of the board, nor CEO duality have significant influence on finance and brand rating, while number of women on board has significant influence on finance and brand rating. However, relationship between number of women on board and finance is negative, while it was expected to be positive.

Detailed model. It is the model, where influence of board composition components on company performance (brand rating and finance) via mediation of components of CSR disclosure was evaluated (Figure 3.24).

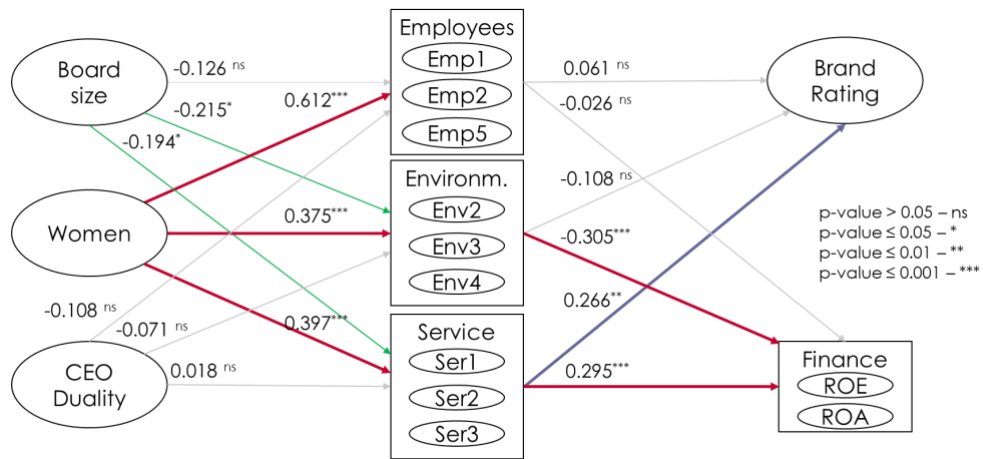


Figure 3.24 Model 2
[Source: made by author]

Quality indices of the model are described below (see Table 3.5). In general, this model shows good quality and all relationships are significant.

Table 3.5 Model 2 fit and quality indices

	Value	Significance criteria	Result
Average path coefficient (APC)	0.212	P<0.007	Significant
Average R-squared (ARS)	0.166	P<0.021	Significant
Average adjusted R-squared (AARS)	0.141	P<0.036	Significant
Average block VIF (AVIF)	1.062	acceptable if ≤ 5, ideally ≤ 3.3	Accepted
Average full collinearity VIF (AFVIF)	1.703	acceptable if ≤ 5, ideally ≤ 3.3	Accepted
Tenenhaus GoF (GoF)	0.387	small ≥ 0.1, medium ≥ 0.25, large ≥ 0.36	Large
Sympson's paradox ratio (SPR)	0.8	acceptable if ≥ 0.7, ideally = 1	Accepted
R-squared contribution ratio (RSCR)	0.852	acceptable if ≥ 0.9, ideally = 1	Accepted
Statistical suppression ratio (SSR)	0.933	acceptable if ≥ 0.7	Accepted
Nonlinear bivariate causality direction ratio (NLBCDR)	0.933	acceptable if ≥ 0.7	Accepted

[Source: made by author]

Summary of information about path indices is presented below (see Table 3.6), and the following color coding was used:

- **P-value**, almost all paths are significant. However, some shows result close to the border of 15%;
- **Effect sizes** for most of the paths are high and only for two of them are low (bold green – high; bold orange – moderate; bold red – low).

Table 3.6 Path indices

Model	Path	P-value	Path coefficient	Standard errors	Effect sizes
1	BrdSize -> CSRd	0.08	-0.13	0.10	0.04
	Women -> CSRd	<0.001	0.57	0.09	0.35
	CEO Duality -> CSRd	0.25	-0.07	0.10	0.01
	CSRd -> BrandRating	0.01	0.29	0.09	0.05
	CSRd -> Finance	<0.001	-0.31	0.09	0.10

Model	Path	P-value	Path coefficient	Standard errors	Effect sizes
	BrdSize - -> Finance	0.27	0.042	0.07	0.01
	Women - -> Finance	0.01	-0.18	0.07	0.00
	CEO Duality - -> Finance	0.38	0.021	0.07	0.05
	BrdSize - -> BrandRating	0.34	-0.029	0.07	0.01
	Women - -> BrandRating	0.03	0.125	0.07	0.00
	CEO Duality - -> BrandRating	0.42	-0.015	0.07	0.00
2	BrdSize -> Empl	0.10	-0.13	0.10	0.02
	BrdSize -> Envir	0.01	-0.22	0.09	0.06
	BrdSize -> Service	0.02	-0.19	0.09	0.06
	Women -> Empl	<0.001	0.61	0.08	0.38
	Women -> Envir	<0.001	0.38	0.09	0.16
	Women -> Service	<0.001	0.40	0.09	0.18
	CEO Duality -> Empl	0.13	-0.11	0.10	0.02
	CEO Duality -> Envir	0.23	-0.07	0.10	0.01
	CEO Duality -> Service	0.43	0.02	0.99	0.00
	Empl -> BrandRating	0.27	0.06	0.10	0.01
	Empl -> Finance	0.40	-0.03	0.99	0.01
	Envir -> BrandRating	0.13	-0.11	0.10	0.02
	Envir -> Finance	<0.001	-0.31	0.09	0.10
	Service -> BrandRating	0.00	0.27	0.09	0.08
	Service -> Finance	<0.001	0.30	0.09	0.09

[Source: made by author]

To verify quality of the model, check via WarpPLS 6.0 in-built calculator was done. The calculator shows what sample size is needed in order to get statistically significant results. As a result, minimum sample size and statistical power requirements were studied.

According to the WarpPLS 6.0 in-built calculator, it was needed to choose the minimum absolute significant path coefficient and the significance level as well as power level in the model. User Guide of WarpPLS 6.0 suggests to use the standard value for power level (0.80) and significance level (0.05). According to the p-value, the minimum absolute significant path coefficient for model 1 is 0.29 for “CSRd -> BrandRating”; therefore, the results of standard input value are the following (see Figure 3.25):

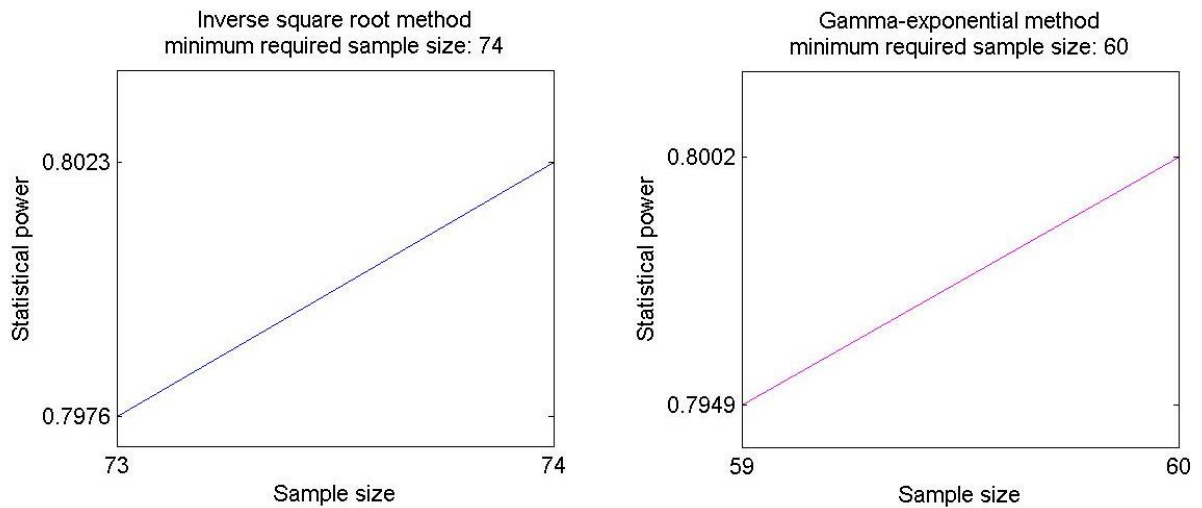


Figure 3.25 Minimum required sample size: model 1
[Source: made by author]

For the second model, the minimum absolute significant path under condition of significance level of 0.05 is path “Service -> BrandRating” with path coefficient value of 0.27. Therefore, the results of calculation of the minimum required sample are the following (see Figure 3.26):

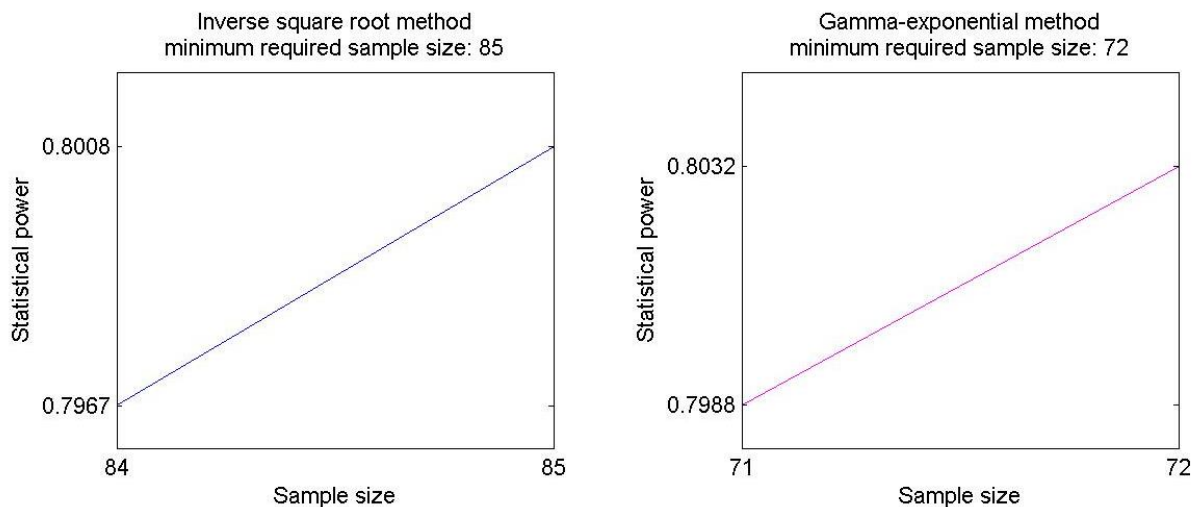


Figure 3.26 Minimum required sample size: model 2
[Source: made by author]

To sum up, it can be seen that for both models current sample size is sufficient; therefore, conclusion about hypotheses can be drawn.

3.2.4 Hypotheses summary

After conducting path coefficient analysis and testing model fit and quality, it is possible to draw conclusions about hypotheses stated in the beginning of the research. There are two options – to accept or to reject initial research hypotheses, and these options will be used based on p-value (see Table 3.7). As a result, 10 hypotheses are accepted, 13 hypotheses are rejected due to

insignificant result; and 3 hypotheses are rejected as paths have significant and non-expected effect.

Table 3.7 Results of hypotheses testing

Hypothesis	Hypothesis accepted (expected effect)	Hypothesis rejected (non-expected effect)	Hypothesis rejected (insignificant)
H1: Size of the board negatively influences CSR disclosure.	Could be accepted with significance level 0.10		+
H1a: Size of the board negatively influences CSR disclosure component Employees.	Could be accepted with significance level 0.10		+
H1b: Size of the board negatively influences CSR disclosure component Environment.	+		
H1c: Size of the board negatively influences CSR disclosure component Service.	+		
H2: Number of women on board positively influences CSR disclosure.	+		
H2a: Number of women on board positively influences CSR disclosure component Employees.	+		
H2b: Number of women on board positively influences CSR disclosure component Environment.	+		
H2c: Number of women on board positively influences CSR disclosure component Service.	+		
H3: CEO duality positively influences CSR disclosure.			+
H3a: CEO duality positively influences CSR disclosure component Employees.			+
H3b: CEO duality positively influences CSR disclosure component Environment.			+
H3c: CEO duality positively influences CSR disclosure component Service.			+
H4: CSR disclosure positively influences financial performance.		+	
H4a: CSR disclosure component Employees positively influences financial performance.			+
H4b: CSR disclosure component Environment positively influences financial performance.		+	
H4c: CSR disclosure component Service positively influences financial performance.	+		
H5: CSR disclosure positively influences non-financial performance.	+		
H5a: CSR disclosure component Employees positively influences non-financial performance.			+

Hypothesis	Hypothesis accepted (expected effect)	Hypothesis rejected (non-expected effect)	Hypothesis rejected (insignificant)
H5b: CSR disclosure component Environment positively influences non-financial performance.			+
H5c: CSR disclosure component Service positively influences non-financial performance.	+		
H6: Size of the board negatively influences financial performance via mediating effect of CSR disclosure.			+
H7: Number of women on board positively influences financial performance via mediating effect of CSR disclosure.		+	
H8: CEO duality positively influences financial performance via mediating effect of CSR disclosure.			+
H9: Size of the board negatively influences non-financial performance via mediating effect of CSR disclosure.			+
H10: Number of women on board positively influences non-financial performance via mediating effect of CSR disclosure.	+		
H11: CEO duality positively influences non-financial performance via mediating effect of CSR disclosure.			+

[Source: made by author]

3.3 Discussion of the results

In this subchapter results of the study are going to be discussed. First of all, managerial implications will be shown. Secondly, academic value of the research will be presented. Finally, limitations of the study will be discussed.

3.3.1 Results discussion

After conducting a research, results are going to be discussed. Hypotheses H1, H1a were rejected due to insignificance, what can be interpreted as there is lack of evidence that board size influences extent of CSR disclosure, and specifically disclosure of information regarding employees' welfare. However, hypotheses H1b and H1c were accepted, what can be interpreted the way that the larger board size in a company, the less CSR information regarding environment and services is disclosed. These results support and go in line with previous researches such as (Khan, 2010), (Jizi, 2017), (Ahmed et al., 2006) and (Dey, 2008).

Most of the hypotheses regarding women on board (H2, H2a, H2b, H2c, H10) were accepted, what can be interpreted the way that the more women on board helps to increase extent

of CSR disclosure due to higher empathy and stakeholders' expectations. Moreover, women on board can increase trust of customers in a company via increasing CSR disclosure extent, what also meets stakeholders' expectations. These results support and go in line with previous researches such as (Jizi, 2017), (Khan, 2010), (Rao, 2016), (Sundarasan, 2015).

All the hypotheses regarding presence of CEO duality (H3, H3a, H3b, H3c, H8, H11) were rejected due to insignificance, what can be interpreted the way that there is lack of evidence that level of CEO control on board of directors does not affect extent of CSR disclosure as well as company performance via mediating effect of CSR disclosure. These results seem to be specific for banking industry context, because in most cases (about 75%) there is no CEO duality in banks, and CEOs are not expected by stakeholders to use CSR disclosure as a primary tool to improve companies' performance.

Hypotheses H4 and H4b were rejected due to non-expected effect. Therefore, it can be interpreted the way that stakeholders do not expect from banks to disclose CSR information in general and specifically regarding environment. These results seem to be specific for banking industry context, because, probably, stakeholders are more concerned about CSR and CSR disclosure practices regarding environment at production companies, which use a lot of natural resource to function and create different kinds of externalities, rather than banks, where effects within value chains are traditionally less harmful for the society and environment.

Nevertheless, hypothesis H4a was rejected due to insignificance, what can be interpreted as there is lack of evidence that CSR disclosure regarding employees' welfare is indifferent to stakeholders. However, hypothesis H4c was accepted, what can be interpreted the way that the disclosure of CSR information regarding data protection, customers' education and awareness as well as improvement of customer service is expected from banks and valued by stakeholders. These results seem to be specific for banking industry context, because banks are expected by stakeholders to protect data of customers properly in order to be trustworthy and competitive.

Hypotheses H5 and H5c were accepted, what can be interpreted the way that the disclosure of CSR information increases the trust in a bank in general, and specifically CSR information regarding data protection, customers' education and awareness as well as improvement of customer service is expected from banks and valued by customers. However, hypotheses H5a, H5b were rejected due to insignificance, what means that there is lack of evidence CSR disclosure regarding employees' welfare and environment is indifferent to stakeholders.

These results support and go in line with previous researches such as (Famiyeh, 2016) and (Beurden, Gössling, 2008). Moreover, positive relationship between non-financial performance and CSR disclosure regarding data protection and service improvements seems to be industry-

specific aspects, because banks are expected to protect data of customers properly in order to be trustworthy and competitive.

Hypotheses H6 and H9 were rejected due to insignificance, what can be interpreted the way that there is lack of evidence that the size of the board does not affect company performance via mediating effect of CSR disclosure. These results seem to be specific for banking industry context, because, probably, stakeholders do not expect boards of banks to use CSR disclosure as a primary tool to improve companies' performance.

Hypothesis H7 was rejected due to non-expected effect. Therefore, it can be interpreted the way that the more women on board a company has, the worse financial performance via mediating effect of CSR disclosure is happening. This result seems to be specific for banking industry context, because, probably, stakeholders expect women to pay more attention to social, rather than financials goals, what is needed by banking industry.

3.3.2 Managerial implications

The results of the research can bring business value to business community improving financial and non-financial performance through changes in board of directors' composition via CSR disclosure practices. Therefore, based on the obtained results it is possible to propose the following managerial implications as recommendations to the companies.

Firstly, in order to improve extent of CSR disclosure in annual CSR reports it is recommended to decrease number of directors on board of directors and increase the number of women on board of directors. These changes also bring other improvements, which are described below.

Secondly, in order to increase company's profitability (ROE) and return on assets (ROA), for example, for meeting key performance indicators (KPIs) and, as a result, get bonuses, top-management team can increase extent of CSR disclosure regarding services factors, via increasing number of women on board.

Thirdly, in order to increase company's non-financial performance based on brand rating, consisted from both reputation and value for potential customers, stakeholders and shareholders, top-management team can increase extent of CSR disclosure regarding services factors, via increasing number of women on board.

Finally, the presence or absence of CEO duality in a company does not influence CSR disclosure extent as well as financial and non-financial performance, so that this characteristic of the board of directors is better to be left as it is.

All things considered, the obtained results of the current study can be used by business community in order to improve financial and non-financial performance in case they are implemented.

3.3.3 Academic value of the research

The academic value of the current research consists of several factors, contributing to theories of corporate governance and CSR as well as increasing the context of research. These factors are the following:

1. Test of the models used in different industries and markets to global banking industry. In this research, models tested in Malaysia, Indonesia, Pakistan, India and China regarding stock companies were applied to banking industry in global context, and results were statistically significant. Consequently, current study proved that the models can be used for further academic research in context of global industries.
2. Test of a new research model that includes brand rating as resulting variable. In order to be more objective regarding companies' reputation, brand rating developed by Brand Finance agency was taken as a resulting variable, and the results were statistically significant. Consequently, brand rating can be considered by researchers as a good variable for conducting further studies in field of CSR and CSR disclosure.
3. Development of a new framework how to evaluate CSR disclosure. During the research model building phase, based on the previous studies, a new CSR disclosure evaluation framework was created, that showed its usefulness in conducting CSR disclosure studies. As a result, the new framework can be used for further academic research.
4. CSR disclosure regarding employees' trainings and development as well as health and safety conditions at work showed statistical insignificance. As a result, in further academic studies researches can exclude these factors from evaluation.

All things considered, the current study produced a new and significant academic value for the field of CSR and specifically CSR disclosure, which is a developing part of management science. Moreover, the research improved existing academic practices, suggesting new ones for conducting further researches in field of CSR disclosure.

3.3.4 Limitations of the research

Every research has its own limitations, and it is important to admit and highlight the limitations of the current research. These limitations are the following:

1. The sample size. Statistically significant results can be produced based on the current sample size; however, it is better to have a greater sample in order to get more objective picture.
2. The countries. In the sample there were banks from 29 countries, while there are 193 officially admitted countries in the world, according to United Nations. Therefore, it is better to have representative banks from other countries in order to get more objective picture.

3. The brand rating. All the banks studied during the research had brand rating no lower than A-, what means they have a very strong brand rating. In order to be more objective, it is better to include banks with different ratings from AAA+ to C-.
4. The board characteristics. In the current research there were three board characteristics studied: board size, number of women on board and presence of CEO duality. In order to be more objective, it could be better to include other board characteristics such as, for instance, number of foreigners and education.
5. The currency transfer in sales. In order to make a standardized sample, it was needed to transfer all the currencies to USD. This was done based on Forbes and Bloomberg sources; however, these transfers can also be unprecise, what could influence the model.
6. Author's subjectivity in CSR disclosure evaluation. In order to be as objective as possible, special Likert-like scale with detailed points was produced. However, even this scale included characteristics such as "detailed" and "general", what is decided and evaluated by the author of research.

Initially, information on presence of foreigners on board of directors was planned to be collected, but it was found, that only a few banks highlighted this information in their reports; in some cases, it was totally impossible to distinguish foreigner from not-foreigner due to lack of photos, knowledge about names and citizenship. As a result, it was decided to drop this characteristic.

All things considered, the abovementioned limitation should be taken into account by academic researchers, who can do the further research based on this study, and practitioners, who can decide to implement recommendations given.

3.4 Summary of Chapter 3

In the third chapter data analysis and development of implications for both business and academic communities were presented. The sample and descriptive statistics were shown and discussed in details. The sample size is sufficient for conducting the research and getting results, that are statistically significant and can be used in the future.

Analysis of the data led to creation of two research models that were used in order to test all the research hypotheses. The process of analysis, characteristics of the data and criteria of their assessment were described in details. After that, research hypotheses were tested, and 10 hypotheses were accepted, 13 hypotheses were rejected due to insignificant result; and 3 hypotheses were rejected as paths had significant and non-expected effect.

As a result, the managerial implications in the form of recommendations based on the results of the research were drawn, as well as academic value of the current study for potential

researchers was discussed. Finally, the limitations of the research were presented, admitted and explained.

Conclusion

The goal of the current research was to identify the effects of board composition on company financial and non-financial performance via mediating factor of CSR disclosure in the global banking industry. All things considered; it can be stated that this goal is reached.

The goal was reached via completing several steps. First of all, justification of the relevance of the study was done. Secondly, conceptual model of the research was developed. Thirdly, proper research approach including data collection and data analysis was identified. Fourthly, verification of the model based on an empirical study was done. Finally, recommendations for researchers on further development of the topic and for practitioners on approaches to CSR disclosure and board composition were suggested.

In the Chapter 1 concepts of board of directors, its composition, CSR and CSR disclosure were defined and analyzed. Then the research framework for the further work was created and theoretical conceptual research model in several versions was built.

Among characteristics of the board of directors, board size, number of women on board and CEO duality were taken into consideration. CSR disclosure framework evaluated 3 general aspects of CSR – Environment, Employees, Service – with 14 specific characteristics via 6-point Likert-based scale.

Financial performance indicators were represented by Profitability (ROE), Return on Assets (ROA) and Sales (revenue), while non-financial indicator was brand rating by Brand Finance. Finally, 26 research hypotheses were introduced, and two conceptual research models were built.

In the Chapter 2 the process of the development of the research design was explained in details. The research was identified as an explanatory and required quantitative research methods in order to answer the research question and test the hypotheses. The research method of the study was determined as archival and documentary research, because the documents from the past were planned to be studied. Total time spent on data search, collection and evaluation was 429 hours.

Then the development of research framework was discussed and explained. Banking industry was chosen because of seven critical factors. CSR disclosure evaluation framework was developed, showed and justified, as well as sources of information were disclosed and justified.

Finally, determination of data analysis method was conducted and critically assessed. As a result, the further study was conducted via WarpPLS 6.0 software, using PLS-SEM analysis.

In the Chapter 3 data analysis and development of implications for both business and academic communities were presented. The sample and descriptive statistics were shown and discussed in details. The sample size was sufficient for conducting the research and getting results, that are statistically significant and can be used in the future.

Analysis of the data led to creation of two research models that were used in order to test all the research hypotheses. The process of analysis, characteristics of the data and criteria of their evaluation were described in details. After that, research hypotheses were tested, and the results are the following:

Accepted hypotheses:

1. H1b: Size of the board negatively influences CSR disclosure component Environment.
2. H1c: Size of the board negatively influences CSR disclosure component Service.
3. H2: Number of women on board positively influences CSR disclosure.
4. H2a: Number of women on board positively influences CSR disclosure component Employees.
5. H2b: Number of women on board positively influences CSR disclosure component Environment.
6. H2c: Number of women on board positively influences CSR disclosure component Service.
7. H4c: CSR disclosure component Service positively influences financial performance.
8. H5: CSR disclosure positively influences non-financial performance.
9. H5c: CSR disclosure component Service positively influences non-financial performance.
10. H10: Number of women on board positively influences non-financial performance via mediating effect of CSR disclosure.

Rejected hypotheses due to insignificant results:

1. H1: Size of the board negatively influences CSR disclosure.
2. H1a: Size of the board negatively influences CSR disclosure component Employees.
3. H3: CEO duality positively influences CSR disclosure.
4. H3a: CEO duality positively influences CSR disclosure component Employees.
5. H3b: CEO duality positively influences CSR disclosure component Environment.
6. H3c: CEO duality positively influences CSR disclosure component Service.
7. H4a: CSR disclosure component Employees positively influences financial performance.
8. H5a: CSR disclosure component Employees positively influences non-financial performance.
9. H5b: CSR disclosure component Environment positively influences non-financial performance.
10. H6: Size of the board negatively influences financial performance via mediating effect of CSR disclosure.

11. H8: CEO duality positively influences financial performance via mediating effect of CSR disclosure.
12. H9: Size of the board negatively influences non-financial performance via mediating effect of CSR disclosure.
13. H11: CEO duality positively influences non-financial performance via mediating effect of CSR disclosure.

Rejected hypotheses due to significant non-expected effect:

1. H4: CSR disclosure positively influences financial performance.
2. H4b: CSR disclosure component Environment positively influences financial performance.
3. H7: Number of women on board positively influences financial performance via mediating effect of CSR disclosure.

Based on the obtained results the following managerial implications as recommendations can be proposed to the companies. Firstly, in order to improve extent of CSR disclosure in annual CSR reports it was recommended to decrease number of directors on board of directors and increase the number of women on board of directors.

Secondly, in order to increase company's profitability (ROE) and return on assets (ROA), for example, for meeting key performance indicators (KPIs) and, as a result, get bonuses, top-management team could increase extent of CSR disclosure regarding services factors, via increasing number of women on board.

Thirdly, in order to increase company's non-financial performance based on brand rating, consisted from both reputation and value for potential customers, stakeholders and shareholders, top-management team could increase extent of CSR disclosure regarding services factors, via increasing number of women on board.

Regarding academic value of the research, the following factors were identified. First of all, successful test of the models used in different industries and markets to global banking industry. Secondly, successful test of a new research model that includes brand rating as resulting variable. Thirdly, development of a new framework to evaluate CSR disclosure extent. Finally, recommendation for researches to exclude some variables, which showed statistical insignificance, from further evaluation.

Regarding limitation of the research, the sample size, the number of countries of companies' origin, high brand ratings, number of board characteristics, currency transfer rates and author's possible subjectivity in CSR disclosure evaluation were named and admitted.

All things considered, the abovementioned limitation should be taken into account by academic researchers, who can do the further research in the field of CSR and its disclosure based on this study, and practitioners, who can decide to implement recommendations given.

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