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# "Ownership Concentration and Firm Performance in Austria and Germany "

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14.09.18 Wien Maya Vassileva

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#### **Abstract**

A lot of research has been conducted, in order to find a relationship between concentration of ownership and firm performance. One of the main focuses of corporate governance falls on the ownership structure of companies. It is a very substantial issue, since it defines who exhibits control rights, voting rights and bears the risk and therefore, a correlation to firm performance can be expected. In an attempt to contribute to this extensive research, this thesis investigates the influence of ownership concentration on firm performance for listed companies in Austria and Germany in the period of 2014 – 2016. The performed analysis does not show a relationship between the two variables.

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## **List of Abbreviations**

ACCG	Austrian Code of Corporate Government	
GCCG	German Corporate Governance Code	
GmbH	Gesellschaft mit beschränkter Haftung	
LLC	Limited Liability Company	
M/B	Market-to-Book	
P/E	Price-to-Earnings	
ROS	Return on Sales	
ROA	Return on Assets	
ROE	Return on Equity	
ROI	Return on Investment	

#### 1. Introduction

Can the level of performance be explained by the ownership structure of the company? This is a question, which initiates a large number of studies, trying to identify some kind of correlation. They examine different samples across the world and use numerous statistical models, but still no unified answer has been found yet. There are also plenty of studies dealing with the identity of corporate owners and their impact on firm performance. Though on first sight it is logical that the owner will aim to maximize the company's outcome, it is not always true. Depending on who holds the firm, there can be differences in personal and shareholder value. One of the main focuses of corporate governance falls on the ownership structure of companies. It is a very substantial issue, since it defines who exhibits control rights, voting rights and bears the risk.

The aim of this thesis is to investigate a possible relationship between the concentration level of ownership and firm performance. The conducted analysis is based on listed firms of two countries, namely Austria and Germany. The thesis starts with a brief literature review of some studies on the topic. Then several theoretical concepts concerning the separation of ownership and control will be discussed: agency theory, stewardship theory, resource dependence theory, stakeholder theory.

In the next part of the paper, the similarities and differences of corporate governance, financial and legal aspects across the two countries will be presented. Thereafter, the structure of ownership will be reviewed, as well as the main identities of owners. The following part deals with firm performance and its measurement. We can differentiate between two ways of evaluating: the accounting based and market measurement. The first one concentrates on past or short-term values including factors such as return of assets (ROA), return on equity (ROE), return on income (ROI) etc. The second one, the market-based measurement, includes non-financial information focusing on the future, such as market growth, product quality or customer satisfaction.

For the statistical analysis of whether ownership concentration has an impact on firm performance, multiple regressions will be conducted. The data sample includes public limited companies in Austria and Germany that are listed on Stock Exchange. The data is extracted from the ORBIS database, which incorporates information about ownership structure as well as financial data of companies all over the world. First of

all, general information about the data with the help of descriptive statistics is obtained, focusing on shareholder identities and ownership concentration. After introducing the variables of the constructed regressions, the results are discussed. For the examination the independent variable is ownership concentration, defined as percentage of share the top shareholder holds. The dependent variable, performance is represented by ROA, since it gives a comparatively strong approximation. Final remarks on the relationship between ownership concentration and firm performance will be made.

Most of references used in the paper, will be obtained from databases such as ProQuest, JStore, Science Direct or Google Scholar, as well as from financial and economic journals.

#### 2. Literature Review and Theoretical Concepts

Over the past decades, there has been a very exhaustive discussion about the impact of ownership concentration on firm performance. However, literature is still indecisive if there is such an effect and if there is, to what extent. A possible reason for this inconclusiveness is that there are just too many uncertain variables that could influence the results. (Pedersen & Thomsen, 2003)

In the subsequent sections, several papers will be presented, that in one way or another have examined the correlation between ownership concentration and firm performance. Additionally, several theoretical concepts will be presented, discussing the separation of ownership and control.

#### 2.1. Positive Impact of Ownership Concentration

Berle and Means (1932) are among first authors investigate the relationship between the concentration of ownership and firm performance and find that there is a positive one. They suggest a separation of ownership and control and introduces professional managers, who have the necessary specific knowledge to boost the firm's success. However, this separation develops some problems, since managers start to act in their own interest. (Shleifer & Vishny, 1997; Berle & Means, 1932)

One way to explain the positive effect of concentrated ownership on firm performance is through alignment of interest. Having the power and motivation, large shareholders monitor and control managers, which stimulates them to operate in a way that increases the company's welfare. (Shleifer & Vishny, 1997) Furthermore, normally there are executives delegated by the controlling large shareholders that supervise and guide managers. These representatives make sure that the ambitions of all parties are united. (Wang & Shailer, 2015)

Another reason for a favorable firm performance when ownership is concentrated can be an ineffective legal system of the given country. In their survey of 49 countries, La Porta et al. investigate the impact of law in connection to ownership structure and firm performance. They find that in countries with a weak legal system, concentrated ownership is high and can be a proxy for a legal protection. (La Porta et al., 1998) The authors find that poor county law enforcement and shareholder protection drives

companies to have only few shareholders in order to provide self-insurance in monetary as well as legal terms. This way they can control and monitor managers and increase firm performance.

#### 2.2. Negative Impact of Ownership Concentration

Some part of the literature argues that concentration in ownership affects rather harmful the firm and its success. For example, large shareholders might act in their own interest and leave minority shareholders unsatisfied or even weaken. This agency conflict, discussed by La Porta et al. (1999), can be overcome by an increase in legal protection of minority shareholder.

Morck et al. (2005) give another reason for a negative effect on firm performance. Very often firms with concentrated ownership are held by families, which are risk averse. In their cautiousness they pass on risky projects, which would benefit the company more than others. Family owned business focus on legacy, family prosperity and protection than on company growth. (Morck et al., 2005) Furthermore, according to Morck et al. (2005), family owners are prone to appointing family members on managing positions and giving them greater financial and non-financial benefits, rather than choosing unrelated managers with firm specific knowledge.

#### 2.3. Separation of ownership and control

Until the industrial revolution, the ownership and control of a company were subject to only one person or family. With the advancing change and modernization of the production process, the number of workers had increased and small companies transformed into big entities. The owners began to have problems operating efficiently their enterprises, so it was necessary to hire professionals to help them. With time the tasks of managers grew from assisting the owners to having control over the whole company by themselves. Furthermore, some entrepreneurs had funds to establish a company, but lacked essential knowledge to transform their original ideas into profitable business. So, at first, the only requirement for the manager was to provide owners with an adequate return. Berle and Means (1932) were among the first authors, who described this process. They identified the necessity of separating

ownership and control, due to the large number of shareholders of many US companies. Along with this discovery they concluded that as a consequence of this separation some problems arise. It influenced not only the structure of the company, but also its performance. Management had the possibility to act in their own interests, which had an impact on the shareholders' return. Furthermore, Berle and Means (1932) argued that the growth of companies leads to a wide dispersion of shareholders, where the individual holdings are below the necessary amount for having control rights. However, recent studies in the US and Europe have not supported this finding.

One of the contradicting papers was presented in 1999 by La Porta, Lopez-De-Silanes, and Shleifer. In their study, the authors examined the ownership structure of the largest companies of 27 countries. They found that the observation of Berle and Means (1932) doesn't hold in civil law countries. Additionally, their results show that a low number of controlling shareholders in large corporations is likely only in countries with strong shareholder protection. La Porta et al. (1999) also observe that the cash flow rights of shareholders are not decisive for the control rights, sometimes because of pyramid structures, but also because of managerial involvement. In general, the controlling shareholders appear to be families, or even the state. In Austria, for example, the state controls about 70% of the largest corporations. However, the authors comment that this is a post-war observation and that privatization is in process. (La Porta et al., 1999)

#### 2.3.1. Agency theory

The objective of a corporation is in principle aligned with the interests of its owners. As a big company may have thousands of shareholders with individual intentions and beliefs, it is complicated to determine whose interests to satisfy. However, this shouldn't be an issue because there is actually one mutual goal among them and it is to increase the value of their shares. Since ownership and control in large corporations are often separated, managers are the business decision makers and they need to undertake certain actions to increase the firm's share value. In order to do so, they will make sure that these actions are in line with their individual goals and will bring them also a maximum profit. If not, they won't have an incentive to make decisions

consistent with the shareholders' interests. Jensen and Meckling (1976) defined this problem as the agency problem. It is one of the most discussed concepts dealing with managerial incentives, financing and strategy. The theory describes and investigates the interaction between owners, called "principles", maximizing the company value and their managers, called "agents", maximizing their own utility. Even though managers are employed to represent the shareholders' interests, they do have an incentive to follow only their own ambition. (Jensen and Meckling, 1976) The agent's self-interest objectives could be monetary, but also private advantages, such as empire building, having luxurious offices, cars or other items, or profit from hiring friends or family members. The so-called "free rider" problem could also occur. It is found the manager invests less effort than others, but enjoys the same benefits. Furthermore, the manager could take advantage of the shareholders by staying in the firm even though their managerial skills and expertise are no longer sufficient. (Shleifer and Vishny, 1997)

Along with the issue of different objectives, the agency theory incorporates the matter of asymmetrical information between the parties. As a consequence, two problems could arise: moral hazard (due to diverse interests, the manager's actions are unfavorable to the owner) and adverse selection (the owner is less informed about the manager's decisions and behavior). (Heath and Norman, 2004) Several mechanisms exist that could control these situations. For example, managers can be monitored by several parties: the board of directors, audits, the government or large shareholders. This would encourage agents not to disobey instructions in order to keep their jobs. Another way is to tie the manager's compensation to his performance. Such incentive contracts can be in the form of share ownership, stock options or even a possibility of lay-off in case firm performance is low or negative. Consequently, managers are motivated to make decisions in favor of the company, while following also their own interests.

However, these control mechanisms are cost-intensive. On one hand the principle needs to incur expenditures for the monitoring process, on the other, he has to expect a residual loss from the decrease of welfare, resulting from the manager's bad decision making. These costs are called agency costs. Furthermore, there are bonding expenditures, which are born by the manager. These incorporate a compensation to

the principal in case the manager makes decisions, causing him a disadvantage. (Jensen and Meckling, 1976)

#### 2.3.2. Stewardship Theory

Offering a quite contrary concept to agency theory, stewardship theory states that the motivation of managers is in line with the company's goals. The essence of this theory lays in the manager's ambition to perform well at his job. According to the stewardship theory, individuals maximize their utility not by achieving their personal goals, such as monetary benefits, career development or other advantages, but by fulfilment of the job objectives. These individuals are called stewards. (Davis et al., 1997)

The main assumption underlying the stewardship theory is that the manager's utility maximization matches the company's goals. For this to be possible, there are several motivations that need to be ensured. First of all, manager and owner need to have trust in one another. Second, the steward seeks respect and a high reputation among the company. (Van Slyke, 2007) Organizational identification is another effective motivation for the manager, particularly if he has been employed in the same corporation for a long time. In this case, reviews of the company can be acknowledged as personal evaluation, leading to the merged interests. This strong commitment to the firm persist even if it is in contradiction to the steward's personal objectives. (Donaldson & Davis, 1991) Furthermore, rising entrepreneurial responsibility and commitment are motivating the manager. Teamwork is one of the leading behavioral characteristics of a steward, since he is urged by the need of his colleague's approval. (Velte, 2010)

The contrast to agency theory starts in the goals of the parties – on one side the agent pursues his own goals and may be sanctioned when not acting in the firm's best interest. On the other, the steward aligns his objectives with the ones of the company, since his own ambitions are collective trust, reputation and responsibility. While in agency theory the costs associated with control mechanisms continue throughout time, stewardship theory uses mechanisms, which enhance the relationship with the steward. These costs decrease in the long-run because the objectives of both parties affiliate. (Velte, 2010)

#### **2.3.3.** Resource Dependence Theory

Another perspective of how organizations can maximize their utility is given by the resource dependence theory. It states that they are influenced by and dependent on resources outside the firm, which are scarce, for example financing. Pfeffer and Salancik (2003) discuss that organizations aren't able to provide all of the resources on their own, so they have to undertake exchanges with other organizations. Therefore, wide-ranging relationships and connections of the stakeholders, access to the environment, information, resources as well as legitimacy are key components, influencing firm performance. (Guerrero-Villegas et al., 2018) Having these resources, the risk of uncertainty decreases and organizational power grows. There are some resources that are most valuable because they can't be replaced, such as priceless relationships to important parties. (Bryant & Davis, 2012)

According to Pfeffer and Salancik (2003), besides their operational functions, managers play a special role for the organization, namely a symbolic one. They embody all the accomplishments and losses of the company. On one hand, this can be seen as an honor because the manager will personally take credit for the success. On the other hand, he also bears a high risk, since company failure will be negatively associated with his personal leading qualities. (Pfeffer & Salancik, 2003)

#### 2.3.4. Stakeholder theory

As already discussed, agency theory implies that firms are focused on satisfying shareholder interest. In contrast to this theory, Freeman (1984) started a very complex discussion about the concept of stakeholders and the stakeholder theory. In its essence the theory states that people or groups in connection to the firm are directly influencing its performance. (Freeman, 1984) Hence, it suggests that managers should consider the utility of stakeholders in their decision making. However, this is an almost impossible mission because it is unlike to recognize all stakeholders. (Sundaram & Inkpen, 2004)

Freeman (1984) defines stakeholders as people or groups, who somehow can have an impact on the firm's performance or the firm's performance has an impact on them. However, there is no exact definition of who can be considered as a stakeholder. Overall, they can be "shareholders, board of directors, managers, lenders, workers,

suppliers, customers, government, pressure groups, local communities, the environment, and even future generations" (Lee, 2009, p. 22). Clarkson (1995) gives a further specification of this term and divides it in two – primary and secondary stakeholders. Primary stakeholders are people or groups, who are influencing the firm's performance to a high level. Without them the company may experience great losses or even stop its business at all. Secondary stakeholders, for example journalists, can influence the firm, or can be influenced by it, but are not able to endanger its existence. (Clarkson, 1995)

Jensen (2002) criticizes, that stakeholder theory doesn't provide managers with a framework of how exactly to satisfy the demands of all stakeholders, therefore there is no way to evaluate their work. This problem gives managers the opportunity to satisfy their own interests, since they are not held responsible, on the costs of the company. (Jensen, 2002)

#### 2.4. Capital Structure

One of the most significant questions for a company is how to design its capital structure. It can consist of internal financing, by reinvesting profits, and external financing, by raising capital. There are two central theories, coping with this issue, one of which is the pecking order theory. Myers and Majluf (1984) suggest that the managers' preference is always to use internal funds in order to finance future investment projects. This is due to asymmetric information linked to external financing. When internal funds are exhausted or external financing is needed, raising debt is preferred. As a last resort managers would raise equity, since it bears a higher risk than debt. (Frank and Goyal, 2003)

The trade-off theory is the other main concept dealing with the structure of financing. According to it, debt level should be chosen such that it weighs the advantages of the interest tax shield and the costs of financial distress costs. (Shyam-Sunder and C. Myers, 1999) However, there is no unquestionable path, which managers should follow. Both theories have their defenders and opponents, but until now, empirical studies have not shown reliable forecasts and a specific approach for defining the best way of structuring the capital in a company. The change of capital structure is directly

linked to its ownership structure, since it could include an increase in external financing and therefore the participation of new shareholders.

# 3. Corporate Governance and Legal aspects in Austria and Germany

In the next part of the paper, different governance systems and their similarities and differences will be presented. Furthermore, financial and legal aspects across the two countries will be discussed.

#### 3.1. Systems of Corporate Governance

The diversity of definitions for corporate governance can be divided into two groups. In the first group, shareholder-oriented, narrow definitions are primarily used in Anglo-Saxon context. According to Faccio and Lasfer (2000) "corporate governance deals with how companies are managed in the long term interest of their shareholders" (Faccio & Lasfer, 2000, p. 75). The broader stakeholder-oriented definitions, primarily used in Germany and continental European countries, posit that all individuals with a legitimate interest in the firm, should be incorporated in the firm's decision making process. (Molz, 1995)

Corporate governance is defined in Germany as the relationship between firms and stakeholders, and relationship between the stakeholders themselves. (Du Plessis et al., 2012) German corporate governance traditionally focuses on the protection of creditors. (Krahnen & Schmidt, 2005)

Regardless of the corporate governance definitions, most researchers divide the mechanisms of corporate governance into one of two groups: internal and external mechanisms to companies. (Urban, 2015)

According to different researchers, the differences between the systems of corporate governance are mainly due to institutions (Aguilera & Jackson, 2003; Thomson, S. & Pedersen, 2000), politics (Roe, 1994), legal systems (La Porta et al., 1999; La Porta et al., 1998; Shleifer & Vishny, 1997).

A number of researchers consider two systems of corporate governance – insider-oriented system and outsider-oriented system. (Franks & Mayer, 2001; Mayer, 1998) Criteria in this respect are the main characteristics of the concentration of ownership and the mode of control on the shareholders. Market-based systems are frequently

called outsider systems and bank-based systems are called insider-systems. (Hackethal et al., 2005)

There are not significant differences in the systems of corporate government and in the legal systems between Germany and Austria, therefore they are described together; any special feature is highlighted.

#### 3.1.1. Insider Systems

The insider-oriented system refers to a system which has concentrated structures. For insider systems, it is typical that ownership and control are held by small groups of so-called insiders (banks, suppliers etc.). Insider groups have stable and long-term relationships with the company and the management, which acts under their close control. (La Porta et al., 1998)

Germany and Austria have insider systems, which reflects on concentrated ownership structures and less developed capital markets compared to outsider systems. The two countries have a small number of quoted firms and most of them are disciplined by the large shareholders, which have a concentrated power in management. Characteristically, banks and large investments groups are controlling indirectly publicly listed companies and owners in both countries. Some authors see a problem in expropriation of minority rights and interests by large controlling shareholders. (Bessler et al., 2015)

The corporate governance system in Germany provides stronger rights to creditors, but weaker rights to shareholders. Specificity of the German model is that it relies strongly on delegation of rights from the shareholders to the supervisory board. (Becht et al., 2017)

#### 3.1.2. Outsider Systems

Outsider system reflects dispersed ownership structure. Ownership equity is dispersed by groups of individuals, institutional investors and holdings. (Mueller & Yurtoglu, 2000) This system is most typical for the USA and Great Britain and is often called the "Anglo-American" or "Anglo-Saxon" approach to corporate governance. Its main features are the developed public capital market, clear separation of ownership and

control, high disclosure standards and the support for the rights of shareholders for control over the company, their board and management. (Clarke & Rama, 2006)

#### **3.1.3.** Convergence of Systems

Most researchers asses that the national governance practices are gradually becoming more similar and the countries are attempting to reduce differences between the systems of corporate governance. (Witt, 2004) Some even hold that there is a possibility of converging of corporate governance at the global level (Solomon, 2007), while an intensive debate is unfolding about which system is better.

The main argument, driving the debate on the convergence of governance models is that market forces enhance cross-national convergence on international standards. In this debate appears the question about the convergence around the best system. (Gordon & Roe, 2004)

Some researchers favor the Anglo-American system in the assumption that with its stronger security markets and high level of disclosure it represents a more efficient model of corporate governance and thus there will inevitably be a shift of the European and Asian corporate governance systems towards the globally best, essentially Anglo-American model. (Clarke & Rama, 2006)

The so called "Strong Convergence Thesis" predicts that increased global competition will force convergence in corporate governance towards the US style of the shareholder-oriented system. (Coffee, 2001)

The supporters of the rival "Path Dependence Thesis" attach importance to the influence of historical conditions, starting points and political forces, which shape the economic evolution and efficiency does not necessarily triumph. There are also significant legal and political arguments against convergence. If it actually does happen, it may be not necessarily based on the best system. (Coffee, 2001)

Even if the convergence is unlikely to occur, there is a tendency of rapprochement of the German and Austrian corporate governance systems with the Anglo-American model, having the goals for good governance rules. (Bessler et al., 2015) Countries of both systems are focused on establishment of a well-balanced combination between independent, but well-informed supervisors. Germany and Austria are on the way to

enhance the collaboration between management and supervisory board and to increase disclosure requirements to provide the supervisory board with all necessary information. (Beetz, 2005)

The common in the systems of Germany, the United States, and also Japan, is that they are based on some combination of concentrated ownership and effective legal protection of investors, which are complimentary in a successful governance system. (Shleifer & Vishny, 1997)

Due to political and economic pressure the two systems will move closer to each other in the future, with developing functional convergence to the American model, although formal convergence is hardly to achieve. (Adungo, 2012)

#### 3.2. Financial Aspects

Institutional environment plays an important role in the shaping of the framework of the corporate government. The financial systems in Germany and Austria, as a playing field for mechanisms of corporate governance, are bank-based, unlike the market-oriented financial systems in US and UK. (La Porta & Lopez, 2000; Thomsen et al., 2006) Some of the characteristics of the German financial system are: "(1) strong role of the banks and simultaneous miner role of the capital markets, (2) less effective investor protection, focused on protection of the debtholders; (3) highly concentrated ownership structures, (4) stakeholder-oriented governance definition, (5) reliance on internal governance mechanisms and (6) a two-tier board model" (Urban, 2015, p. 56). In Germany the financial institutions exercise extensive voting control over large publicly traded companies.

#### 3.2.1. Corporate Financing

The external financing of the companies is based principally on a contract between the company and the creditor, who in return receives appropriate control rights. In case of violation of the terms of the agreement by the manager, the investor has the right to defend his rights in court. The literature describes also other models of private financing, which in some cases have a place in the external financing – the reputation-building model and the excessive investor opportunism. But in such cases investors

receive no control rights in exchange for their investments. (Pagano et al., 1998; Shleifer & Vishny, 1997)

#### 3.2.2. Stock Exchange

The stock exchange, as a specific market for financial services, is rapidly changing in recent years. The competitive pressure and internationalization of the markets led in Germany to a rapid adaptation and modernization of ownership, governance and regulations of the exchanges. (Baum, 2004) For historical or political reasons some of the structural and regulatory features in Germany are very resistant to change and are clear "path dependent". As Baum (2004) concludes, most prominent features in this regard are the unique perception of exchange, as a public law entity regulated by the Exchange Law, and the multi-staged exchange supervision in Germany.

#### 3.2.3. Banking Power

Insider systems are usually bank centered and depend strongly on banks, with Germany and Austria as classical cases, where banks traditionally have a relatively great role in controlling companies. Banks in both countries have a dominant role in channeling funds from private households and investors to companies. They also maintain close contacts whit their corporate customers, take direct equities and have representatives in their supervisory boards. (Krahnen & Elsas, 2004)

In a large number of cases, when the bank is both shareholder and lender, it is able to provide access to inexpensive capital, as well as to services and to inside information. Banks in such cases provide shareholder protection through a right to vote (voting power) and cash flow rights. The confidential sharing of information benefits the borrows. (Azofra et al., 2007)

Negative moments are the weak protection of the interests of minority owners and the low level of transparency, the practice of proxy voting on behalf of the actual shareholders. (Bessler et al., 2015)

With the liberalization of the capital markets and the globalization, the German financial system is moving towards more market-oriented system and the Anglo-Saxon model. In recent years the German banks increasingly give preference to

market-oriented services at the expense of the commercial banking business. They reduced their dominant position, as shareholder in domestic companies reduced the seats in supervisory boards and the use of proxy voting. (Bessler et al., 2015; Urban, 2015)

#### 3.3. Legal Aspects

#### 3.3.1. Legal Systems

Historical backgrounds and development factors put the German legal system alongside the French and Scandinavian in the legal family of civil law, unlike the Anglo-Saxon, which is in the common law family. Civil law countries do not provide investor protection in such extend as common law countries and their capital market is behind the development in the common law family.

Legislative environment in a national economic is an external mechanism for the corporate governance and has a great impact on corporate governance and on protection of the rights of shareholders and stakeholders. Regulations and legal mechanisms have a fundamental importance for the development of the structures of firms and their governance. (La Porta et al., 2000)

#### 3.3.2. Legal Protection

The best legal protection for minority shareholders and investors is provided in countries with common law. (La Porta et al., 1998)

Authors, such as Easterbrock and Fischel (1983), assess that the most important legal right shareholders have, is the voting right. Even elected from the shareholders, directors are not always in condition or not are willing to protect the interests of the shareholders. Although the OECD countries support the idea of a commitment to the loyalty of managers, this obligation cannot be protected by a court in many other countries. (Easterbrook & Fischel, 1981)

Germany's widespread two-tier system - supervisory boards and management boards - is accepted also in Austria. In Germany, legal law protects to some extent the rights of investors, although it also leaves great freedom to managers.

If measured on the so-called anti-director index, Germany ranks after common law countries and Scandinavian civil law countries. In the ascending 6-point scale for better protection of the rights of the stakeholders Germany has 2.33 points. (La Porta et al., 1998)

In Austria, unlike in Germany, on the basis of enhanced institutional activity, the rights of private investors and minority holders are protected to a greater extent. (Birkner & Inetas, 2015)

#### 3.3.3. Legal Forms

In terms of corporate governance in Germany and Austria, the emphasis is put on the *Aktiengesellschaften* (AG, public limited companies), as they are the only legal form that can be listed. Other legal forms, especially group structures, are also of importance, because listed companies can include non-listed companies and vice versa. It is difficult to ensure transparence (see 3.3.4.) and disclosure to group structures or holdings, which involve both listed and non-listed firms.

#### 3.3.4. Transparency

Transparency is one essential element for the proper functioning of a financial market, because it is relevant to cash-flow, control, separation of ownership and control, board composition.

It is noteworthy that the concept of disclosure and transparency is becoming increasingly important for Germany, as some authors mention transparency of ownership and control structures are not a reallity in Germany and arguments against transparency still abound. (Becht & Boehmer, 1999) Enhancing transparency is an important requirement from a European perspective and is a declared goal of German institutions. For listed companies, transparency can help to ensure the equal and fair treatment of all investors, no matter in which EU country they reside.

#### 3.3.5. Codification

The codification regarding the behavior of the companies in Germany and Austria is well developed.

In Germany the roots of the German Commercial Code are in the period after the German unification in 1897. Modern principles of the corporate governance are contained in the Stock Corporation Act, the Commercial Code, the Shop Constitution Act, the Co-Determination Act, the Transparency and Publicity Act, the Security Acquisition and Takeover Act, the Fourth Financial Markets Promotion Act and the Corporate Governance Code. (Shearman & Sterling, 2002)

The adopted first version of the German Corporate Governance Code (GCCG) in 2002 was determined to raise the shareholders' confidence and international trust in Germany-based listed companies. As in other countries, the GCCG endorses the comply or explain rule.

The GCCG includes essential statutory regulations and internationally and nationally recognized standards for the management and supervision of public traded companies. The regulations and recommendations of the Code are not legally binding and have been implemented as a soft law. (Du Plessis et al., 2012)

The principles and rules for corporate governance in Austria can be found in the Austrian Code of Corporate Governance, but also in the Austrian Commercial Code, company law and stock exchange law. (Birkner & Inetas, 2015) The Austrian Code of Corporate Government (ACCG), published in October 2015, validates voluntary rules for good governance and control systems. The Code established a self-regulatory basis on the fundamental principle comply or explain. ACCG is an essential element of the Austrian corporate governance system. It has been timely modified and complies with the latest EU requirements (Recommendation of the EU Commission of 9. April 2014 on the quality of the corporate government reporting – "comply or explain").

The Codes of Corporative Governance have regulatory functions and must be applied by listed companies. They should ensure good corporate management, increase the degree of transparency and reinforce the behavior of managers in compliance with the principles of the sustainability and long-term orientation. The comply or explain principle provides flexibility to the companies and ensures transparency for investors, even if companies do not fully comply with code rules, but duly state the reasons and circumstances of the deviation. Capital market rewards firms for adopting best practices in corporate governance.

This chapter has looked into insider and outsider systems of governance and introduced the possibility of their convergence. Moreover, a brief overview of some financial and legal aspects has been presented. In the following chapter, the ownership structure, different types of owners and ownership concentration will be discussed.

#### 4. Ownership Structure

The ownership structure of a company is a major topic in this thesis and is to be presented in the current chapter. Initially, this section defines the various types of ownership structures, depending on the legal form of a given entity. Thereafter, the paper examines the most common identities of owners. Lastly, the important comparison between concentrated and dispersed ownership is analyzed.

#### 4.1. Legal Forms

This subsection of the paper describes the various legal forms of a business entity beginning with the sole proprietorship and partnership. Thereafter, the more complex limited partnership and limited liability company (LLC) are to be presented. Finally, the subchapter defines the most complex legal forms of business entities, namely, the corporations. The definitions of the above listed legal forms is of great importance for the further development of the section, as the different legal forms are to certain extend favored by the various types of owners examined in following subchapter.

The sole proprietorship is a simple legal form whose main characteristic is that there is only one person involved in the business. From a legal perspective, this person and the legal entity are indivisible. Namely, the individual is fully liable for the sole proprietorship's liabilities, including debts and lawsuits. Furthermore, the individual is to declare all business income and losses within their personal tax declaration. (O'Neal, 2018)

The partnership legal form is very similar to the sole proprietorship. In fact, the only difference between both forms is that the partnership includes more than one natural person. Both of the above described forms are suitable for starting businesses, as well as for small-scale businesses that bear low credit and legal risks and do not have excessive costs. In many cases these are B2C services. (O'Neal, 2018)

The next legal form to be described is the limited partnership. This type of business entity consists of one general partner and one or more limited partners. The general partner operates the company and is personally liable as a natural person. The limited partners, on the other hand, do not have the right to participate in the management of the company. Nevertheless, their liability, both legal and credit, is limited to the

amount of participation in the given company. This type of legal form is often used by investors who finance a company but are not willing to take risks other than the risk of losing their initial investment. (O'Neal, 2018)

The limited liability company (LLC) is a preferred legal form for businesses that have passed through the initial start-up phase and are further scaling their operations. The main characteristic of this type of legal entity is that the owners of a limited liability company, as natural persons, are not financially and legally liable for the company. The LLC form is useful for owners who have considerable personal assets and are willing to protect them. Another potential motivator for doing business using an LLC is to accumulate debt avoiding personal liability. (O'Neal, 2018)

Lastly, this subchapter introduces the corporation legal form of a business. Similarly to the LLC, the owners of a corporation are not liable for the business entity's liabilities. On the contrary, the owners and the company are completely separated. The owners influence the corporation indirectly by hiring managers (in the larger scale a board of directors) that operate the corporation and aim to maximize the shareholders' value. Furthermore, the owners are entitled to receive dividends from the corporation, in case the latter makes profit. The corporations could be private or public. In the latter case, they are required to publish their financial statements, as well as other documents in order to provide transparency for the investors. (Investopedia, 2018b)

This subchapter has briefly presented the most common types of ownership structure, as some of the above discussed legal forms would be examined in more details in the upcoming chapters of the thesis. The main differences between the listed ownership structures arises from the extent to which the owners are liable for the company. The level of the owner's involvement in the operations of the business is another factor that varies in the different legal forms.

#### 4.2. Identity of the Owner

After discussing the various ownership structures of business entities in the previous subchapter, logically, this subsection provides more information on the different natures of owners per se. There is a great number of possible natural and legal persons, as well as institutions that could own a company. For the purpose of this

thesis, the most important owner categories would be discussed. Namely, the state, the institutional investors, and in particular the family as a social unit.

The first owner identity to be discussed is the state or government owner. This type of ownership is particularly common with regards to companies whose business is focused on communal services in the sectors of transportation, energy, infrastructure and others. One major difference between the state owner and the other owners are the strategic priorities given to the company through its management. Namely, the state owner might want to impose low prices on the company's goods and services, and thus to minimize the profits. The reason behind it are to be found in the political agenda of the state, that might aim at low prices and low unemployment rates. (Arrow, 1969) According to Thomsen and Pedersen (2000), due to the above described reasons the companies owned by the state might not seem to perform well when compared to other business entities. Nevertheless, the state-owned companies are backuped by the government and have access to government-backed guarantees, low cost of capital and other advantages. (Thomsen & Pedersen, 2000)

Another type of ownership identity to be discussed is the family ownership. Floeren (2002) defines family as "a social system consisting of individuals, related either by blood, by marriage or by legal adoption, interacting with and influencing the behavior of each other" (Floeren, 2002, p. 28). It is common that the family-owned companies have been founded and are actively managed by the family in question. This creates stronger emotional relationship and affects the objectives of the company. Namely, the family owners and managers of a company focus on long-term goals and are unwilling to take risks that would put the existence of the company in risk. Furthermore, the family owners of a company are likely to provide capital in order to protect the firm from bankruptcy in times of crisis. (Urban, 2015)

The institutional investors are the last type of owners to be discussed in this chapter. Urban (2015) points that there is a great controversy in the image of these owners. On one side, they could be perceived as benign owners, on the other side - as speculators with negative effect on the business entity they own. The positive appearance of the institutional investors is due to the fact that they have access to a considerable amount of capital. Furthermore, the institutional investors operate in a highly competitive market and it is their top priority to facilitate the progress of the companies they own. Their main ownership objective is to maximize the shareholders' value. The negative

image of the institutional investors arises from the fact that often they are connected with other players in the financial markets, such as banks. These relations might influence the decisions of the institutional investor is making with regards to the companies they own. (Urban, 2015)

This subchapter has examined three of the most important types of ownership identities, namely, the state, the family as a social unit and the institutional investors. The various types of owners have different objectives, as well as different access to capital and financial services. Furthermore, the emotional ties with the companies they own are very different. Nevertheless, the aim to prosperity of the business entities is common goal for the different owners. For the purpose of this thesis, the following subchapter proceeds with a comparison between concentrated and dispersed ownership.

#### 4.3. Concentrated vs. Dispersed Ownership

Concentrated ownership implicates that there are large shareholders, whose interests concerning cash flow and control are pooled. Blockholders are motivated to monitor, since managers have a large interest in gaining personal benefits. The maximization of their own utility is a problem, which arises very often in companies with widely spread shares. In order to obtain more profit, managers are willing to work less, take advantage of company's benefits or even to undertake investments with a negative present value.

Berle and Means (1932) acknowledge that not only management may have control, but also individuals outside the firm, who are holding company shares. Therefore, they use the concentration of voting power as a suitable measurement of control. Following the concept of Becht (1997), Table 1 presents four quadrants, where concentrated and dispersed ownership are compared, while also taking into account voting power. (Becht, 1997) This helps us see what advantages, disadvantages and implications the four combinations have.

Table 1 Concentration of ownership (Becht, 1997, p. 25)

	Dispersed Voting Power	Concentrated Voting Power
	Quadrant 1	Quadrant 2
	+ liquidity	+ direct monitoring
	+ diversification	+ liquidity (< Q1)
Dispersed	+ low cost of capital	+ diversification (< Q1)
Ownership		+ low cost of capital (< Q1)
	- no direct monitoring	
	- takeovers	- disproportional cash flow
		and voting power
		- private benefits to
		blockholders
	Quadrant 3	Quadrant 4
	+ voting right restrictions	+ direct monitoring
		+ mutual cash flow and
Concentrated	- no liquidity	control interests
Ownership	- no diversification	
	- no direct monitoring	- low liquidity
	- high cost of capital	- low diversification
		- high cost of capital
		- extreme monitoring

The first quadrant reviews the situation where ownership, as well as voting power are dispersed. Here the main advantages are high liquidity and diversification. Risk-averse investors are prone to this setting, since their objective is to invest in assets that are easy to sell, as well as in diversified portfolios. Furthermore, dispersion leads to lower cost of capital, which is an advantage to the firm. (Becht, 1997) According to

Gugler (2001), this setting includes the principal agent problem. Managers could maximize their own utility without taking into account the company's benefits because of low direct monitoring. The firm also faces the problem of free-riders and is more exposed to takeovers. (Gugler, 2001)

The second quadrant looks at dispersed ownership and concentrated voting power. Additional to the opportunity of direct monitoring, the advantages from quadrant one are holding, but only to a lower level. The main problem of this setting is that controlling blockholders aren't having proportional cash flows to their voting power. Therefore, they have an incentive to find other ways of maximizing their profits. Most likely, they are to get benefits at the expense of small shareholders. This problem could be prevented when controlling blockholders are also managers. (Becht, 1997)

Quadrant three considers concentrated ownership with dispersed voting power. This situation has the least advantages. One could be, that small shareholders are not fully exposed to voting right restrictions. Liquidity, direct monitoring and diversification are here the lowest, while the cost of capital is high. (Gugler, 2001)

Quadrant four is together with quadrant one the mostly spread situations: ownership and voting power are both concentrated. The direct monitoring problem of quadrant one can be overcome, since the major shareholders have the ability and the motivation to do it. The reason for this is the combination of both cash flow and control interests. Nevertheless, this quadrant's weaknesses are among others low liquidity and diversification, high cost of equity and discouraging managers due to extreme monitoring. (Gugler, 2001)

In order to present the characteristics of ownership structure, this chapter has defined the various legal forms of a business entity. Thereafter, some of the most important types of owner identities have been explored. Lastly, the difference between concentrated and dispersed ownership has been analyzed. This leads to the next section of this thesis that examines the performance of a company, as well as the manners in which it is measured.

# 5. Company performance

The company performance, as well as its measurement methodology, is another concept that needs to be defined and examined for the purpose of this paper. According to Richard et al. (2009), the performance of a business entity is to be measured through the examination of various indicators, such as operational effectiveness, reputation, employee and customer satisfaction and others. (Richard et al., 2009) Kaplan and Norton (1992), ones of the most prominent supporters of this multidimensional approach, have developed the concept of the balanced scorecard. This is a performance measurement tool that considers financial goals, customer perspective, internal business processes, and the learning and growth perspective. (Kaplan & Norton, 1992)

Considering that recently company performance has been perceived as an analysis dependent on different factors, this paper focuses on the primary and, arguably, the most important of those factors - the financial performance.

The data for the abovementioned financial analysis of the business entity's performance are the company's financial statements, as well as the market information derived from the stock price of the company. These two data sources determine the two main approaches of analysis, namely, the accounting-based performance measurement and the market-based performance measurement. (Combs et al., 2005; Hoskissonet al., 1999; Hult et al., 2008) These two approaches are to be examined in the following subsections of this thesis.

## **5.1.** Accounting-based Performance Measurement

The accounting-based performance measurement is an analysis of the financial statements issued by the company. Considering that the figures in these documents present either the development of the company in a past period (e.g. income statement) or an image of the company's state on a given date (e.g. balance sheet), the accounting-based performance approach provides the analysts with results on the past and present performance of the company. Predictions on the future of the company could then be derived from the abovementioned results. (Horngren et al., 1999)

The profitability of a company is arguably one of the most important indicators for financial analysts. Namely, is the company able to generate profits and, hence, to pay out dividends to its owners. The accounting-based analysis utilizes the profitability ratios such as ROA, ROE, ROS and others, in order to measure how profitable a company is. (Masa'deh et al., 2015)

As defined by Investopedia, "ROI is a performance measure, used to evaluate the efficiency of an investment or compare the efficiency of a number of different investments" (Investopedia, 2018c). The ratio divides the return from an investment by the cost of the investment. The return of the investment is derived by subtracting the cost of the investment from the gains from the investment. The percentage representation of the ratio enhances its application in the comparison of various investments. (Investopedia, 2018c)

$$ROI(\%) = \frac{\textit{Gain from investment} - \textit{Cost of investmentt}}{\textit{Cost of investmen}} \times 100 \quad (1.1)$$

The return on investment ratio is meant to be used in the evaluation of an investment rather than a company. Nevertheless, due to the simplicity of the ratio's concept, as well as its universal application, it is considered as one of the most important financial ratios. Furthermore, it is vital to explain the ROI in order to understand the Return on assets, return on equity and return on sales - three important ratios that provide direct information on the profitability of a company. (Masa'deh et al., 2015)

The return on assets ratio is very similar to the ROI ratio. In this case the investment is perceived to be the company's assets. The ratio divides the net income of the company its total assets in order to shows the rate at which a company uses its assets in order to generate income. (Investopedia, 2018d)

$$ROA(\%) = \frac{Net Income}{Total Assets} \times 100$$
 (1.2)

Similarly to ROI, the return on assets ratio is expressed in percentage and is easily comparable with the ROA ratios of other companies. Nevertheless, the ratio is only useful when compared among the same industry, as some industries require more assets than other. (Investopedia, 2018d)

The Return on Equity ratio measures a company's performance by showing the rate at which it uses the capital invested in it by the shareholders in order to generate profits. It is calculated by dividing the Net Income by the Shareholders' equity.

$$ROE(\%) = \frac{Net Income}{Shareholder's Equity} \times 100$$
 (1.3)

The last accounting-based performance ratio to be discussed is the Return on Sales ratio, also referred to as the net profit margin. This ratio presents the efficiency at which a company generates profit from its sales. This ratio is calculated by dividing the Operating profit by the Net Sales of the company. (Investopedia, 2018e)

$$ROS(\%) = \frac{Operating Profit}{Net Sales} \times 100$$
 (1.4)

Due to the fact that the ROS only considers figures from the income statement, the picture it provides on the performance of a company is limited. (Hennell & Warner, 2001) As this limitation is also applicable to other ratios, the best practice is to use a number of ratios in order to reach a reliable result.

Despite the convenience of the accounting-based measurement approach, one major flaw of the method lies in the essence of its data source - the company's financial statements. Namely, the financial documents are issued by the company per se, and the management, as well as the owners, are legally able to influence the figures used for the accounting-based performance measurement. It is vital to take in consideration that the analysis could lead to a misleading outcome due to the influence management and owners have on the financial figures. (Masa'deh et al., 2015)

To conclude, the accounting-based performance measurement examines the financial statements of the company using financial ratios. The most commonly used ratios provide information on the ability of the firm to generate profit with the given assets and equity. Furthermore, the financial ratios could also provide information on the profit a company generates based on a given quantity of sales. The results of the accounting-based performance measurement are based on past and present data, derived from the financial statements of the company. These outcomes then serve as basis for future predictions. The fact that management and owners can influence the figures in the financial statements, and hence, the results of the analysis is considered to be one of the major flaws of the approach. Another method of performance measurement that complements the accounting-based approach is examined in the following subsection of the thesis.

#### 5.2. Market-based Performance Measurement

The market-based performance measurement is a chronologically newer approach. It became popular as in the 1980s a great number of companies began to consider shareholder value maximization as a primary priority. (Useem, 1993) The most important figure in this method is the market price of a company. In their 2007 book *Financial Reporting, Financial Statement Analysis and Valuation: A Strategic Perspective*, Stickney et al., (2007) state:

The market price for a share of common equity is a very special and informative number because it reflects the aggregate expectations of all of the market participants following that particular stock. The market price reflects the result of the market's trading activity in that stock. It summarizes the aggregate information the market participants have about the firm, and the aggregate expectations for the firm's future profitability and growth (Stickney, Brown, & Wahlen, 2007, pp. 969-970).

While the market-based performance measurement also relies on the financial statements of a business entity, it based on the market share price of the company as well. Compared to the accounting-based performance measurement approach, the

management and owners of the company have less influence, as the market price is established by the market per se.

As the authors of the above mentioned book explain in the quotation above, the other major difference between the two methods is that the market price provides information based on the future expectations of the market participants. In contrast, the accounting-based approach focuses on the past and present data, as explained in the previous subsection.

Another potential difference between the two approaches could be derived from the past - future contrariness. Depending on the competence of the given analyst or investor, it is probable that the expectations of all market participants on the future of a company are more realistic than the ones of a single analyst using the accounting-based performance measurement approach. If applicable, this could be an advantage in favor of the market-based approach.

Appart from the share price per se, the market-based performance approach considers other associated figures, such as dividends and the number of shares issues. (Masa'deh et al., 2015) Similarly to the accounting-based approach, the above mentioned figures, as well as some of the figures from the financial statements, are examined in ratios in order to determine the profitability of a company. This paper discusses the most common of those ratios, namely, the Price-to-Earnings (P/E) ratio, Market-to-book (M/B) ratio and Tobin's Q.

One of the most common ratios used in the market-based performance measurement is the Price-to-Earnings ratio. It is calculated by dividing the share price of the company by the earnings per share. The results of the ratio provide information on the confidence of the market in the performance of a given company. Generally, the higher the ratio is, the better the company is perceived by the investors.

$$P/E = \frac{\text{Share Price}}{\text{Earnings per Share}}$$
 (1.5)

Nevertheless, it is important to be noted that the ratio could be misleading due to the fact that share price component of the formula is a figure that represents the future

expectations of the market, whereas the earnings per share component presents past data. (Masa'deh et al., 2015)

The next market-based performance measurement ratio is the Market-to-Book ratio. It is calculated by dividing the market capitalization of a given company by its book value. The market capitalization is calculated by multiplying the current share price by the number of outstanding shares. The book value, on the other hand, is calculated by subtracting the total liabilities from the total assets. (Investopedia, 2018a)

$$M/B = \frac{\text{Share Price} \times \text{Shares Outstanding}}{\text{Total Assets} - \text{Total Liabilities}}$$
(1.6)

The purpose of the Market-to-Book ratio is to show whether a company is overvalued or undervalued. In case the Market-to-Book ratio is greater than one, the company is perceived to be overvalued. If the ratio is lower than 1, then it is undervalued. Nevertheless, it has to be noted that this ratio does not consider the intangible assets. This makes it inaccurate for industries that are traditionally low on tangible assets. (Investopedia, 2018a)

The last market ratio to be examined is the Tobin's Q ratio. Its concept is very similar to the Market-to-Book ratio. Namely, it determines whether a company is undervalued or overvalued, by dividing the market capitalization by another figure. The difference between both is that the Tobin's Q uses the total replacement value of a company, rather than its book value. (Investopedia, 2018f)

Tobin's 
$$Q = \frac{\text{Share Price} \times \text{Shares Outstanding}}{\text{Replacement Value}}$$
 (1.7)

Due to the fact that the market-based performance measurement approach uses some of the figures of the company's financial statements, it is also exposed to the risk of data being influenced by the firm's management and owners. Another potential drawback of the market-based approach is that some of the market participants might

be speculating. In that case, the realistic future expectations of the company's performance might differ from the ones derived from the market price.

So far, this chapter has presented and compared the two main methods of determining the performance of a company - the accounting-based and the market-based approach. After discussing the core methodology, the positive sides and drawbacks of these approaches, it is important to provide a statement on the relationship between the two approaches. Gentry and Shen examine this topic in a 2010 paper published in The Journal of Managerial Issues. This research uses "data from all the publicly traded firms in the COMPUSTAT database from 1961 to 2008" in order to discover whether there is a relationship between the two models (Gentry & Shen, 2010, p. 516). The results of this research provide a clear indication that there is no reason to believe that accounting-based performance measurement and market-based performance measurement are "a single unidimensional construct" (Gentry & Shen, 2010, p. 526). On the contrary, the two methods do not overlay and are to be treated as different approaches that could complement each other but are not substitutable. This is primarily caused by the past perspective of the accounting-based approach and the future perspective of the market-based performance measurement. (Gentry & Shen, 2010)

# 6. Data description and methodology

#### 6.1. Database

For the purposes of this theses the database Orbis has been used, which provides ownership and financial data about around 300 million companies worldwide. For Germany, the database incorporates about 3.4 million firms and for Austria about 1.2 million firms. There are hundreds of search criteria in the database, such as year of incorporation, legal form, industry, M&A data, financial and ownership data or location. This large capacity of information gives us the opportunity to analyze and compare companies and countries in detail. The database is very detailed and provides a broad image of companies. However, it is not entirely complete since firms offer part of their information voluntarily. The company records for Austria and Germany are provided by "Creditreform", a credit bureau offering among others company data, credit assessment and debt collection. Furthermore, data about ratings, news, industry and company reports is collected by different business and financial services companies. According to Austrian law, companies with the legal status of AG and GmbH (Gesellschaft mit beschränkter Haftung) are required to file accounts. Additionally, very large firms have also a filing obligation, but the information they need to provide may be shortened. According to the database, companies often do not submit the data in time. In Germany, likewise AGs and GmbHs are obliged to file accounts, as well as cooperatives. (Bureau van Dijk, 2018)

## **6.2. Description statistics**

Before conducting to the main analysis, some descriptive statistics are needed to give an overall understanding of the data. It is also important to mention that the results of the statistics may not be representable, since sometimes data had to be omitted. This has been necessary in cases, where the database was incomplete.

For both, Austria and Germany, the same search strategy for the sample has been undertaken: the first step is of course to eliminate the companies from the rest of the world. Then, only public limited companies were selected and divided into listed and unlisted companies, as Table 2 shows. As can be seen, from all public limited

companies in the dataset, only about 4.8% are listed in a Stock Exchange in both countries.

Table 2 Number of companies

	Austria	Germany
All companies	1152005	3450436
Public limited companies	2737	26996
Listed	130	1293
Unlisted	2607	25703

Table 3 presents the average number of shareholders in a listed company for both countries. In Austria, as can be seen, the mean is just a little bit over the median, revealing that the sample is only slightly skewed to the right. There are more firms with a lower number of shareholders than with a higher number. The data for Germany shows a drastic difference between the mean and the median, in favor of the mean, which indicates that there are quite less companies with more shareholders than the average number of shareholders. Thus, most of the German companies have a concentrated ownership.

Table 3 Number of shareholders of listed firms

	Austria	Germany
Mean	27,83	9,83
Median	25,5	3

The number of employees is a helpful way of defining the size of a company. Table 4 presents how many employees Austrian and German firms have, arranged in six intervals. In the first column, the data shows that in Austria most companies belong to

the fifth interval, which means that they engage between 1000 and 10000 employees. Furthermore, about half of the observations employ more than 500 people. For Germany, the highest percentage of firms are small ones, in which less than 50 people work. However, in both countries nearly 10% of the companies are very large, counting more than 10000 employees.

Table 4 also shows that the mean number of employees is higher than the median. For Germany this difference is much bigger than in Austria, showing again the greater tendency of having small firms for the country.

Table 4 Number of employees in listed firms

Number of employees	Austria	Germany
≤50	20 (19%)	338 (32%)
$50 > x \le 100$	2 (2%)	79 (7%)
$100 > x \le 500$	23 (22%)	233 (22%)
$500 > x \le 1000$	15 (14%)	106 (10%)
$1000 > x \le 10000$	34 (32%)	219 (21%)
10000<	12 (11%)	87 (8%)
Mean	5007,46	6104,46
Median	733	217
Number of companies	106	1062

#### 6.3. Concentration

Table 5 shows how firms are distributed according to the concentration level of shareholders, using five intervals. Some of the firms had to be omitted due to the lack of data about the percentage of shares held.

According to the provided data, in Austria there are no shareholders holding directly shares in a company that are less than 10%. An explanation might be that there is the

possibility of total ownership in a pyramid structure, which is not considered for this table. The forth interval includes the greatest number of firms. Most of the companies have a majority owner, while almost all of the firms have shareholders with more than 25%, precisely 93%. There are also quite a few companies with just a single owner.

In Germany shareholders as well hold mostly more than 25,01% of company. Here, most of the shareholder's ownership is spread between 25,01% and 50%. More than half of all listed firms are held by a shareholder with majority. There are about 12% of the companies that are wholly owned by a shareholder.

When comparing both countries, Table 5 shows that both countries have rather concentrated ownership. However, a slightly greater tendency to dispersed ownership can be observed in Germany.

Table 5 Distribution of firms according to a concentration level

Percentage of held shares	Austria	Germany
≤10%	0	45
$10\% > x \le 25\%$	6	133
$25\% > x \le 50\%$	18	280
$50\% < x \le 75\%$	31	238
$75\% < x \le 100\%$	15	155
100%	17	114
Number of firms	87	965

## 6.4. Identity

In order to analyze who the largest shareholder is, their identity needs to be defined. On that account, following groups are considered:

- Bank
- Financial company

- Insurance company
- Corporate companies
- Mutual & Pension Fund/Nominee/Trust/Trustee
- Foundation/Research Institute
- Public authorities, States, Governments
- One or more known individuals or families
- Employees/Managers/Directors
- Private equity firms
- Public
- Unnamed private shareholders, aggregated
- Venture capital

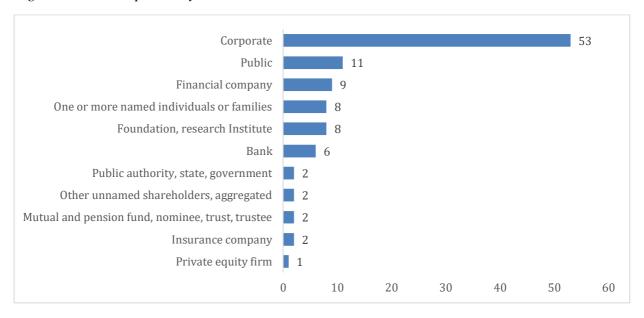
The categories of ownership identity have been taken from the Orbis database and modified and shortened in order to fit for this thesis. The categorization "corporate companies" consists of companies from different industries. It includes firms in the manufacturing and trade business, as well as non-financial B2B services.

In the category "one or more known individuals or families" shareholders with the same last name have been accumulated because by assumption they are prone to vote in one direction. Therefore, they haven't been classified as single shareholders.

Shareholders, who only are known to be a private person, have been pulled together in the category "unnamed private shareholders, aggregated". Furthermore, shareholders of less than 2% stock, companies and shareholders that are not named are included in group.

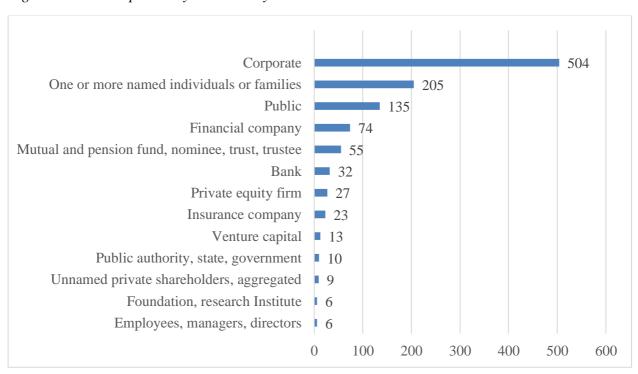
Recognizing who owns a firm, is a very significant step toward the understanding of ownership. Figure 1 and Figure 2 show graphically the identity of the largest shareholders, respectively in Austria and Germany. Since there is no data about the identity of some companies, they had to be omitted, what leaves the analysis with 104 companies for Austria and 1099 for Germany. Figure 1 shows that corporate firms are the unquestionable leader in Austria, representing half of the observations. The next category with the highest number of firms are publicly held ones, counting 11. Financial companies, families and foundations are held form approximately 8 firms each.

Figure 1 Ownership Identity in Austria



In Germany 504 of the 1099 companies are held by a corporate owner, as Figure 2 shows. This is about 50% of companies in the sample, just as in Austria. However, on second place, with almost 19%, are family owned and on third – publicly owned firms. Foundations or research institutes are holding stock in 7% of the German firms.

Figure 2 Ownership Identity in Germany



## 6.5. Performance

For the analysis of performance, the return on assets using net income has been chosen. The Orbis database provides the variable already calculated for both countries for one year. After extracting the ROA for the period of three years (2014 - 2016), its mean has been determined and used for the further examination. The database excludes firms with no data about the ROA, as well as firms held by public authorities, states and governments.

In the next table, the number of employees, as an embodiment of size, and the mean ROA are summarized.

Table 6 Mean ROA in categories of number of employees

	Aus	etria	Germany		
	Number of firms	ROA in %	Number of firms	ROA in %	
≤ 50	7	3,58	135	-3,54	
$50 > x \le 100$	3	8,09	51	-2,7	
$100 > x \le 500$	14	6,20	125	1,9	
$500 > x \le 1000$	8	0,55	62	2,9	
$1000 > x \le 10000$	21	4,11	143	2,76	
10000<	9	1,94	74	3,91	
Number of firms / Mean ROA for all firms	62	4,08	590	0,87	

For Austria, the ROA is in every interval positive, but when looking at the numbers, no connection between the variables can be identified. However, in the case of Germany Table 6 shows clearly a positive correlation between the size of a company and its ROA. With every interval the ROA increases, starting with a negative number

for small firms. Firms with more than 10000 employers have a mean ROA of 3,91%. An explanation of the negative ROA might be that in the first years of incorporation, when firms in addition have not that many employees, they could have a negative net income. Furthermore, it can be remarked that the mean ROA of Austrian firms is much higher than the one of German firms.

#### 6.6. Variables and Methods

The question of whether ownership concentration has an impact on firm performance will be investigated with the help of regression analyses. The dependent variable, with which the performance will be analyzed is the ROA. With the help of some control variables, possible additional influence factors on firm performance will be examined.

## **6.6.1.** Independent and Control Variables

Ownership concentration (OWN), as the independent variable, is defined as the percentage of shares held by the top shareholder. There have been chosen two control variables, that might have an impact on the company performance: total assets (SIZE), as a measure of company size and leverage (LEV), defined as total liabilities and debt divided by total assets. The size of a company is assumed to be relevant to performance, since it is probably more unproblematic for large firms to find investors and financing. However, large firms have often communication problems and information loss.

Leverage has been chosen as a control variable, because it is assumed that it has impacts performance due to several factors: it could affect agency costs, cash flow, investments. (Y. Lee & Lee, 2014)

The next table describes the two control variables. On average, the total assets of a company in Austria are about €2.5 Million and in Germany €5.2 Million according to this sample. In Germany there is a very big gap between the smallest (€5.2 Million) and the largest (€381 Million) company. In both countries the total debt is about 50% on average.

Table 7 Descriptive Statistics of Control Variables

	Austria		Germany		
	SIZE	LEVERAGE	SIZE	LEVERAGE	
Mean	2.585.263,98	0,5204	5.212.049,63	0,5188	
Standard Error	906.023,80	0,0337	1.314.192,30	0,0124	
Minimum	9.649,67	0,0002	470.197,67	0,0092	
Maximum	3.2904.666,7	0,9622	380.958.666,67	1,7402	

## **6.6.2.** Dependent Variables

In literature various ways of firm performance measurement can be found, but there are two variables that are most frequently applied. On one hand, many studies used return on assets (ROA), which is an accounting-based measure that gives information about past data. (Gaur et al., 2015; Lehmann & Weigand, 2000) On the other hand, Tobin's Q, a market-based measure, has also been applied very often in literature. (Demsetz & Villalonga, 2001; Guerrero-Villegas et al., 2018; Y. Lee & Lee, 2014) This ratio focuses on the future and replicates the expectation of firm performance. (Demsetz & Villalonga, 2001) ROE can also be found as an accounting-based ratio in studies. (Gaur et al., 2015; Kalezić, 2015)

## 7. Results and Discussion

Many of the Austrian companies had to be omitted, because of incomplete data. Therefore, the sample is very small and not very representative for the whole country. The multiple regression output for Austria is presented in the next three tables. Starting with the regression statistics in Table 8, for 41 observations the R<sup>2</sup> is 0,2632, which is not a very strong prediction.

Table 8 Regression Statistics - Austria

	Austria
R Square	0,2632
Adjusted R Square	0,2035
Standard Error	4,5841
Observations	41

The next two tables (Table 9 and Table 10) show further statistical results of the analysis for Austria. The ANOVA table shows the statistical significance of the whole model. Since the significance F is lower than 0,05, it can be stated that the model is statistically significant. In other words, there is a 0,0952% chance that the results occurred randomly. In Table 10 it can be observed that the coefficients of all the independent and control variables for Austria are negative. Ownership concentration and size are not statistically significant, as their p-values are quite over the 5% significance level and they cannot explain the dependent variable. However, leverage seems to have a strongly negative influence on firm performance. As the leverage increases, the value of ROA decreases.

Table 9 ANOVA – Austria

	df	SS	MS	F	Significance F
Regression	3	277,77	92,59	4,406	0,00952
Residual	37	777,52	21,01		
Total	40	1055,30			

Table 10 Coefficients – Austria

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	12,3196	3,0939	3,9819	0,0003	6,0508	18,5883
OWN	-0,0394	0,0376	-1,0479	0,3015	-0,1157	0,0368
LEV	-11,7745	3,4575	-3,4055	0,0016	-18,7799	-4,7690
SIZE	-1,2142E-07	1,2735E-07	-0,9534	0,3466	-3,7946E-07	1,3662E-07

In the case of Germany, about 150 companies were excluded from the sample, due to the same reason as before – incomplete data, leaving 411 companies for the analysis. As can be seen in Table 11, the strength of the prediction is even lower than in Austria, representing only 12,62% explanation of firm performance. The standard error for Germany also shows that the model is not very precise.

Table 11 Regression Statistics - Germany

	Germany
R Square	0,01262
Adjusted R Square	0,00534
Standard Error	12,1898
Observations	411

The ANOVA table of the companies in Germany shows that the model is not statistically significant, since the Significance F is very high. This also means, that the probability that one of the coefficients is equal to 0 is quite high. Table 13 shows exactly that — the coefficient of size is almost zero, indicating that there is no correlation between firm size and performance. This is also shown by the p-value of the variable. Ownership concentration can neither indicate a relationship to ROA. The coefficient of the predictor is as well near zero and has a p-value way over the

significance level. The only variable that shows a statistical significance is leverage. Its p-value is just a little bit below the significance level of 5% (for space reasons the value has been rounded up). The coefficient of leverage is -4,7428, indicating a negative relationship between debt and performance. As in the analysis of Austria, companies in Germany, high leverage indicates lower performance.

Table 12 ANOVA - Germany

	df	SS	MS	F	Significance F
Regression	3	773,17	257,72	1,73	0,16
Residual	407	60476,08	148,59		
Total	410	61249,25			

Table 13 Coefficients - Germany

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	1,9500	1,8669	1,0445	0,2969	-1,7200	5,6201
OWN	0,0236	0,0250	0,9436	0,3460	-0,0256	0,0728
LEV	-4,7428	2,4122	-1,9662	0,0500	-9,4847	-0,0009
SIZE	-5,583E-09	6,3871E-09	0,9605	0,3374	-1,814E-08	6,973E-09

A further analysis of the influence of ownership concentration on firm performance, with Tobin's Q as measurement for performance, has been performed. Though, due to the lack of any meaningful conclusions, it is not presented in the paper.

## 8. Conclusion

The link between concentration of ownership and firm performance has been analyzed by a lot of researchers but there is still no conclusive evidence on this correlation. Some studies show a positive relationship, some a negative and other no relationship between these two variables. In all likelihood, the good performance of a company can be explained not only by its ownership structure, but by a combination of different factors. Until now, no recipe for these factors has been presented, promising a high profit.

In an attempt to contribute to the extensive research, this thesis investigates the influence of ownership concentration on firm performance for listed companies in Austria and Germany in the period of 2014 – 2016. After an overview of the theoretical implications, the corporate governance of both countries has been discussed. The performed regressions for both countries show no relationship between the two variables. Two control variables have been chosen in order to investigate a possible influence. Size, defined by total assets, is of no importance to the model, while leverage is seen to be negatively correlated to firm performance for both countries. A possible explanation for the lack of verification of the variables may be the incomplete data.

Wrapping up, the conducted analysis for Austria and Germany presents no evidence of a correlation between ownership concentration and firm performance. However, there should be further research on this topic.

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# **Appendix**

## **Abstract German**

Es existiert in Großteil an Literaturforschung, der sich mit der Beziehung zwischen Eigentumskonzentration und Unternehmensleistung beschäftigt. Einer der Schwerpunkte der Unternehmensführung liegt in der Eigentümerstruktur, da sie Kontrollrechte, Stimmrechte und Risikoträger definiert. Aus diesem Grund kann angenommen werden, dass eine Korrelation zur Unternehmensleitung besteht. In dem Versuch, einen Beitrag zu dieser umfangreichen Forschung zu leisten, untersucht diese Arbeit den Einfluss der Eigentumskonzentration auf die Unternehmensleistung für börsennotierte Unternehmen in Österreich und Deutschland im Zeitraum von 2014 bis 2016. Die durchgeführte Analyse zeigt keinen Zusammenhang zwischen den beiden Variablen.