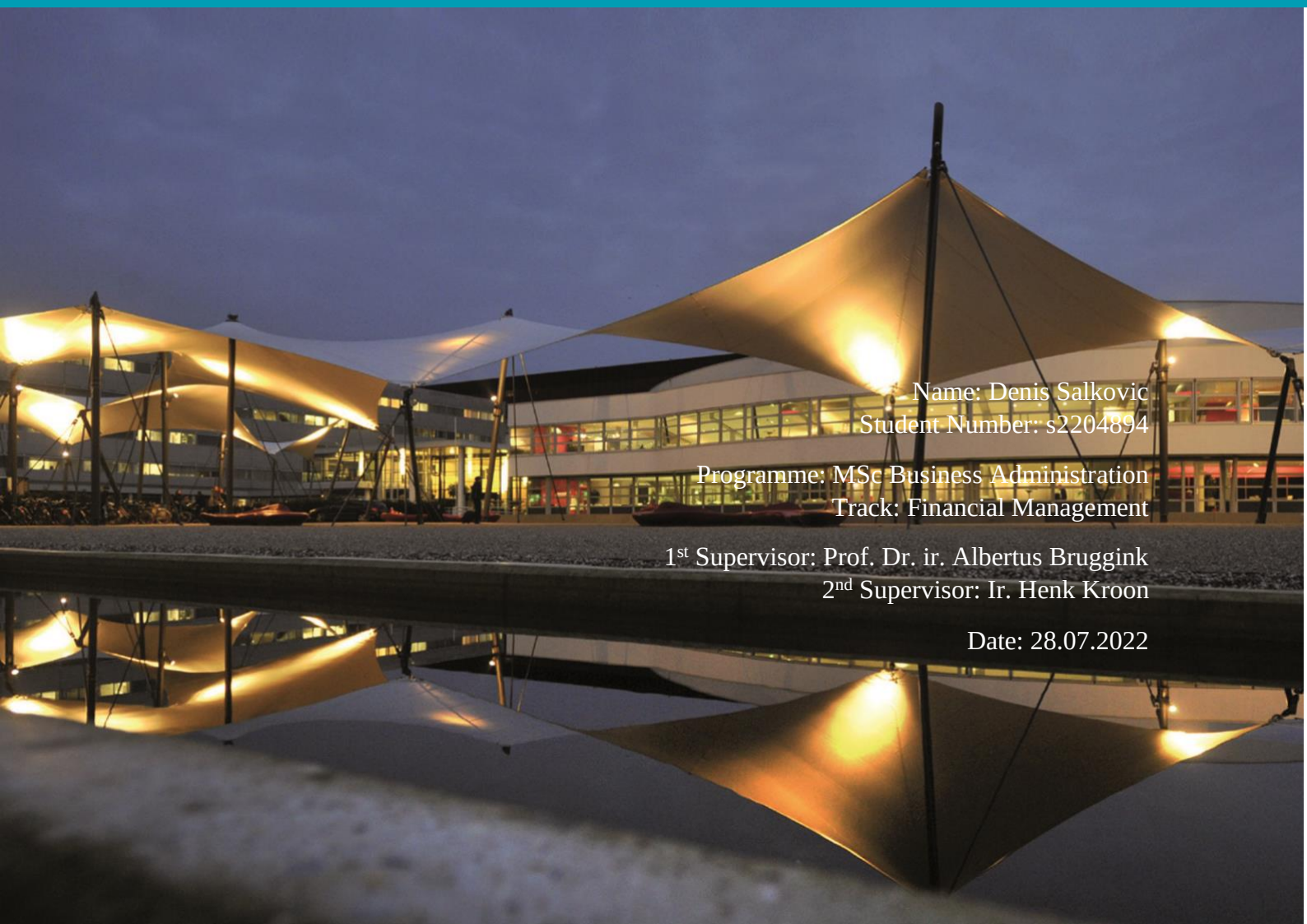
CORPORATE GOVERNANCE MECHANISMS AND THEIR EFFECT ON FINANCIAL BANK PERFORMANCE IN ISLAMIC COUNTRIES

MASTER THESIS

UNIVERSITY OF TWENTE.



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Abstract

Several researchers indicate that good corporate governance can lead to better firm performance and bank performance. This study investigates if the effect of different corporate governance mechanisms also holds on financial bank performance in Islamic countries. In more detail, it was investigated if ownership structure (Ownership Concentration and Foreign Ownership) and board structure (Shariah Supervisory Board Size and Size of Board of Directors) have a significant effect on Return on Equity (ROE) and Return on Assets (ROA). An ordinary least squares (OLS) regression is conducted analyzing a sample of 37 Islamic banks from different Islamic countries. Overall, the results find no consistent evidence that these corporate governance mechanisms lead to better financial bank performance. However, some other interesting findings emerged in the robustness tests of this study which need further research to assess the reliability and validity of these results. There is not much research on corporate governance mechanisms and their effect on bank performance in Islamic countries. This study tries to contribute to this research and motivate to further research to explore the Islamic financial world which is growing consistently and gathering more and more attention.

Keywords: Ownership concentration, foreign ownership, shariah supervisory board size, size of board of directors, bank performance, Islamic countries

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1.Introduction

1.1 Background Information

When studying financial institutions, it is quite impossible to not come across with their corporate governance. Corporate governance itself is very broad and got more and more attention in the last decades. There is no one way to define corporate governance. In general, the purpose of corporate governance is to facilitate effective, entrepreneurial, and prudent management that can deliver the long-term success of a company[1]. It is also implied that corporate governance deals with the mechanisms that ensure investors in corporations get a return on their investments (Shleifer et al., 1997). Besides that, corporate governance can be interpreted in different ways, also corporate governance varies a lot across countries and across firms (Doidge et al., 2007). It is generally accepted that better governance can enable firms to access capital markets on better terms. These terms are beneficial for firms which are intending to raise funds (Doidge et al., 2007). According to Abdul et. Al corporate governance or rather people responsible of corporate governance in corporations have the purpose to gain competitive advantage in a free-market knowledge economy. Additionally, they are asserting that good practices ensure better decision making, operational efficiency and reduction in waste (Abdul et al., 2013).

Due to some high-profile scandals in the US in the recent years, corporate governance has received a high amount of attention. Therefore, the US government published a lot of regulations as the Sarbanes-Oxley Act of 2002. Brown et al. identified several governance factors and found out that some governance factors are positively related to selected performance measures and some governance factors are negatively related to selected performance measures (Brown, 2004). Since corporate governance is a hot topic in recent years and will also remain of great importance in the future, it was figured out to be a relevant research topic while reading literature about it. It is an active area of research and public debate. Various parties take advantage of outcomes of the debate like developing countries, industrialized nations, and transition economies (Vives, X. 2000).

The Literature on the relationship between corporate governance and firm performance is extensive. However, there are no clear conclusions about whether the relationship is positive or negative since one side of research streams find positive relationships and the other side find no relationship at all (Mashayekhi & B, 2008). This finding is in line with what Muhammad Abdul Majid Makki and Suleman Aziz Lodhi found in their research. Even though the relationship between corporate governance and corporate performance has been studied a lot, still no one real consensus was reached (Abdul et al., 2013). Therefore, there is still space to take action on this specific research topic. The focus of this research paper will lie on the relationship between corporate governance mechanisms and financial performance in Islamic banks. Furthermore, the goal is to investigate which corporate governance mechanisms work best to influence corporate performance positively. Knowing which

[1] https://www.icaew.com/technical/corporate-governance/principles/principles-articles/does-corporate-governance-matter

corporate governance mechanisms lead to better performance and which not is of great importance for corporations. Since Islamic banking is one of the fastest-growing segments in the global financial industry it is particularly interesting and relevant for the rest of the world to get insights on how corporate governance mechanisms affect the financial performance of Islamic banks. Furthermore, as Islamic finance gains more and more market capitalization in today's world it's in their interest to find out which of their specific corporate governance mechanisms help towards better financial performance. Islamic corporations are directly linked to Islamic financial institutions as these are the main investors for Islamic corporations as both must operate shariah compliant. The term shariah compliancy will be discussed in more detail in the following sections.

It is also planned to identify in the literature review of the thesis the main differences between corporate governance mechanisms in Islamic countries and European/Western countries and if they are leading to a better financial performance. This research therefore tries to give an answer to the explained research gap. The underlying research question is the following:

RQ: Do corporate governance mechanisms lead to a better financial performance in Islamic banks?

1.2 Structure of the study

The paper is planned to be structured as follows. The next section is about the literature review which should give an outline of the content to be covered. In this section corporate governance and different mechanisms will be defined as well as what corporate governance means to the Islamic world. After that, the methodology will be identified to examine the underlying research question. Mainly, it will be centered around multiple regressions.

The sample will be taken from Orbis. Only out of this sample the banks` financial reports are considered for missing data. In other words, if some data of the sampled banks cannot be retrieved from Orbis, it will be looked at the financial and annual reports of the banks to gather the missing data. The sample will only be derived from Orbis. Financial reports are only considered for missing data and not for building the sample.

2. Literature Review

The second chapter gives a review of the main subject of this study to get a better understanding of the concepts. First, a brief explanation of what corporate governance means in Islamic countries is given and afterwards the Islamic law is explained. The Islamic law is remarkably important in terms of corporate governance. Also, corporate governance in western countries is briefly explained to then be better able to analyze some main differences between these two corporate governance views. After that, the main theories regarding corporate governance are described, and subsequently to that, the

determinants and outcomes of corporate governance mechanisms are analyzed. Finally, a conclusion and overview of the literature is stated at the end of this chapter.

2.1 Corporate Governance in Islamic countries

At its core corporate governance can be identified as a set of promises made by a corporation and those that make the decisions for a corporation to the corporation´s stakeholders. The main objective of the corporation including the so-called Islamic corporation is to maximize the shareholder's value of wealth (Hasan, 2009).

In other words, corporate governance can be viewed as a system of law, social norms and contracts that govern the decisions made by a corporation (Samra, 2016).

It is generally assumed that good corporate governance leads to good firm performance. Previous studies found out that poorly governed firms have a lower operating performance while well governed firms show higher financial performance and market valuation (Abdul et al., 2013). According to Choudhury and Hoque an Islamic corporation is "*a legal entity where the principle and proportionate of the firm's shares owned by the shareholders based on equity participation and profit sharing ratios and deals with legal and organizational structures that control the internal governance of a firm with an objective to define and attain an objective criterion by way of understanding the relations between variables supported by policies, programs and strategic coalition*" (Choudhury & Hoque, 2006). According to Hasan the foundation of corporate governance in Islamic countries does lie in the Tawhid. The Tawhid is explained as the foundation of Islamic faith. In his research Hasan takes the Tawhid as the basis of corporate governance which emanates from this concept (Hasan, 2009). The principle of Tawhid consists of three important concepts of which the corporate governance of the Islamic organizations is built on. These are vicegerency (khilafah), trust (amanah) and justice (al-adl wal ihsan). Furthermore, Hasan adds in his research that in the process of corporate governance there are two main institutions involved. Islamic organizations which operate according to Islamic corporate governance usually have the Shari´ah board and the Shura groups. The Shura group consists of the stakeholder of the organization. The functions of the Shura groups or also named Consultation are the following: Shura should give the people most affected by a decision the chance to participate in decision making and discuss their own problems. Additionally, Shura is meant to prevent the problem of one group of people overriding the rights of another group of people (Muneeza & Hassan, 2014). Together with the Tawhid the Shura groups provide the epistemological foundation of Islamic corporate governance (Hasan, 2009).

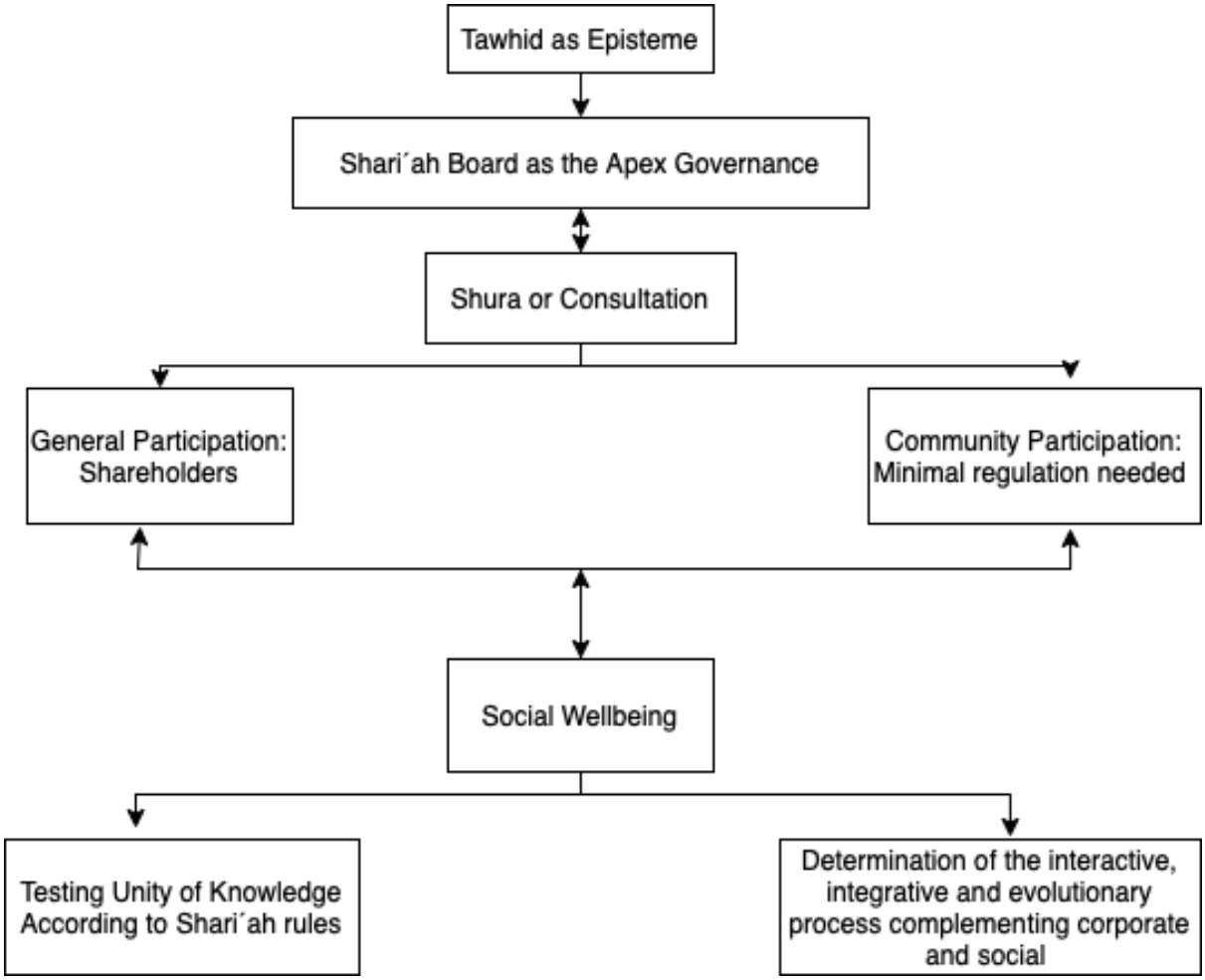

Figure 1: Islamic model of Corporate Governance
Source: Choudury & Hoque (2006)

2.1.2 Islamic Law (Shariah)

An important role of the corporate governance in Islamic countries takes the Islamic Law, also known as the Shariah. Islamic finance is the label used to describe the subset of financial services that comply with the so-called Shariah (Samra, 2016). The Shariah complied services are not only practiced in Islamic countries nowadays. In the past decades the Islamic finance industry has grown significantly and meanwhile manages over 2.7 trillion USD globally[2]. In 2020 there were over 1,526 islamic finance institutions in operation around the world, with over 46 countries now supporting the growth and development of Islamic Finance within their legal and regulatory frameworks[3]. There are several rules for companies or securities before they can be considered as shariah compliant. Some of the requirements for a Shariah compliant fund include the exclusion of investments which derive most of their income from the sale of alcohol, pork, military equipment, weapons, or gambling. Furthermore, an appointed Shariah board is included and an annually Shariah audit purifying certain prohibited types

[2] https://www.qardus.com/news/the-islamic-financial-services-industry-statistics
[3] See footnote 2

of income such as interest, by donating them to a charity[4]. This is in line with the findings of Yildirim et al. who find that Shariah law prohibits elements such as riba which means usury or interest, gharar which can be translated as unnecessary/excessive risk or uncertainty and conventional financial services and maisyir which means gambling and speculation (Yildirim et al., 2018). Furthermore, firms with leverage ratio below the Shari'ah threshold are considered being Shari'ah compliant. This threshold is set to a maximum debt ratio of 33%.
Fully Shariah compliant firms are still rare since most of the countries do have conventional finance institutions which results in companies being exposed to riba-related activities when dealing with these institutions.

2.1.3 Corporate Governance in Western Countries

Corporate Governance in western countries is in its origin quite similar to corporate governance in Islamic countries. In the literature of corporate governance, the variety of variables and concepts used to describe the complexity of corporate governance mechanisms can be used. These can be separated into two main categories: capital-related and labor-related.
There are several different corporate governance systems existing in the world for solving the collective action problem among dispersed shareholders (Hasan, 2009). To give an insight into the most dominant systems in the western countries in the following sections the Anglo-Saxon model of corporate governance and the European model will be explained in more detail. Both the Anglo-Saxon and the European model have their own features and different aims to solve the collective action problem. They are both differing mainly in the two before mentioned categories, capital-related and labor-related on which will be more elaborated on in the two following sections. Additionally, the main features of those two models will be discussed in more detail.

2.1.3.1 The Anglo-Saxon Model of Corporate Governance

The corporate concept in the Anglo-Saxon model is based on a fiduciary relationship between shareholders and managers (Cernat, 2004). The model is known for being a market-based system, shareholder-value system or principal-agent model. These theories are said to be most dominant in the United States and the United Kingdom. In the market-based system corporations and investors are said to be primarily concerned about short-term returns. In the shareholder system the individual is sovereign which means that the corporation is most concerned with maximizing the shareholder value (Hasan, 2009). This is due to the shareholder theory which states that the owners are the shareholders of the firms, and they bear the highest risk (Ahmad & Omar, 2016). Furthermore, in the Anglo-Saxon model the board of directors represent the shareholder of the corporation. The board of directors in this model

[4] https://www.investopedia.com/terms/s/shariah-compliant-funds.asp

is usually single-tired, primarily composed of non-executive directors elected by shareholders (Ahmad & Omar, 2016). To conclude, in the Anglo-Saxon model of corporate governance the board of directors and shareholders are the controlling parties and the relationships between the managers and shareholders are short-lived and concentrated on short-term returns.

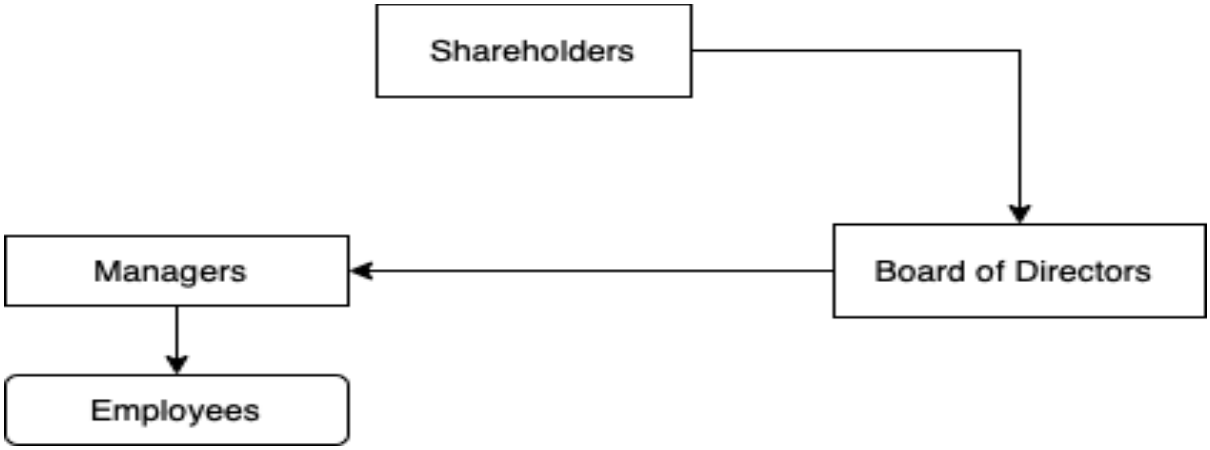

Figure 2: Anglo-Saxon Model

2.1.3.2 The European Model

Other than the Anglo-Saxon model the European model is known as the Stakeholder model. As the name suggests in the European model the primary objective of the corporation is not just the shareholder but the stakeholders of a corporation. Stakeholders include employees, managers, creditors, shareholders, etc. In other words, the term stakeholders refer to groups of constituents who have legitimate claim on the corporation or a person who contributes directly or indirectly to a firm (Ahmad & Omar, 2016).

In this system, companies raise most of their external finance from banks. The relationships between these banks and their corporate customers are close and usually long term in contrast to the Anglo-Saxon model where business relationships are usually short-term. Overall, the Stakeholder model is focused on a relationship-based model that emphasizes the maximization of a broader group of stakeholders and not just of a small group of shareholders.

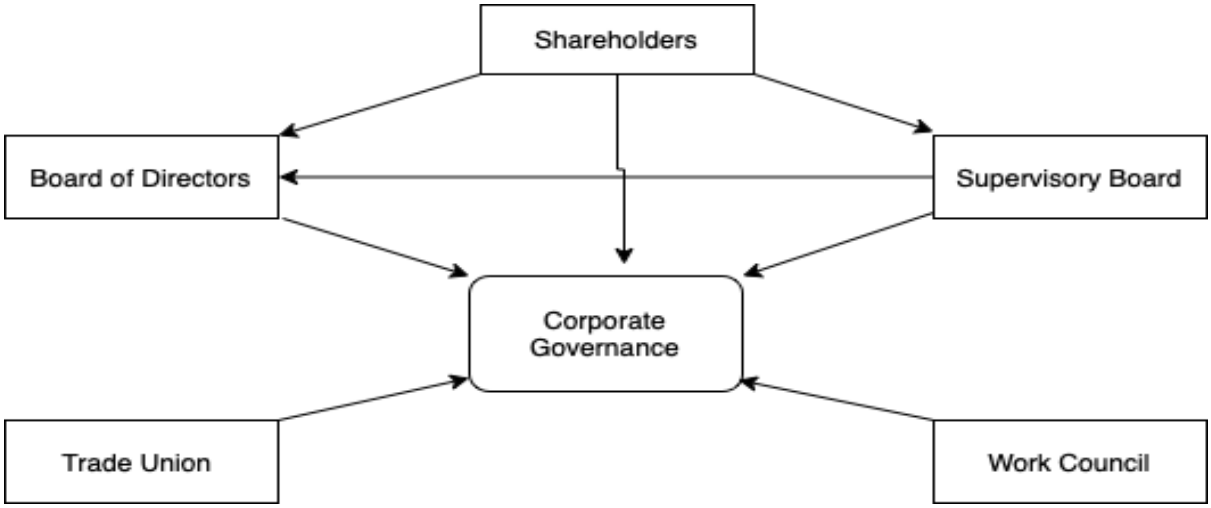

Figure 3: European model

2.1.4 Differences Corporate Governance Western and Islamic Countries

The concept of corporate governance from Islamic perspective does not differ much from the conventional concept of corporate governance. It refers to a system by which companies are directed and controlled with the purpose to protect all the stakeholders´ interest and rights whereas meeting the corporation´s objectives (Hasan, 2009). In the Islamic paradigm corporate governance presents distinct characteristics and features in comparison with the conventional system. The reason for that is the Islamic paradigm refers as a special case of a broader decision-making theory that makes use of the premise of Islamic socio-scientific epistemology which is premised on the divine oneness of God (Choudhury & Hoque, 2006). The probably biggest difference between these two corporate governance systems is that for western countries there are usually codes of corporate governance which corporation are following to have a good corporate governance. In Islamic countries often religious motives play a big role since some states are religiously governed. The Shariah Law for example originated from the holy Quran. Out of the Shariah Law the Shariah Supervisory Board evolved, which is the main difference comparing the structure of western companies with the structure of Islamic companies. Typically, the Shariah Supervisory Board certifies Islamic financial products as Shariah-compliant.

2.2 Theories of corporate governance

Besides the definitions of important concepts of corporate governance in Islamic countries there are also some main theories that drive organizations to implement corporate governance mechanisms. These will be briefly discussed in the following section. These theories are Agency theory and Resource dependence theory. Islamic governance is widely based on stakeholder theory and social contract theory, which will also be discussed in the following section.

2.2.1 Agency theory

The most used theory in studies regarding corporate governance is the agency theory. The basis of the agency theory lies in the separation of ownership and control of an organization.

In this theory the relationship between the so-called principals (shareholders) and agents (managers of the company) in a business is explained (Frynas & Yamahaki, 2016). The principal is said to delegate work to the agents who must perform the required work. By delegating the work to the manager (agent) the owner (principal) demands the manager to work in the benefit of the owner (Panda & Leepsa, 2017). The most common agency relationship in finance refers to the relationship between the before mentioned shareholders and the managers. It is often referred to two main problems in agency theory. Namely that managers do not perform in the best interest of their shareholders but in their own interest. This difference of the goals of both parties could result in agency problems (Panda & Leepsa, 2017). Another problem is that both parties often have a different understanding or rather attitude towards risk. Whereas managers are acting risk averse, shareholders are more risk seeking. The reason why shareholders are more risk seeking than the managers is simply because they want to take on more risk to increase value while the managers´ job is at stake what makes them more risk averse. Out of this description of the agency theory the question arises how corporations can ensure to align interest of principals and agents. According to Htay there should be corporate governance mechanisms to align these interests. Good corporate governance can resolve this conflict of interest by a certain extent (Nu & Htay, n.d.). As the ultimate goal of corporate governance is to maximize the shareholder's value of wealth and direct and control companies with the purpose to protect all the stakeholders´ interest and rights it is directly linked to the mechanisms of corporate governance which suitable for solving the problems of the agency theory related to corporate governance.

2.2.2 Resource dependence theory (RDT)

Initially, the resource dependence theory was formulated to give an explanation about the relationships between units within the organization but nowadays got to be used more widely to also explain relationships between organizations and different types of institutions and actors (Frynas & Yamahaki, 2016). Primarily, the resource dependence theory is arguing that organizations are not autonomous, meaning they are existing rather in an external environment which is comprised by a network of interdependencies with other organizations. The goal of the organization is to reduce these dependencies of other organizations.

After Nienhüser researched the resource dependence theory thoroughly he concluded that the RDT overall significantly contributes to explaining behavior, structure, stability and change of an organization (Nienhüser, 2008). The competitive advantage, also derived from the resource dependence theory, fundamentally arises from resource heterogeneity. This fact gives an indication that corporate governance can act as a mean to generate or enhance access to resources (Udayasankar, 2008). Additionally, the board of directors contribute to their organization through their expertise and their linkages to other organizations and institutions. Also, directors can contribute via their reputation to the positive valuation of an organization (Pfeffer & Salancik, 1972). Fundamentally, corporate governance can be viewed in the resource dependence theory as being a critical resource of the organization.

Therefore, in contrary to the agency theory the resource dependence theory claims that the role of the board of directors is to provide access to resources instead of monitoring the management. Out of the resource dependence theory it can be concluded that the board of directors is elected according to their ability to bring important resources to the bank, their knowledge, and their skillset (Gales & Kesner, 1994).

In that sense the resource dependence theory is likely to assume that the larger the board of directors the more ability to bring resources or the wider the range of resources which positively influence performance. And, the more members the board have, the more skills and knowledge it can bring to the organization.

Hence, resource dependence theory can be viewed as an important theory when analyzing the impact of corporate governance in Islamic countries on corporate bank performance.

2.2.3 Stakeholder theory

The stakeholder theory found its origin in 1984 when Freeman first introduced it. Freeman defined the stakeholder theory as managerial, as intimately connected with the practice of business, of value creation and trade (Freeman, 1984). According to Freeman stakeholders are all those who are affected by the achievement of an organization´s objectives or who can affect these. All and only those who have a stake in the firm need to be satisfied and managers must implement processes in the best interest of these stakeholders. Stakeholders can be internal (owners, employees, senior management, middle management) or external (buyer, supplier, customer, investors, shareholders, government). This theory is in line with the definition of corporate governance of Shleifer et al. and several other authors who state that e.g., investors get a return on their investment in the firm. The return is not for all stakeholders the same. For example, the employees get a remuneration, the creditors interest rates and the shareholder dividends. But all in all, every stakeholder should get a return on their investment in stakeholder theory.

If the historical background of the development of corporate governance is examined, it is observable that the responsibilities of the board of directors have shifted or rather have been extended. Prior, the board of directors mainly concentrated on the shareholders. Nowadays, the responsibilities mostly are centered to all stakeholders of a firm. And this is due to several corporate governance codes which were implemented to comply with the stakeholder theory. In other words, the management and provision of information is directed at satisfying the interest of the general public rather than shareholders (DA & L, 2016).

2.2.4 Social contract theory

The social contract theory is basically a theory saying that people live together in a society in accordance with an agreement that establishes moral and political rules of behavior. In other words, social contracts are no written rules or a settled code of conduct. It is assumed, that every human being lives morally by their own choice. The most important virtue of this theory is ethics. The theory is almost as old as the

Age of Enlightenment. The three authors or founder of this theory are John Locke, Jean Jacque Rousseau and Thomas Hobbes.

Thomas Hobbes´ theory of social contract is about ethics as obedience. Primarily, this means that humans need a fear of the consequence of breaking their word, or pride in appearing not to break it. In his time, Hobbes marked that, uncodified norms are not sufficient to ensure that the lives together will be productive and commodious (Jos, 2006).

John Locke´s theory of social contract is about ethics as accountability. He defines social contract as not generating shared ideals and understandings among all parties but to defend and protect particular values. These values are associated with particular interests in society and to institute a system of authority that is accountable. In other words, Locke says that the authorities, today known as governments, are created through the consent of the people (Jos, 2006).

And the last major founder of social contract theory is Rousseau who related to ethics as social transformation. In his theory, the only legitimate political authority is the authority consented to by all the people who agreed to belonging to a government by entering into a social contract for the sake of their mutual preservation[5]. His consensus is built on complex social processes that engage both the mind and the heart. And building this consensus requires political, social, and organizational transformation (Jos, 2006).

In the Islamic perspective the social contract theory considers the social responsibility as a contractual obligation the corporation owes community and society. In their research Donaldson & Dunfee (1999) defined social contract theory as a way for managers and also directors to make ethical decision making. For this they were referred to the communities and their expectation from the business to support local community (Donaldson & Dunfee, 1999). Society and the members of the society combined are in that sense considered as society by corporate governance.

2.3 Determinants of Corporate governance and empirical findings

To investigate if corporate governance has a positive effect on the financial firm performance of organizations in Islamic countries four important determinants of corporate governance mechanisms have been identified. These are Corporate Ownership Structure, CEO Duality, Shariah Supervisory Board and Board Size. The four most common used determinants in current literature will be discussed in more detail in the following section.

2.3.1 Corporate Ownership structure

Corporate ownership structure is about how much equity (shares) of the company are owned by inside shareholders (managers) and outside shareholders.

[5] https://www.sparknotes.com/philosophy/rousseau/section2/

When researching the effect of corporate governance mechanisms on corporate financial firm performance almost every researcher uses corporate ownership structure as a determinant for corporate governance mechanism. There is a strong indication that managers of a firm tend to allocate the firm resources to their best interest which is likely to conflict with the interest of the outside shareholders. But as the equity ownership of these managers increases, meaning they are owning are bigger portion of stocks of the company their interest coincides more closely to the outside shareholders. This is likely to resolve the agency problems between management and shareholders (Han & Suk, 1998). Some researchers find that there is a positive linear relationship between profitability and ownership structure. Measured in this study were managerial ownership and important shareholdings and both measured a positive relationship which means the more concentrated shares are in the hands of outside or inside shareholders, the more effectively management behavior is monitored and disciplined. This fact ultimately results in better firm performance (Kapopoulos & Lazaretou, 2007). Foroughi et al. distinguishes corporate ownership structure into concentrated ownership and dispersed ownership. In a concentrated ownership only few individuals, mostly owner or family-owned firms, own most of the shares. In a dispersed ownership the owner-base is widely held. In his research of listed firms in Iran he found that firm performance is negatively related to ownership concentration of Iranian listed firms. This means that the higher the concentration of ownership the more opportunities and incentive to expropriate firm´s resources at the expense of the minority of shareholders. This is in line with the agency theory (Foroughi & Fooladi, 2011). Han et al. also found that as insider ownership increases, stock return increase. But they added that excessive insider ownership is likely to hurt corporate performance (Han & Suk, 1998).

Rehman et al. researched the impact of foreign ownership of Islamic banks and found that foreign ownership is likely to have a positive impact on the financial performance of banks because the presence of foreign-owned banks creates more avenues for investment and making profit which is line with the resource dependence theory since foreign ownership also means more sources of knowledge, expertise, and access to resources (Ur Rehman et al., 2022).

2.3.2 CEO Duality

CEO Duality can only be found in one-tiered board structures. The one-tier board is a model where only one body of the corporation exists instead of two. Executives and non-executives are working together in one board. The executive directors oversee the daily management of the company but will be intensively supported by the non-executive directors. In dual-tier boards the non-executives are operating in a separate board of directors called the supervisory board. With CEO Duality the CEO is simultaneously also the Chair (Belot et al., 2014). The literature provides mixed evidence on the relation between CEO duality and corporate financial performance (Yang & Zhao, 2014). Lam et al. found in their research that the relationship between CEO duality and financial firm performance is contingent on the presence of the family control factor. That means they are indicating that CEO duality is only

having a positive relationship with financial firm performance for non-family-controlled firms. Family-controlled firms should have no CEO-duality as according to the researchers (Lam & Lee, 2008). Yang & Zhao came to a different conclusion when researching the relationship between CEO duality and corporate financial performance. They found that dual leadership is beneficial to firm performance when competition intensifies. Additionally, the positive effect of CEO duality is larger when firms have high levels of information costs and better corporate governance (Yang & Zhao, 2014). If effective, the composition of the Board and the performance of board members can bring a lot of benefits to meeting organizational strategies. The boards of directors are very important to organizations and their corporate governance (Cabral Lima da Costa et al., 2019). This is only one study of a few who found a positive relationship between CEO duality and corporate financial firm performance. The majority of researcher found a negative relationship (Mashayekhi & B, 2008; Rashid, 2013). Consistent with the agency theory CEO duality is detrimental to bank performance as one and the same person has the power to mark "own examination paper". Therefore, Rashid found that CEO duality will reduce firm efficiency and therefore has a negative relationship with corporate financial firm performance (Rashid, 2013).

2.3.3 Shariah Supervisory Board

The Shariah Supervisory Board is the backbone of Islamic corporations. This board act as an additional layer of governance and functions to improve the transparency of the corporations. The SSB is the biggest difference when comparing corporate governance with the conventional counterparts of the western countries. As described above there are a lot of similarities between these two governance systems but also some similarities and this similarity is the biggest as the wester companies with conventional corporate governance mechanisms do not possess a SSB (Aslam & Haron, 2020). The Shariah Supervisory Board has some similar tasks with conventional Supervisory Boards. These are according to Resource Dependency Theory ensuring that valuable resources, knowledge, aptitudes, and expertise are available for the organization. In addition, the SBB has some tasks conventional supervisory boards do not have. Their primary responsibility is to eliminate interest, gharar, gambling and high risk in company operations and significantly monitor the operations to comply with the Shariah law (Aslam & Haron, 2020). To help Islamic financial institutions mitigate the effects of potential risk through due diligence by abiding the ethical foundations of Islamic moral economy, the SSB is there to ensure Shariah-compliancy of all the contracts offered by the IFI. Furthermore, the SSB is to perform Shariah-audit to satisfy the stakeholders since the SSB is no operating as an ex post compliance medium (Nawaz, 2017).

In Accordance with the social contract theory the Shariah Supervisory Board has the obligation to fully concentrate on these tasks as the society relies on the SSB that they eliminate "haram" operations. The society has trust in these directors on the SSB and only invest in their organizations with the believe that the corporation fully operates according to shariah law and therefore in line with the Islamic believers. Kok et al. researched the effect of a SSB in Islamic Financial Institutions (IFI) and found that

SBB tenure is linearly significant and positively related to bank performance as measured by both ROA and ROE. They conceptualized their study according to the resource dependence theory since the key role of SBBs in IFIs is more related to the provision of resources (Kok et al., 2022).

2.3.4 Board Size

With the board size of a corporation the total number of directors on a board is meant. Typically, a board consists of executive and non-executive directors. It is subject of many researchers in the current literature what board size is the optimal size for organizations. It makes it much more difficult that it is a big debate about smaller boards or larger boards being more effective and hence delivering a positive effect on financial bank performance or not.

The board size is quite contradictory when it comes to the discussed theories. According to agency theory a smaller board size is beneficial since more board members means communication will get more complicated. With a more complicated communication and informal decisions making agency costs of the firm are likely to increase.

On the contrary, a large board according to the resource dependence theory means that corporations have more access to valuable resources (knowledge, expertise, resources) as the number of directors is bigger. As Mashayekhi proposes in his study a smaller board may be less encumbered with routine problems and may provide better bank performance. This is according to agency theory and therefore also the basis of the research of this study (Mashayekhi & B, 2008).

3. Hypothesis Development

For the purpose of this research some variables have been identified that are of importance when considering and analyzing the impact of corporate governance in Islamic countries on bank performance.

The literature often divides the performance measures into accounting-based and market-based measures.

The variables of performance used in this study are performance measures like **Return on Assets (ROA)** and **Return on Equity (ROE)**. These measures are generally known as accounting-based measures.

Meaning, the relationship between corporate governance mechanisms and these two bank performance indicators are tested separately. Whereas the variables of corporate governance are planned to be corporate ownership structure, CEO duality, Shariah Supervisory Board size and Board size. The hypotheses will be formed based on the described theories and the empirical findings of the determinants of corporate governance.

3.1 Corporate ownership structure

Here several possibilities of measuring corporate ownership structure as a variable are existing. The ownership concentration will be measured, meaning how much percentage the biggest shareholder holds. This is in line with several previous studies. As the study of Foroughi et al. researched the performance of bank in an Islamic country, Iran, they proposed in their finding that ownership concentration has a negative relationship with bank performance (Foroughi & Fooladi, 2011). Mamatzakis et al. came to the same conclusion in banking in emerging markets (Mamatzakis et al., 2017). Therefore, the following hypothesis is developed:

H1a: There is a negative relationship between concentrated ownership structure and Financial Bank Performance.

Foreign ownership will be measured as well, meaning how much percentage of shares are hold by foreign Investors. According to Bhagat et al. performance-based compensation and insider information, bank performance could be a determinant of ownership (Bhagat & Bolton, 2008). Hence, the following hypothesis is developed:

H1b: There is a positive relationship between Foreign Ownership and Financial Bank Performance

3.2 CEO duality

CEO duality refers to the situation in which the same person functions at the same time as the CEO and the Chair. Since in this study CEO duality is tested in relation to the agency theory CEO duality is seen to hinder firm performance. It is assumed that if one and the same person has too much power within an organization bank efficiency can be mitigated and therefore the following hypothesis is developed:

H2: There is a negative relationship between CEO duality and Financial Bank Performance

3.3 Shariah Supervisory Board size

According to research, scholars, researcher and international organizations all stress the importance of a Shariah Supervisory Board (SSB) in Islamic countries. This Supervisory board can reassure stakeholders that the organization´s activities fully comply with the Shariah. The SBB is also responsible for various other corporate governance mechanisms of an organization (Safieddine, 2009). Since it is advised to have a SBB for a better corporate governance and according to resource

dependence theory should have better access to valuable resources, the following hypothesis can be developed:

H3: There is a positive relationship between SSB Size and Financial Bank Performance

3.4 Board size

On the contrary of the resource dependence theory some researcher found that Board size would have a negative impact on corporate performance. Dehaene et al. for example did not find any relationship between board size and corporate firm performance (Dehaene et al., 2001) whereas Jensen proposes that larger board size may lead to problems in group coordination and effectiveness in arriving at decisions (Jensen, 1993). Furthermore, Mashayekhi (2008) in his study assumed that board size has a negative effect on financial performance. As he did his study on corporations in Iran and Iran is an Islamic country, this study will follow his finding (Mashayekhi & B, 2008).

H4: There is a negative relationship between Board Size and Financial Bank Performance.

3.5 Hypothesis Model

For making the relations more visible, the following model is developed:

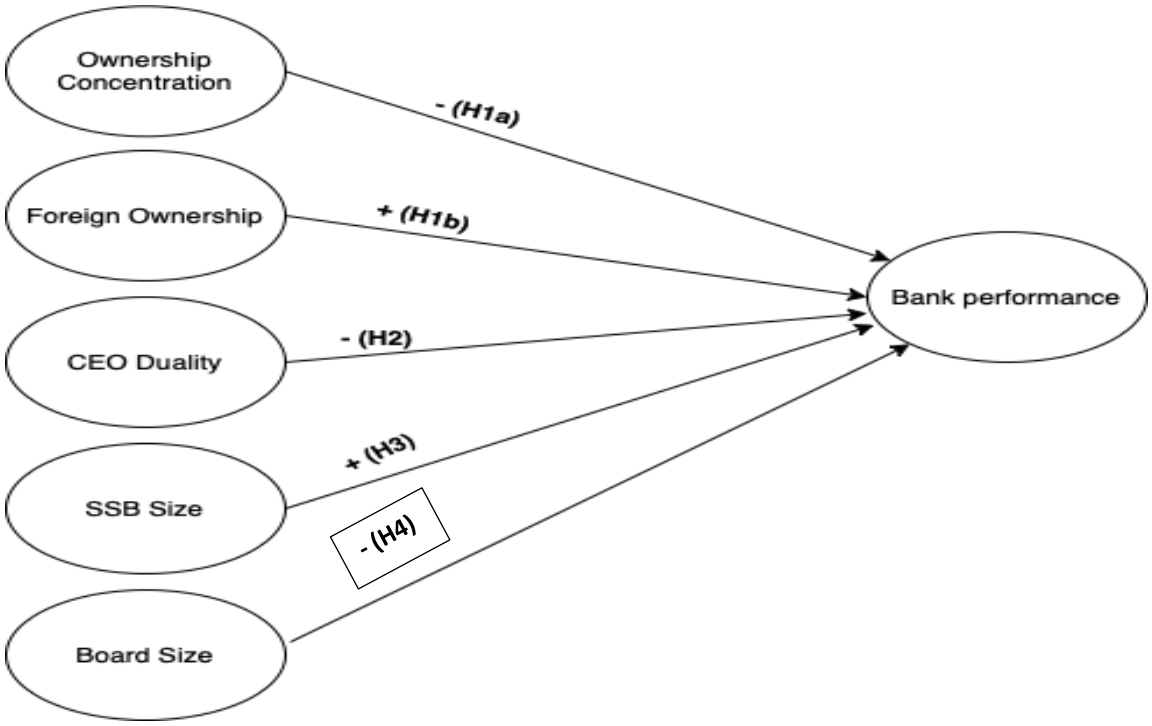

Figure 4: Hypothesis model

4. Research Method

One of the most important factors in a study is the research method. The research method is the basis on which the results are based. Furthermore, it forms the conclusions on the built hypotheses and helps in answering the research question of an empirical research paper. Multiple similar studies doing research on the effect of corporate governance mechanisms on the financial firm performance mainly used Structural equation modeling (SEM), Ordinary Least Squares regression (OLS), two stage least squares regression (2SLS) and three stage least squares regression (3SLS). There are even some researchers that use two or three methods simultaneously to deliver the most precise findings possible. First, these research methodologies used in prior studies will be explained. After that, the methodology of this study is explained followed by the model used in this study. And lastly, the measurement of the variables used in this study will be elaborated on.

4.1 Prior studies

4.1.1 Regression analysis

Prior studies in the topic of corporate governance used different kinds of research methods. However, when looking across studies examining the relationship between corporate governance and corporate performance mainly two research methods are used. These are regression analyses in different forms and structural equation modeling (SEM). Ordinary least squares (OLS), two stage least squares (2SLS) and three stage least squares (3SLS) are used in the study of Bhogat & Bolton (2008), who examine the relationship between corporate governance and performance, by considering the inter-relationships among corporate governance, corporate capital structure and corporate ownership structure (Bhagat & Bolton, 2008). Similar to this Aswathy Mohan and S.Chandramohan used a panel data OLS regression model for a sample of 30 firms listed in BSE Sensex for the period 2007 to 2016. Their main objective was to examine the impact of corporate governance on firm performance after controlling for firm specific variables (Mohan & Chandramohan, 2018). Other studies that used an ordinary least squares regression are (Babatunde et al., 2014, Mashayekhi & B, 2008, Vo & Nguyen, 2014).

4.1.2 Structural Equation Modeling (SEM)

Besides the different types of regression, the research paper of Yu and Main examined the influence on firm performance of board-level intervention by government and financial institutions. They used SEM for this as it has a major advantage when dealing with concepts such as governance, board monitoring, or institutional intervention. Furthermore, SEM allows a group of variables to be associated with an underlying concept, in their study for example internal governance. The reason for them finding SEM more appropriate was because it seemed to be far easier to specify a range of measures that capture the notion of board monitoring (Yu & G. M. Main, 2012). SEM is short for Structural Equation Modelling, which is capable of modeling nomological networks by expressing theoretical concepts through constructs via a structural model to study their relationship (Benitez et al., 2020).

4.1.3 Endogeneity Problem

One key issue that needs to be addressed when examining the effect of corporate governance mechanisms on bank performance is that possibly an endogeneity problem could occur. It could be that banks that have better, or more corporate governance mechanisms also perform better than banks with fewer or less good corporate governance mechanisms. As a result of this there is a correlation among the independent variables and the error term. To account for this problem in this study the independent and control variables are lagged by one year.

4.2 Research method of this study

The Research method intended to be used in this study is OLS regression since many similar studies already used OLS regression. It seemed to be the most appropriate method to analyze the relationship between corporate governance mechanisms and corporate firm performance. OLS regression is best suitable when the dependent variable is metric and recorded on an interval or ratio scale. Additionally, OLS regression presents results that are easy to understand and analyze.

4.3 Model

In order to test the in the prior sections developed hypotheses an OLS regression is conducted that regresses the effect of corporate governance mechanisms on financial firm performance in Islamic financial institutions. The OLS regression is similar to other studies examining the effect of corporate governance mechanisms on financial firm performance (Babatunde et al., 2014b; Mamatzakis et al., 2017; Nawaz, 2017; Rashid, 2013). The regression model is written as follows:

$$PERF_{it} = \beta_1 OWN\_CON_{it} + \beta_2 OWN\_FOR_{it} + \beta_3 DUAL_{it} + \beta_4 SSB_{it} + \beta SIZE_{it} + \beta_6 LN\_AGE_{it} + \beta_7 LN\_BSIZE_{it} + \beta_8 LN\_NETINCOME_{it} + \varepsilon it$$

Table 1
Codes of Variables

Code	Description
$PERF_{it}$	Financial Performance of bank i in period t measured in ROA and ROE
OWN_CON_{it}	Ownership concentration of bank i in period t
OWN_FOR_{it}	Percentage of Foreign Ownerhsip of bank in period t
$DUAL_{it}$	CEO Duality of bank i in period t
SSB_{it}	Shariah Supervisory Board Size of bank i in period t
$SIZE_{it}$	Size of board of directors of bank i in period t
LN_AGE_{it}	Natural logarithm of Age of the bank I in period t
LN_BSIZE_{it}	Natural logarithm of Size of bank (total assets) i in period t
LN_NETINCOME	Natural logarithm of total net income of the bank in period t
εit	Error term

4.3.1 Robustness tests

Additionally, to the regression models that are conducted to test the hypotheses, some robustness tests are performed to examine whether the results hold under different circumstances. At first, additional measures of variables are used. Only data from 2019 for the banks is analyzed and another control variable is added in the first robustness test.

Second, a subsample analysis is conducted where the banks of the most occurring country are analyzed separately. The country with the most Islamic banks in the sample of this study are the United Arab Emirates with 11 banks. For robustness, a subsample analysis of this sample will be conducted.

4.4 Variables

4.4.1 Dependent Variables

The aim of this study is to investigate the impact of corporate governance mechanisms on financial firm performance of Islamic financial institutions. Hence, financial firm performance is the dependent variable of this study. There are various performance measures in the current literature available. To measure the financial firm performance of Islamic financial institutions the study uses the most commonly used measures in previous studies. These are Return on Assets (ROA) and Return on Equity (ROE) (Baklouti, 2022; Grassa, 2016; Mollah & Zaman, 2015). ROA is calculated as the ratio of net earnings to total assets. It indicates the extent to which a firm´s assets are used to generate profits. The ROE is calculated as the ratio of net profits to total equity. It measures a firm´s capacity to generate profit from the shareholders equity invested in the firm (Baklouti, 2022; Kok et al., 2022). These two performance measures are in the literature referred to as accounting-based performance measures.

4.4.2 Independent Variables

The independent variables in this study are the corporate governance mechanisms since their impact on firm performance will be analyzed. The first independent variable that will be analyzed in this study is ownership structure. Ownership structure will be measured in two different ways. Out of these two ways two different variables are measured, Ownership Concentration (**OWN_CON)** and Foreign Ownership (**OWN_FOR).** Ownership concentration is measured as the percentage of shares held by major shareholder (Mamatzakis et al., 2017; Rashid, 2013). Foreign Ownership will be measured as the percentage of shares held by foreign investors (Hapsari & Rokhim, 2017; Ur Rehman et al., 2022). This study will investigate if foreign ownership indeed contributes positively to the financial performance of banks and if ownership concentration indeed hinder banks to perform better.

The second independent variable is CEO Duality **(DUAL)**. With CEO Duality it is measured if the CEO is also the chairman. CEO Duality is assumed as a binary variable or dummy variable. If the banks CEO is also the chair and therefore the same person holds both positions the variable takes the value 1, and 0 otherwise. With this independent variable it is planned to investigate if it has a negative relationship with financial performance if the CEO is also the chair and therefore has a lot of power.
Isik used the same approach in his research about the dynamic association between CEO Duality and bank performance in Turkey which makes it quite appropriate also to use for this study (Isik, 2017). Rashid also used CEO Duality as a dummy variable, only difference is that he studied non-financial firms (Rashid, 2013).

The third independent variable is the size of the Shariah Supervisory Board. It was planned to assume SSB as a dummy variable as well, but as only Islamic Banks are taken into the sample it does make not any sense. This is due to the criterium that every Islamic bank must have a Shariah Supervisory Board. If SSB then would be taken as a dummy, every bank would take the value 1. Therefore, the variable has been altered to the size of the Shariah Supervisory Board **(SBB).** With the size of the Shariah Supervisory Board, it is measured of how many members the Boards of the banks contain. Baklouti measured the same variable in his research if the Shariah Supervisory Board is a friend or an enemy of Islamic banks. In his research he hypothesized that the size of the Shariah Supervisory Board has a positive relationship with the financial performance of the banks (Baklouti, 2022).

The fourth and last independent variable that is going to be measured in this study is the size of the board of directors of the bank **(SIZE)**. The board size is measured by the number of members serving on board of directors, respectively. With this variable it is going to be investigated on in this study if the board size indeed has a negative relationship with the financial performance of Islamic banks. A similar study conducted by Bino et al. researched similar variables as are studied in this research. They used the board size as a variable as well and measured it the same way (Bino & Tomar, 2012).

4.4.3 Control Variables

When analyzing whether the independent variables (ownership, CEO Duality, SSB size, Board size) have an impact on the dependent variables (financial firm performance) it is of importance to consider also other factors that could influence financial performance of the banks. There are various control variables used in many different studies studying similar research topics. The first control variable used in this study is the size of the bank **(BSIZE)**. Since bigger banks are likely to have more assets available and have more experience the risk of these bank probably is lower than of smaller banks which could contribute positively to the financial performance of the banks. The control variable bank size is measured as the natural logarithm of the total assets (Grassa, 2016; Nawaz, 2017).

The second control variable commonly used when researching financial performance of banks or firms is the age of the bank **(AGE)**. The age of the bank is measured as the natural logarithm of how many years the bank is existing after foundation. The age of the bank is assumed to influence financial performance of the bank positively since older banks are likely to have more experience and probably more expertise on board whereas young banks could have some challenges adopting in the world of banks while building a position in the market. (Grassa, 2016; Mashayekhi & B, 2008).

Table 2

Summary of Variables and their Measurement

Variable	Abbreviation	Measurement
Dependent Variables		
Return on Assets	ROA	Net income/ Total assets
Return on Equity	ROE	Net income/ Total equity
Independent Variables		
Ownership concentration	OWN_CON	% of shares by largest shareholder
Foreign Ownership	OWN_FOR	% of shares held by foreign investors
CEO Duality	DUAL	Dummy variable
Size of Shariah Supervisory Board	SSB	Total number of SSB members
Size of Board of Directors	SIZE	Total number of members of the Board
Control Variables		
Bank size	LN_BSIZE	The natural logarithm of the IB´s total assets
Bank age	AGE	Natural Logarithm of Years since the company's incorporation date
Net Income (Robustness)	LN_NETINCOME	Natural logarithm of Total Net Income

5. Sample

The sample that is used for this study consists out of the publicly traded national commercial (SIC 6021) and state commercial banks (SIC 6022). Publicly traded means that the bank is traded on any stock exchange, not specified on which stock exchange since the banks are located in different countries. As this study concentrates on Islamic countries, the countries were selected according to where the most dominant religion is Islam. Not every country where Islam is most dominant were selected. Minor African countries were not considered as the banking sector there is not so big. The countries that were selected for this study therefore were Algeria, Azerbaijan, Bangladesh, Bosnia & Hercegovina, Egypt, Indonesia, Iran, Iraq, Kuwait, Lebanon, Libya, Malaysia, Oman, Pakistan, Qatar, Saudi Arabia, Tunisia, Turkey and United Arab Emirates. Only banks with a minimum of 150 million USD market capitalization were taken into the sample and only those who are still active. This leaves a sample of 130 banks in those Islamic countries mentioned before. This sample given by Orbis is not yet the final sample. All these banks are checked individually on the existence of a Shariah Supervisory Board. All banks that do not have a Shariah Supervisory Board are excluded from the sample. After checking all the banks websites if they have a Shariah Supervisory Board 39 banks remain. After removing banks

with missing data and removing outliers the final sample is 37 Islamic banks. 7 banks are located in Pakistan, 9 in the United Arab Emirates, 4 in Saudi Arabia, 5 in Indonesia, 6 in Bangladesh, 2 in Malaysia and one in Kuwait, Qatar, Lebanon and Oman. A list with the names of all Islamic banks and their country can be found in Appendix A.

Table 3

Sample size

Sample size	**Reason for excluding**	**Number of excluded banks**
Initial Sample	Banks in the before mentioned countries	-
634	Excluding unlisted banks	425
209	Excluding banks with market capitalization below $150 million USD	79
131	Excluding banks which do not have a SSB	92
39	Excluding banks with missing data and outliers	2
37	Final Sample	-

6. Data

The data that will be used for this study comes from Orbis and annual report of the sampled banks. The Orbis database collects both financial (income statements and balance sheets) and non-financial data (ownership concentration and general company information). If missing values are identified for some banks of the sample taken from Orbis, it will be looked at the annual reports of these banks to collect the missing data. That means that the banks included in this sample completely was derived from Orbis. Annual reports were only considered for gathering the missing data for the banks that had not the whole data available in Orbis.

The sampled banks will be selected according to if they are Shariah compliant. The term 'Shariah-compliant' is used in Islamic Finance to denote that a financial product/service/activity complies with the principles of Shariah (Islamic Law)[6]. That means that the selected banks are acting in accordance with the Islamic Shariah. Every bank of the first sample was individually checked for Shariah Supervisory Board, Ownership Concentration and Foreign Ownership, and CEO Duality. This data was

[6] https://www.cimb.com.sg/en/personal/help-support/faq/accounts/why-wait-fixed-deposit-i/general/what-does-shariah-compliant-mean.html

not available in Orbis. The annual reports of the banks provided the required data. The data for the total assets, ROA and ROE of the banks are all collected from Orbis.

For this research the years 2019-2021 are examined. To resolve for the endogeneity problem the independent variables are one year lagged (Corporate Governance variables).

7. Results

In this chapter the most important results of the analysis are presented. First in chapter 7.1 the descriptive statistics are discussed. Second, Pearson´s correlation matrix is described and discussed. Third, in chapter 7.3 the assumptions of the regression analysis are evaluated. After that the regression results are discussed, and robustness checks are performed.

7.1 Descriptive Statistics

An overview of the descriptive statisctis can be found in table 4. For the analysis of the descriptive statistics, the papers for comparison will be the paper of Nawaz (2017) and Baklouti (2022) as the models and variables are similar to these of this study(Baklouti, 2022; Nawaz, 2017). Nawaz researches the effect of corporate governance on the performance of Islamic banks whereas Baklouti is focusing more on the Shariah Supervisory Board and its effect on firm performance. However, Baklouti uses similar variables in his study. Comparing the statistics of this study to the statistics of their study, some of them are very similar and some of them are differing a lot. Furthermore, a study conducted by Mamatzakis (2017) will be taken into comparison for some variables as the further two studies did not test on some variables used in this study (Mamatzakis et al., 2017). However, it is important to state that the research of Mamatzakis was not conducted on islamic banks.

Starting with the independent variables, the minimum of ownership concentration (OWN_CON) is found to be 6.1% and the maximum 99.98%. The mean is 46.27%. There is quite a big difference in ownership concentration of the banks in this sample as 6.1% is widely dispersed and many shareholders are involved whereas 99.98 is very concentrated and almost the whole bank is owned by only one shareholder. Compared to the study of Mamatzakis (2017) there is not a big difference in ownership concentration in emerging markets (Mamatzakis et al., 2017). He found a minimum ownership concentration of 0% and a maximum of 74%. The mean of his sample is 21%. This is half of the mean of this sample, but it needs to be considered that the sample in Mamatzakis´ study was eight times as high. Furthermore, the maximum ownership concentration of this study of 99.98% is raising the average. This gives evidence that banks in Islamic countries are more concentrated than in emerging markets, meaning shares are not that much dispersed.

Coming to Foreign Ownership (OWN_FOR), the minimum of the variable Foreign Ownership is 0% and the maximum 94.72%. The maximum indeed is an outlier since the bank which is owned 94.72% by a foreign investor got acquired in the last decade because of almost going bankrupt during the crisis

of Lebanon. This can be seen very well on the statistic of the mean of foreign ownership which is 12.67%. This indicates that the mean of foreign investors in Islamic banks is equal to 12.67%. Out of this it can be derived that not much of the Islamic banks in the sample of this study are owned by foreign shareholders. This is the same as what Mamatzakis (2017) found as the minimum of foreign ownership in emerging markets is also 0% whereas the maximum is 20% and the mean 3.88% (Mamatzakis et al., 2017). When calculating the mean of foreign ownership without the outlier with 94.72% the mean is 9.94% which is not that much different from the mean of Mamatzakis (2017). But it is important to keep in mind that ownership concentration in this study was measured a little different than in the study of Mamatzakis. In his study he measured the concentration as the sum of the squared ownership shares of top the largest ten shareholders of the bank whereas in this study ownership concentration was measured as the percentage of the single largest shareholder of the banks.

Next, the size of the Shariah Supervisory Board (SSB) of the sample has a minimum of 2 and a maximum of 8 members. The mean lies at 4.24. This indicates that on average Islamic banks have 4 members active on their Shariah Supervisory Board to oversee the practices of the bank and assure that they are compliant with the Shariah Law. Compared to Nawaz (2017) the minimum, maximum and mean of the SSB size is very similar (Nawaz, 2017). The minimum amount of members in his study is 2, which is the same as in this study whereas the maximum is 7 and thus one fewer than 8 members as the maximum in this study. The mean in Nawaz (2017) is 4.102 SSB members. This is almost the same as the mean in this study with 4.24. Consequently, one can conclude that on average Islamic banks have a size of their SSB of 4 members. Also, when comparing to Baklouti (2022) the number of the minimum, maximum and mean of the size of the SSB is quite similar to this study (Baklouti, 2022). The minimum number of members is 2, the maximum 6 and the mean is 3.306 which is a bit fewer than in this study and Nawaz (2017).

The minimum size of board members (SIZE) is 4 and the maximum 21. The mean of members of the board of directors in the sampled Islamic banks is 9.3. For comparison reasons the natural logarithm of board members is calculated and only used for descriptive statistics. The minimum of the natural logarithm of board members is 1.39 and the maximum 3.04 whereas the mean is 2.1667. Compared to the sample of Baklouti (2022) which has a mean of 2.1447 this is very similar to the sample of this study (Baklouti, 2022). Therefore, the mean of the number of board directors should not deviate much from this study. This implies that on average, an Islamic bank has 9.3 members on their board of directors.

The two accounting-based measures of firm performance incorporated in this study are ROA and ROE. In the years 2019-2021 the average ROA and ROE of the sampled banks is respectively 0.84% and 7.89%. Again, these values are in line with the study of Baklouti (2022) who find an average ROA of 1.187% and an average ROE of 8.741% (Baklouti, 2022).

As table 4 shows, the minimum value for bank size, measured as total assets in dollar, is 1,836,843,000.884 and the maximum value 190,085,083,000.000. With a mean of 32,411,588.800 and a standard deviation of 42,852,052.400, one can see that the data contains outlier. Therefore, the natural logarithm of the variables LN_SIZE, is used in the analysis. Both variables have 111 observed values which shows that almost all banks have data on their total assets for all years. When looking at the size measured as the natural logarithm of total assets of the bank (LN_SIZE), the minimum is 21.3310 and the maximum 25.9710 whereas the mean is 23.4392. These results are quite differing a lot from the results of Nawaz (2017). The main reason why this is the case could be that Nawaz conducted his research during the time of the financial crisis in the years 2006-2009. Furthermore, the banks have grown in terms of total assets in recent years. Nawaz (2017) found a minimum 10.787 and a maximum of 16.836 in his study for the natural logarithm of total assets in his sample of 67 Islamic banks (Nawaz, 2017). This is quite a big difference since the maximum of his sample is not even close to the minimum of the sample of this study.

Looking at the variable AGE, one can see that the difference between the youngest and oldest bank is 117 years. The oldest bank was founded in 1952 whereas the youngest bank has its incorporation date back to 2014. On average the banks used in this sample are 44.73 years old. As already with the first control variable the natural logarithm of the age of the banks were used for the analysis to allow easier interpretation. The mean of the variable LN_AGE in this study is 3.6553. This cannot really be compared to the other studies as they are not measuring the natural logarithm of the age of the banks. In the study of Baklouti (2022) the mean of the age without the natural logarithm was 14.737 which is significantly lower than the average of 44.73.

The variable CEO Duality had to be dropped out of the sample and therefore does not occur in the descriptive statistics. The reason for that is simply that all the 37 Islamic banks in this sample do not have CEO Duality. That means no chairman of one bank is also the CEO of the bank. In section 7.3.4 it will be described in more detail what that means.

Table 4
Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Dependent Variables					
ROA	111	-0.4494	0.02645	0.0084	0.0089
ROE	111	-0.4588	0.2232	0.0789	0.0832
Independent Variables					
OWN_CON	111	0.0610	0.9998	0.4627	0.2462
OWN_FOR	93	0.0000	0.9472	0.1267	0.2060
SSB	111	2	8	4.24	1.738
BSIZE	111	4	21	9.3	3.594
Control Variables					
LN_SIZE	111	21.3310	25.9710	23.4392	1.2559
SIZE in thousands	111	1.836.843,884	190.085.082,000	32.411.588,8	42.852.052,4
LN_AGE	111	2.079	4.828	3.6553	0.5630
AGE	111	8	125	44.73	23.825
LN_NETINCOME (Robustness)	105	7.86	15.19	11.80	1.66568

Note: This Table shows the descriptive statistics for all variables. The data of the dependent variables are based on the years 2019-2021 and the data of the independent variables are lagged by one year. The maximum number of observed values is 111 because 37 banks are included in the sample for a period of three years. For a better interpretation, the original data for AGE and SIZE are given although in the analysis the variables are converted into LN_AGE and LN_SIZE.

7.2 Pearson´s Correlation Matrix

Pearson´s correlation matrix is used for the bivariate analysis in order to analyze the association between the variables in this study. In general, the values can take a value between -1 and +1. -1 indicates a total negative correlation, 0 indicates no correlation at all, and +1 a total positive correlation. It is generally known that values below -0.5 or above 0.5 are indicating a strong correlation between two variables. Furthermore, a moderate correlation is given when the values are between -0.5 and -0.3 or between 0.3 and 0.5. Low correlation is assumed when the values of the variables are between -0.3 and +0.3. The correlation matrix for the variables used in the regression analysis of this study can be found in table 5. As can be observed in the table the ownership variables do not have a significant correlation with the performance measures. Contrary to the first hypotheses 1a and 1b either ownership concentration nor foreign ownership have a significant correlation with the financial performance variables giving reason that there is no significant relation between ownership and financial performance.

Considering the two firm performance variables, both are highly correlated on the 0.01 level (.880**). This is according to expectation as both these variables are measuring the financial performance of the banks.

Regarding the board structure variables, members of the Shariah Supervisory Board and Board of Directors, the two variables are significantly correlated with each other at the 0.01 level (.713**). SSB is significantly positively correlated with the performance variable ROE at the 0.05 level (.238*). This is in line with hypothesis H3, as the size of Shariah Supervisory Board is expected to have positive relationship with the financial performance of the bank. Contrary to the expectations and hypothesis H4 the size of the board of directors has no significant correlation with the financial performance variables.

The control variables in the correlation matrix are bank size and bank age. The variable bank age (LN_AGE) has no correlation either with ROA or with ROE. Only the variable bank size (LN_SIZE) is significantly positively correlated with ROA and ROE. With ROA bank size is significantly positively related at the 0.01 level (.379**) and at the 0.05 level significantly positively related with ROE (.217*). This gives evidence that at least the control variable bank size is relevant in this study.

Since there are some variables that are highly or moderately correlated a VIF test is conducted. The VIF test is useful when multicollinearity issues are needed to be excluded. Multicollinearity exists when two or more variables are highly or moderately correlated in a regression model. Since the VIF of the independent variables used in this study is much lower than the threshold of 10 and even better lower than 5 except for ROA and ROE on the independent and control variables, multicollinearity seems to be no problem in this data set. An overview of the VIF scores can be found in Appendix B.

Table 5

Pearson´s Correlation Matrix

	OWN_CON	*OWN_FOR*	*SSB*	*BSIZE*	*ROA*	*ROE*	*LN_SIZE*	*LN_AGE*
OWN_CON	1	.14	-.377**	-.110	.021	-0.177	.026	.051
OWN_FOR	.14	1	-.202	-.233*	.032	-.048	.161	.352**
SSB	-.377**	-.202	1	.713**	.041	.238*	-.158	-.313**
BSIZE	-.110	-.233*	.713**	1	.004	.163	-.261**	-.282**
ROA	.021	.032	.041	.004	1	.880**	.379**	.009
ROE	-.177	-.048	.238*	.163	.880**	1	.217*	-.020
LN_SIZE	.026	.161	-.158	-.261**	.379**	.217*	1	.334**
LN_AGE	.051	.352**	-.313**	-.282**	.009	-.020	.334**	1

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

7.3 Regression Results

7.3.1 Ownership structure and bank performance

The first hypothesis states that ownership concentration has a negative and foreign ownership a positive relationship with financial bank performance. That means that the more concentrated ownership is the lower is the ROA and ROE of the bank. For foreign ownership that means that more shares owned by foreign investors lead to a higher ROA and ROE of the bank. Regression models are conducted to test this hypothesis. The results are presented in table 6. As can be observed in the table none of the regression models do find a significant positive relationship between ownership structure and firm performance. Although there is indeed a negative relationship between ownership concentration and ROE the relationship is not significant. Furthermore, the relationship between ROA and ownership concentration is insignificantly positive. This leads to the assumption that there is no significant relationship between ownership concentration and financial performance as assumed in hypothesis 1a. Hence, there is no reason to believe that Islamic banks with more concentrated ownership do not perform as well as Islamic banks with more dispersed ownership. This can be argued with that the most dominant shareholder may influence the bank´s decision based on short-term financial performance.

Foreign ownership was assumed to lead to a better financial firm performance in Islamic banks. When looking at table 6 one can see that there is no significant relationship between foreign ownership and both financial performance measures ROA and ROE. The unstandardized coefficient of foreign ownership and ROA is .001 and -.012 between foreign ownership and ROE. As already mentioned, not significant. Even if they were significant, hypothesis 1b could not be confirmed as the relationship with ROE is unexpectedly negative. These results are not in line with Mamatzakis (2017) who found a significantly negative relationship between ownership concentration and foreign ownership with the bank performance measures ROA and ROE. This study finds the same negative relationship for ownership concentration and foreign ownership with ROE, but as already mentioned, not significant.

However, there is no reason to believe that Islamic banks with more foreign ownership perform better than Islamic banks with fewer foreign ownership and therefore hypotheses 1a and 1b cannot be accepted.

7.3.2 Shariah Supervisory Board size and bank performance

The third hypothesis stated that the Shariah Supervisory Board size has a positive relationship with bank performance. That means a bigger SSB size would lead to better bank performance, respectively. Regression models are conducted to test this hypothesis. The results are presented in table 6. As can be observed in the table both regression models do not find a significant positive relationship between the size of the SSB and bank performance. Although the relationship of SSB size and both performance variables ROE (.010) and ROA (.001) is positive, it cannot be concluded that the relationship between SSB size and ROE and ROA is positive since the coefficients are not significantly positive. Based on

these results, there is no reason to assume that the size of the SSB has a positive impact on financial performance of the Islamic banks in this sample. These results are in line with Kok et al (2022)., who also found no relationship between SSB size and ROA and ROE (Kok et al., 2022). Baklouti (2022) researched several Shariah Supervisory Board factors and one of them was also the size of the SSB. He also found no significant relationship between the size, but admittedly the insignificant relationship found in his research was negative whereas the insignificant relationship in this study is positive. Hence, there is not enough evidence to accept H3 and therefore H3 is rejected.

7.3.3 Size Board of Directors and bank performance

Considering board size, the fourth hypothesis H4 stated that the size of board of directors has a negative relationship with bank performance, contrary to the resource dependence theory but according to agency theory as coordination and communication is better with a smaller board of directors. Table 6 presents the results of the OLS regression with the effect of size board of directors on the dependent variables ROE and ROA. As can be observed in the table, no significant relationships are found between board size (SIZE) and performance measures (ROE and ROA). When considering the insignificant relationships from the regression it can be seen that the coefficients are both positive (.004) and (.000) which means that even if the relationship had been significant, hypothesis H4 would not hold and nevertheless would have been rejected. But as there is no significant relationship, there is no reason to believe that board size has a negative effect on bank performance.

7.3.4 CEO Duality and bank performance

Hypothesis H2 which dealt of the impact of CEO Duality on bank performance, more specifically the negative impact on bank performance is not considered in the regression analysis and therefore cannot be answered. The reason for eliminating the variable CEO Duality in the dataset and with it the hypothesis H2 is simply that all banks in the final sample have two different persons as their CEO and their Chairman. Every bank´s website was checked manually and none of the 37 has the same CEO and Chairman. Hence, nothing can be concluded about the relationship between CEO Duality and bank performance. Although literature found mixed findings about CEO Duality in this study it was assumed to have a negative impact, it is not ultimately known as a bad corporate governance mechanism as also several studies find a positive relationship between CEO Duality and bank (firm) performance. Unfortunately, this study cannot contribute to the findings of prior literature.

To make these relationships, although insignificant, more visible, partial regression plots and the histograms of the standardizes residuals for the regression analysis of independent and control variables on financial performance measures ROA and ROE are conducted and can be found in the Appendices C, D and E. Additionally, the standardized residual histogram confirm that the standardized residuals of a multiple regression follow a normal distribution. In Appendix F the P-P plots of the standardized

residual can be found. If the dots in a P-P plot follow the 45-degree line, the residuals are perfectly normally distributed. As can be seen on the P-P plots for this study the dots are very close to the 45-degree line and hence a normal distribution can be assumed.

Table 6

OLS regression results of corporate governance mechanisms on ROA and ROE

	Full Model ROE			Full Model ROA		
	Untandardized Beta	Standardized Beta	Sig.	Untandardized Beta	Standardized Beta	Sig.
Constant	-.514		0.003	-.071		0.001
OWN_CON	-.029	-.085	0.451	.003	.085	0.447
OWN_FOR	-.012	-.029	0.783	.001	.032	0.758
SSB	.010	.196	0.205	.001	.138	0.368
BSIZE	.004	.147	0.289	.000	.086	0.532
LN_SIZE	.023	.328	0.003	.003	.457	0.001
LN_AGE	.001	.009	0.937	-.001	-.076	0.511
R^2	.194			0.207		

Note: Table 6 shows the unstandardized coefficients, standardized coefficients and significance levels for the OLS regression models with dependent variables ROA and ROE. The definitions of the variables can be found in table 2. All independent variables and control variables are lagged by one year.

7.4 Robustness tests

In this section some robustness tests are performed concerning the validity of the results. In these robustness tests it is going to be examined if the results hold under different circumstances.

7.4.1 Alternate measures of variables

In the first robustness test of this study the same OLS regression is conducted, but with an additional control variable which is the natural logarithm of the total net income of the banks only in the year 2019. In the first model ROE and ROE data for the years 2019-2021 are used. The robustness test now only incorporates bank performance data of 2019. Additionally, another control variable is added. The control variables of the original model include LN_SIZE (natural logarithm of Total Assets) and LN_AGE (natural logarithm of years since incorporation date), whereas this robustness test includes LN_NETINCOME (natural logarithm of Net Income). The robustness test should assess whether the results from the first regression results for the hypotheses still account with alternative measures.

When including alternative measures of variables, the results are quite similar to earlier findings. The coefficient for ownership concentration and foreign ownership remains negative for ROE and turned from positive to negative for ROA but still insignificant. LN_SIZE became significantly negative at the .05 level (-.033*) in comparison to significantly positive in the original model (.023*) for ROE and at the .01 level (-.005**) for ROA compared to (.003**) in the original model. The added control variable LN_NETINCOME is significantly positively related to ROE (.042**) and ROA (.007).

The variables SSB and BSIZE remain insignificantly positive for both ROE and ROA. Finally, and in line with earlier results no significant relationships are found between ownership structure and bank performance and also no significant relationships are found between board structure and bank performance. To conclude, the results are similar when measuring the variables alternatively. Again, hypotheses H1a, H1b, H3 and H4 cannot be confirmed as there is no reason to believe that Ownership structure and board structure have a significant effect on bank performance.

Table 7

OLS regression results with additional control variable for only 2019

	Full Model ROE			Full Model ROA		
	Untandardized Beta	Standardized Beta	Sig.	Untandardized Beta	Standardized Beta	Sig.
Constant	.373		0.081	.056		0.003
OWN_CON	-.052	-.272	0.108	-.001	-.021	0.845
OWN_FOR	-.029	-.131	0.370	-.001	-.043	0.644
SSB	.001	.023	0.914	.000	-.136	0.322
BSIZE	.003	.249	0.208	.000	.072	0.556
LN_SIZE	-.033	-.877	0.030	-.005	-1.042	0.001
LN_AGE	-.001	-.015	0.935	-.001	-.060	0.611
LN_NETINCOME	.042	1.446	.001	.007	1.746	.001
R^2	.632			.849		
N	28			28		

Note: Table 7 shows the unstandardized coefficients, standardized coefficients and significance levels for the OLS regression models with dependent variables ROA and ROE. The definitions of the variables can be found in table 2. All independent variables and control variables are lagged by one year.

7.4.2 Analysis of banks only from United Arab Emirates

The second robustness test is a subsample analysis of the Islamic banks located in the United Arab Emirates (AE). Hence, in this subsample only the data of the Islamic banks located in the United Arab Emirates are considered for the analysis. The reason why these banks are analyzed separately is simply that out of the original sample the most banks are located in the United Arab Emirates and for this subsample analysis the country with most banks located in was chosen. The results of the subsample analysis can be found in Table 8.

Looking at the Table, one can see that the results are quite different from the original analysis. Ownership concentration now became significantly positive at the .05 level (.628**) for ROE and also significantly positive at the .05 level (.096) for ROA. This gives evidence that ownership concentration has a significantly positive relationship with bank performance. Additionally, the variable board size in the subsample analysis became significant. Namely, significantly negative. Hence, there is evidence to assume that the board size of Islamic banks in the United Arab Emirates has a significantly negative effect on bank performance.

This is not in line with previous results as there were no significant relationships between none of the corporate governance mechanisms and the performance measures. Now, there is a significantly negative relationship found between ownership concentration and both performance measures and between board size and both of the performance measures. According to these results, there is enough evidence to reject H1a as the relationship is found to be positive and not negative. Hence, there is no reason to believe that ownership concentration is significantly negatively related to bank performance and therefore, H1a is rejected according to this robustness test.

Furthermore, a significant negative relationship is found between board size and both performance measures ROE and ROA. As hypothesis H4 states that there is a negative relationship between board size and bank performance, there is enough evidence to accept this hypothesis in the robustness test. Hence, hypothesis H4 is confirmed after analyzing the Islamic banks in the United Arab Emirates separately in the subsample robustness test.

The results of the robustness test therefore are not in line with earlier results, indicating that there is evidence that ownership concentration leads to better bank performance whereas board size led to a lower bank performance. As the robustness test already stated, this is only the case for banks located in the United Arab Emirates. This give some indication that it depends on the countries within the sample if the corporate governance mechanism have significant effects on the financial performance of the banks.

Table 8
OLS regression results of only AE banks

	Full Model ROE			Full Model ROA		
	Untandardized Beta	Standardized Beta	Sig.	Untandardized Beta	Standardized Beta	Sig.
Constant	-1.191		0.191	-.069		0.476
OWN_CON	.628	.743	0.027	.096	1.007	0.003
OWN_FOR	.324	.312	0.091	.032	.270	0.123
SSB	.045	.340	0.547	.012	.828	0.135
BSIZE	-.061	-.713	0.033	-.009	-.918	0.006
LN_SIZE	.045	.543	0.272	.001	.132	0.776
LN_AGE	.029	.090	0.697	.005	.147	0.508
R^2	.549			0.588		
N	23			23		

Note: Table 8 shows the unstandardized coefficients, standardized coefficients and significance levels for the OLS regression models with only banks from AE with dependent variables ROA and ROE. The definitions of the variables can be found in table 2. All independent variables and control variables are lagged by one year.

8. Conclusion

In the last chapter of this study, the conclusion, the results are reviewed and discussed with special regard to the hypotheses and theories. After that, limitations of the study are examined. Lastly, implication for future research will be given.

8.1 Discussion

Over the past decades Islamic finance got more and more attention and is steadily growing. Also, corporate governance became more present and more important in the last decades due to some high-profile scandals that occurred in the USA. Generally, the purpose of corporate governance is to facilitate effective, entrepreneurial, and prudent management that can deliver the long-term success of a company. Several researchers assume that good corporate governance automatically leads to better firm performance. This also has been researched quite a lot in recent literature with different findings. Some find indeed a relationship between corporate governance mechanisms; some are stating that corporate governance mechanisms do not have an effect on the financial performance of companies.

As research is extensive on the effect of corporate governance on financial firm performance, but not especially in Islamic countries and certainly not on Islamic banks, this research planned to find out more

on corporate governance in Islamic countries and if it influences the financial performance of banks. Based on this the following research question is formulated:

"Do corporate governance mechanisms lead to a better financial performance in Islamic banks?"

Based on prior literature, different hypotheses were formulated to give an answer to this research question. The first hypotheses are about ownership concentration. The first hypothesis examines the effect of ownership concentration, measured as the percentage of the largest shareholder, on financial bank performance. Based on the agency theory, it is argued that firms with higher concentration of ownership give the controlling shareholders more opportunities and incentives to expropriate firm´s resources at the expense of the minority of shareholders and use their power to undertake activities intended to obtain private profit to the detriment of minority shareholders and therefore leads to a negative relationship with financial performance. In other words, according to agency theory it is assumed that the more concentrated the ownership, the lower the financial performance of a bank.

The next hypothesis, also related to ownership structure, examines the relationship between foreign ownership and bank performance. It is hypothesized that foreign ownership leads to a higher performance. This hypothesis is based on the resource dependence theory, which assumes that foreign investors create more avenues for investment and making profit. Additionally, resource dependence theory assumes more sources of knowledge, expertise and access to resources which is likely be given when having a broad investor base also located in other countries than the bank itself.

The second hypothesis focuses on the effect of CEO Duality on bank performance. It is hypothesized that it has a negative impact on bank performance if the CEO of the bank is also the Chairman, which is known as CEO Duality. Based on the agency theory this relationship is negative and CEO Duality leads to lower bank performance, as one and the same person has the power to mark "own examination paper", which is likely to lead to agency costs. Unfortunately, this hypothesis had to be dropped as the study progressed. The reason for that is that all 37 banks of the final sample did not have the same person as CEO and Chairman. Therefore, this study cannot say anything about the relationship of CEO Duality and bank performance in Islamic countries.

The next two hypotheses focus on the effect of board structure on financial performance. The third hypothesis examines the effect of the Shariah Supervisory Board size. It is hypothesized that the SSB size has a positive impact on the financial bank performance. This is in accordance with the social contract theory which states that the SSB has the obligation to fully concentrate on the tasks to eliminate "haram" operations. The society relies on and trusts the SSB in these operations, which strengthens the link to the social contract theory.

Based on the resource dependence theory the fourth hypothesis would test a positive relationship between board size and financial performance since this theory assumes that more board members would lead to better resource availability, more knowledge and expertise. But prior literature more often

argues with agency theory that the bigger the board of directors the lower the financial performance. This is due to communication and decision-making being more difficult through more members. As one of the primary tasks for the board of directors is to control for agency costs the relationship between board size and financial performance is being hypothesized as negative.
To test these hypotheses a regression analysis was conducted using the ordinary least squares (OLS) regression with bank specific controls. The sample contains a total of 37 publicly traded Islamic banks located in different Islamic countries. These countries are Pakistan, United Arab Emirates, Saudi Arabia, Indonesia, Bangladesh, Malaysia, Kuwait, Qatar, Lebanon, and Oman. In order to resolve the endogeneity problem, the independent variables are one year lagged.

The results of the OLS regression analyses found no evidence to confirm any of the five hypotheses. Although none of the hypothesis can be confirmed, some other interesting findings emerged during the study. In the subsample robustness test the OLS regression found that, contrary to the agency theory, ownership concentration has a positive effect on financial performance. The hypothesis in this study was that ownership concentration affects financial performance negatively. This hypothesis was developed according to agency theory. After conducting the OLS regression for the subsample analysis this hypothesis can be rejected as the coefficients are significantly positive. Hence, more concentrated ownership does not necessarily mean that controlling shareholders are to abuse their power to benefit themselves. Another interesting result is that in the subsample analysis hypothesis H4 can be accepted as the coefficients of board size are significantly positively related to financial bank performance in banks located in the United Arab Emirates. A possible explanation for this could be that it depends on the specific countries within the chosen Islamic countries in the sample if specific corporate governance mechanisms lead to a better financial performance of banks. Although all banks are Islamic and in Islamic countries, the country specific regulations, cultures, etc. can have different effects on the financial performance of the banks.
As already mentioned, none of the developed hypotheses can be confirmed by OLS regression. But as there are some significant relationships in the subsample analysis based on that hypothesis H4 could be confirmed and hypothesis H1a rejected. For the other hypotheses also in the robustness tests there is no evidence to confirm the hypotheses.

Concluding and coming to an answer of the research question that was formulated, this study found no evidence of a significant effect of corporate governance mechanisms on financial performance of Islamic banks. Only some evidence was found that it could be country specific as the subsample analysis found evidence that ownership concentration is significantly positively related to financial performance and board size significantly negatively related to financial performance.
Possible reasons for not finding enough evidence in the main analysis are given in the next section as well as implication for future research.

8.2 Limitations and Future Research

This section discusses the limitation of this research and based on these limitations some recommendations for future research are given. The first limitation of the study is with regards to the sample that was used. After excluding outliers, banks with no SSB and with missing data, only 37 Islamic banks remained in the study. This is less than in other studies researching the effect of corporate governance mechanisms on the financial bank performance (Kok et al., 2022; Mamatzakis et al., 2017; Nawaz, 2017). Another limitation is that not all Islamic countries were considered. Additionally, there are also Islamic banks in western countries, which were not considered at all as the sample only deals with Islamic banks in Islamic countries. Out of these limitations the first recommendation arises. In future research bigger samples could lead to more consistent results, therefore it is advised if conducting a study about the effect of corporate governance mechanisms on financial bank performance to consider more banks out of more countries. As there are also Islamic banks in non-Islamic countries it would also be interesting to also consider Islamic banks out of western countries in the sample.

Another limitation is that only the recent 3 years were considered in this study. As 2019 the outbreak of Covid-19 took place it may well be that these years are not representative as a lot of firms suffered big losses. If it was the same for banks as for firms is not known, so it is just a possible limitation. Consequently, for future research it is not only advised to use a bigger sample but also a bigger time span to come to more consistent results. With a bigger time span it will be prevented that specific events like Covid-19 could influence the results.

The third limitation is that only two governance mechanisms were considered for this study. These were ownership structure and board structure. This could lead to a biased result as there are some more corporate governance mechanisms that could influence the financial performance of banks. For future research some more corporate governance mechanisms could be considered like the frequency of board meetings or also the composition of boards or the knowledge/expertise of the board members if these mechanisms have a significant effect on the financial bank performance in Islamic countries.

Another limitation is that this study only considered one model and tested it via OLS regression. As other studies also used other forms of regressions as two stage least squares regression or logistic regression and completely other analyses as structural equation modeling (SEM) it is advised for future research to also conduct other analysis models. This could lead to more consistent results.

The final limitation is that this study only used accounting-based performance measures (ROE and ROA) and no market-based. Therefore, for future research it is recommended to add a market-based performance measure like Tobin´s Q.

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Appendix

Appendix A: List of sampled Islamic Banks

	Company name Latin alphabet	Country ISO code	NACE Rev. 2, core code
1.	EMIRATES NBD BANK PJSC	AE	6419
2.	AL RAJHI BANK PUBLIC JOINT STOCK COMPANY	SA	6419
3.	ABU DHABI COMMERCIAL BANK	AE	6419
4.	RIYAD BANK	SA	6419
5.	NATIONAL BANK OF KUWAIT S.A.K.	KW	6419
6.	DUBAI ISLAMIC BANK PJSC	AE	6419
7.	SAUDI BRITISH BANK JSC (THE)	SA	6419
8.	RHB BANK BERHAD	MY	6419
9.	QATAR ISLAMIC BANK SAQ	QA	6419
10.	BANK TABUNGAN NEGARA (PERSERO)	ID	6419
11.	HABIB BANK LIMITED	PK	6419
12.	BLOM BANK S.A.L.	LB	6419
13.	PT BANK BTPN TBK	ID	6419
14.	NATIONAL BANK OF RAS AL-KHAIMAH (P.S.C.) (THE)	AE	6419
15.	COMMERCIAL BANK OF DUBAI P.S.C.	AE	6419
16.	NATIONAL BANK OF PAKISTAN	PK	6419
17.	SAUDI INVESTMENT BANK (THE)	SA	6419
18.	BANK PERMATA TBK	ID	6419
19.	BANK OCBC NISP TBK	ID	6419
20.	PT BANK MAYBANK INDONESIA TBK	ID	6419
21.	AFFIN BANK BERHAD	MY	6419
22.	NATIONAL BANK OF FUJAIRAH PJSC	AE	6419
23.	BANK AL HABIB	PK	6419
24.	BANK ALFALAH LIMITED	PK	6419
25.	ALLIED BANK LIMITED	PK	6419
26.	UNITED COMMERCIAL BANK LTD	BD	6419

27.	CITY BANK LTD	BD	6419
28.	BANK ASIA LIMITED	BD	6419
29.	FAYSAL BANK LTD	PK	6419
30.	TRUST BANK LTD (THE)	BD	6419
31.	COMMERCIAL BANK INTERNATIONAL P.S.C.	AE	6419
32.	MERCANTILE BANK LIMITED	BD	6419
33.	JAMUNA BANK LTD	BD	6419
34.	UNITED ARAB BANK PJSC	AE	6419
35.	DUBAI FINANCIAL MARKET	AE	6419
36.	BANKISLAMI PAKISTAN LIMITED	PK	6419
37.	ALIZZ ISLAMIC BANK S. A. O. G.	OM	6419

Appendix B: VIF Scores

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	OWN_CON	.745	1.342
	OWN_FOR	.854	1.171
	ShariahMembers	.395	2.535
	BoardMembers	.493	2.028
	ROA	.793	1.261
	LN_SIZE	.661	1.513
	LN_AGE	.689	1.451

a. Dependent Variable: ROE

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	OWN_CON	.745	1.342
	OWN_FOR	.854	1.171
	ShariahMembers	.391	2.558
	BoardMembers	.489	2.045
	ROE	.806	1.241
	LN_SIZE	.723	1.384
	LN_AGE	.693	1.444

a. Dependent Variable: ROA

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	OWN_FOR	.844	1.184
	ShariahMembers	.463	2.160
	BoardMembers	.506	1.977
	ROE	.163	6.124
	ROA	.161	6.218
	LN_SIZE	.637	1.569
	LN_AGE	.670	1.492

a. Dependent Variable: OWN_CON

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	OWN_CON	.662	1.511
	ShariahMembers	.389	2.569
	BoardMembers	.489	2.046
	ROE	.147	6.818
	ROA	.144	6.923
	LN_SIZE	.638	1.567
	LN_AGE	.732	1.367

a. Dependent Variable: OWN_FOR

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	OWN_CON	.780	1.282
	OWN_FOR	.837	1.195
	BoardMembers	.773	1.293
	ROE	.146	6.863
	ROA	.142	7.035
	LN_SIZE	.652	1.533
	LN_AGE	.722	1.385

a. Dependent Variable: ShariahMembers

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	OWN_CON	.684	1.463
	OWN_FOR	.843	1.186
	ShariahMembers	.620	1.612
	ROE	.146	6.845
	ROA	.143	7.011
	LN_SIZE	.667	1.500
	LN_AGE	.670	1.492

a. Dependent Variable: BoardMembers

Coefficients[a]

Model		Collinearity Statistics Tolerance	VIF
1	OWN_CON	.656	1.524
	OWN_FOR	.838	1.194
	ShariahMembers	.398	2.510
	BoardMembers	.508	1.970
	ROE	.149	6.709
	ROA	.161	6.229
	LN_AGE	.779	1.284

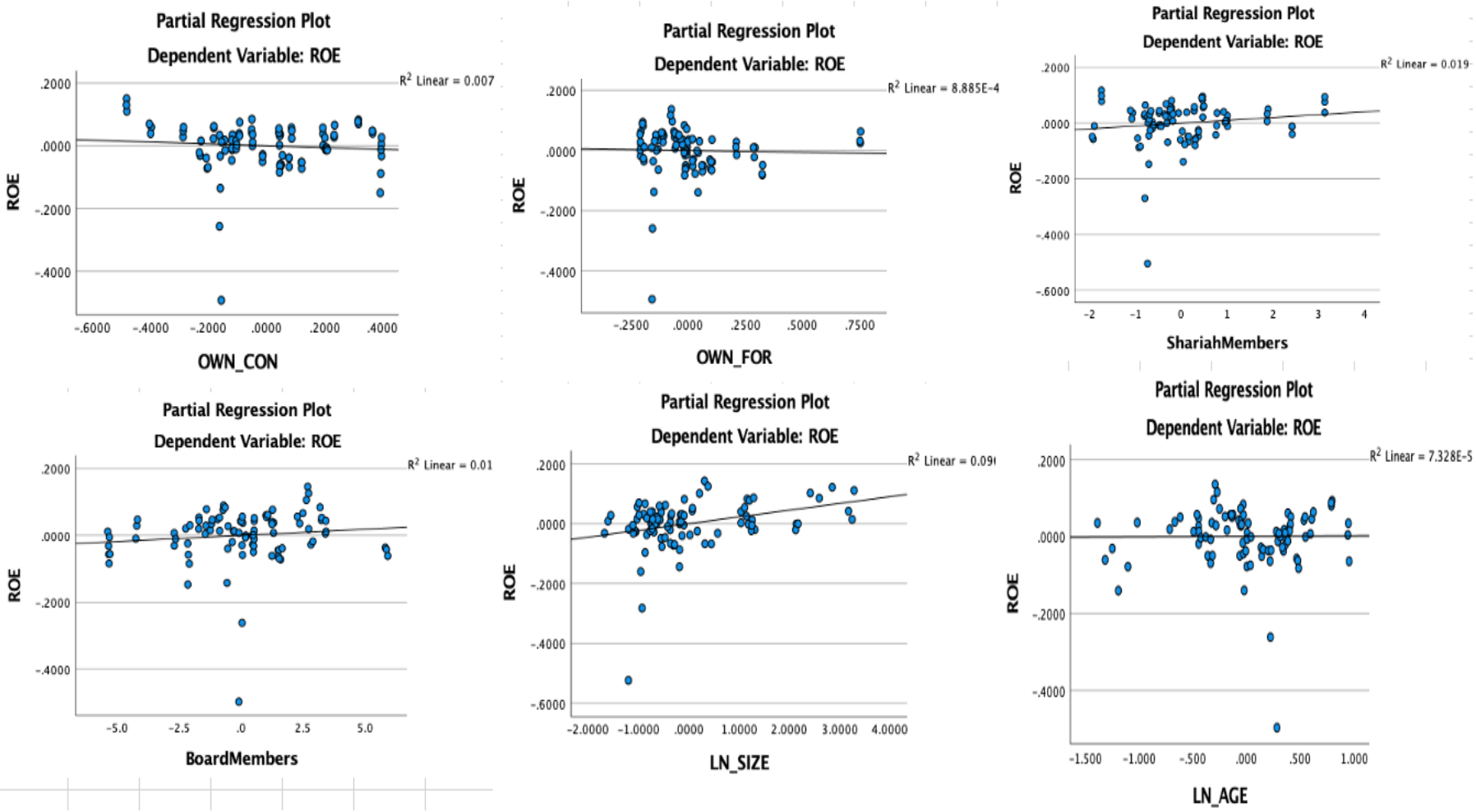
a. Dependent Variable: LN_SIZE

Coefficients[a]

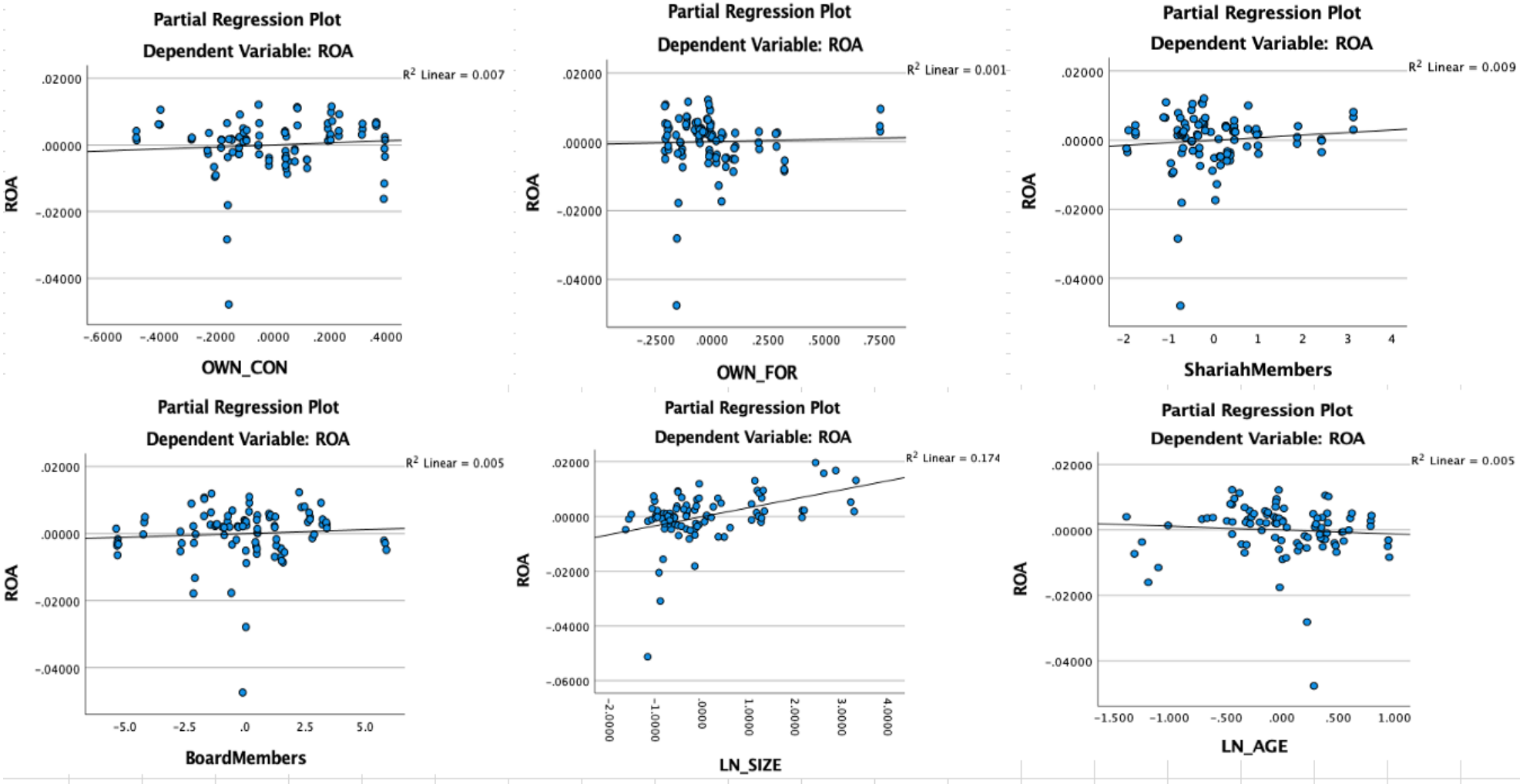
Model		Collinearity Statistics Tolerance	VIF
1	OWN_CON	.657	1.523
	OWN_FOR	.915	1.093
	ShariahMembers	.420	2.382
	BoardMembers	.486	2.057
	ROE	.148	6.755
	ROA	.147	6.825
	LN_SIZE	.741	1.349

a. Dependent Variable: LN_AGE

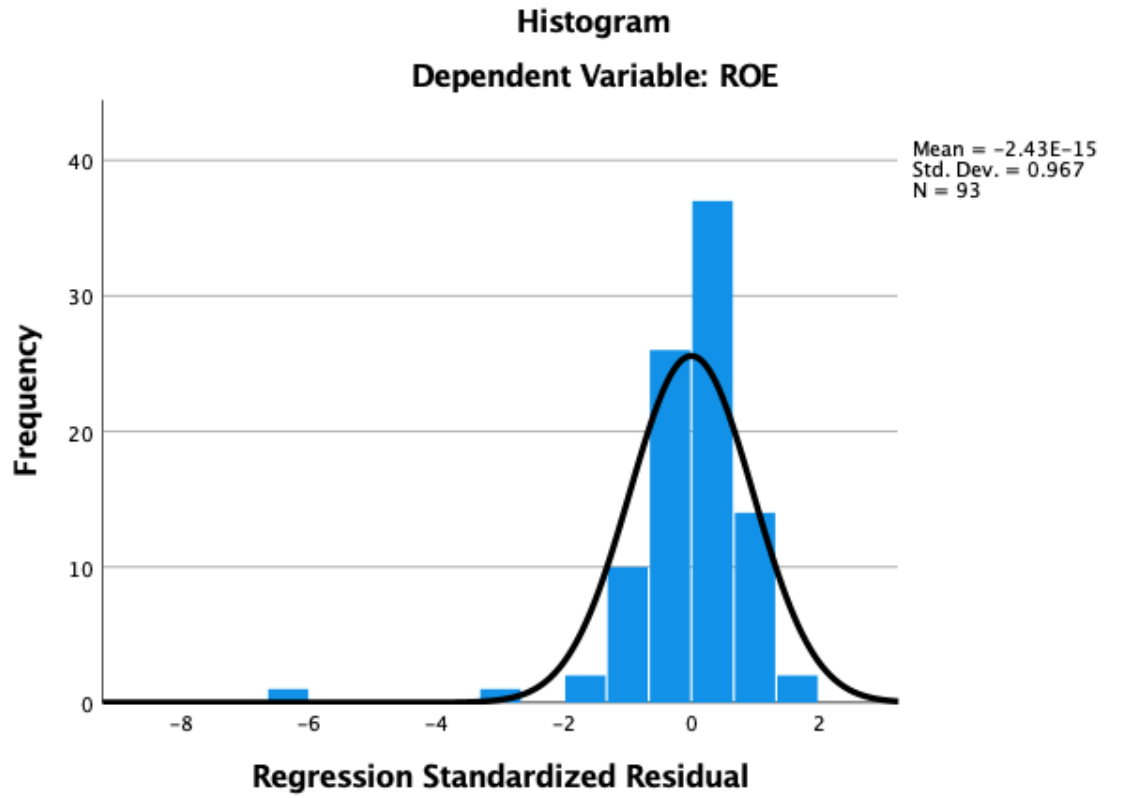
Appendix C: Partial Regression Plots between all independent and control variables and ROE

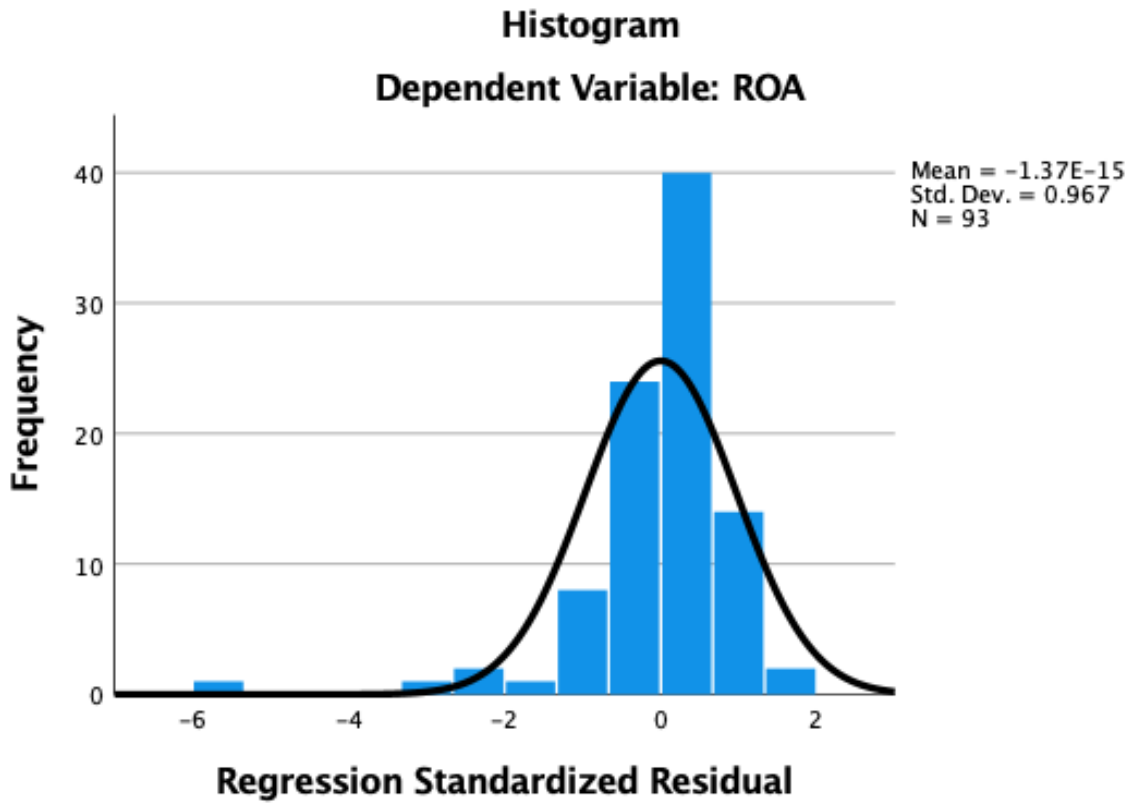


Appendix D: Partial Regression Plots between all independent and control Variables and ROA



Appendix E: Histogram Standardized Residual of the independent and control variables on ROE and ROA





Appendix F: P-P plots of the standardized residual of the model with dependent variables ROE and ROA