The impact of ownership structure on firm performance and leverage level.

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Abstract

My thesis tries to shed some light on a contradictory subject that has been a matter of interest for more than 80 years. Previous papers have provided mixed results regarding the impact of ownership structure on firm performance and leverage level across different countries. My study is based on Greek, Italian and Spanish corporations where the ownership concentration is very high on individuals. The findings show a positive and significant correlation between firm performance and ownership concentration on individuals, although I find no significant relation between firm's ROA and family ownership. Moreover, I show that family ownership concentration affects firm's leverage level on a negative way and that impact is even stronger when the firm is controlled by an individual blockholder.

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1. Introduction

Over the last decades one of the most contrary issues on corporate governance is the ownership structure and whether it affects firm performance or not. The first attempt on giving a clear answer to this question was made many years ago. Berle and Means in a ground-breaking study they did back on 1932 suggested that there is an inverse correlation between ownership dispersion and firm performance. That study came in a very crucial period for the U.S economy, which faced a rapidly industry growth at that time. That growth had as a consequence many firms to look for new investors in order to expand their functions and meet their market's demands which were increasing rapidly. That expand could only be achieved by talking money from potential investors and giving them a part of the firm's ownership and profits as a return. Berle and Means, based on their thesis, found that this policy might have a negative effect on firm performance. Their main point was based on the view that, the higher the shareholder diffusion is, for a particular firm, the more difficult will be to act cooperatively and hence to influence the managers in any great extent. As a result of that, the managers might try to act on their own interest without considering firm's interest.

Information asymmetry is a factor that raises while ownership structure becomes more disperse. Managers have much more information than the shareholders and sometimes can use that information for their own benefits giving rise to the principal-agent problem. "When the shareholders are too dispersed to enforce value maximization, corporate assets may be deployed to benefit managers rather than shareholders" by Morck, et al. (1988). The benefits of these managers, like neglecting their responsibilities or asset misappropriation for personal interest, reduces the value of the company. Strong and independent boards are a solution to mitigate the extent of this problem but there are still many ways for the managers to extract wealth. In many cases the managers have high power over board members, when a manger is also the Chairman of the board or has developed personal relationship with the board members, so the monitoring effect is reduced substantially. In that case stronger controlling on the managers and the boardroom from the investors is necessary.

Sometimes shareholders have to directly control their managers themselves in order to prevent any possible wealth extraction and reduce the agency costs for their firm. When there are a lot of shareholders then the cost of effort to actively control the manager exceeds the benefits of that action. In other words, the fewer the shareholders are for a firm the higher the control will be on the firm's manager and the more difficult will be for the manager to act on his own interest. This is the point where the agency problems begin. The separation between ownership and management creates different type of behavior for the participating individuals. The investors want to maximize their own profits and benefits and so do the managers. Sometimes those benefits tend to move on the same direction but sometimes those benefits come in contrast. And that happens because there is a good reason that managers do not act always act on the shareholder's interest. This will lead to agency costs and will have a negative impact on firm profitability. The shareholders can prevent that from happening by providing incentives to their managers. Those incentives vary from giving bonus salary to the successful managers or firm's shares if the firm's annual goals are reached.

On the other hand, there are some opposite views suggesting that high ownership concentration might have a negative impact on firm's performance. Shareholders make a financial investment in the corporation, which entitles them with the right to vote for electing directors. Normally shareholders do not have any right to be involved directly in the company's management, although in many cases, especially when the ownership concentration is very high, the blockholders get involved directly or indirectly, affecting the way the firm operates in a negative way. This happens when the blockholders act on their own interest and try to maximize their own profitability without considering the firm's performance. Usually, shareholder's profitability is positive correlated with firm's profitability. This means that the higher the profits are for a firm the higher the profitability will be for the shareholders. Even though, sometimes the blockholders might choose to minimize the profits for one firm with the intention of maximizing the profitability of another subsidiary or parent firm. This policy will affect not only the company's performance but also will have a cost on the minority shareholders.

Furthermore, information asymmetry and agency costs increase the level that blockholders engage in the company management. Blockholders, with the fear of firm's asset

misappropriation and wealth extraction by their managers, will try to involve directly in the company management. As a result, in many cases the shareholders will not let their managers cooperate and control the firm the way they want. This may cause some negative impact on firm performance because managers do not have completely discretion to operate on their own. Moreover, the blockholder's profile has an impact on the company's performance. When a large shareholder is more risk neutral, then he will push the manager into taking riskier decisions. This will increase the firm's exposure to risk and might affect the profitability.

In my study I use data from 7,747 different firms between the ten-year period of 2008-2017 across 3 Mediterranean countries, Greece, Italy and Spain and I try to shed some light on this contrary issue by examining the correlation between ownership structure and firm performance. In the first part of my analysis I split the ownership concentration into two categories, firms controlled by a blockholder which holds more than 50% of the company's stake and widely held firms. The results show a positive and significant correlation between firm's ROA using Net Income and ownership concentration. That correlation is even higher when I use EBITDA to total assets ratio as dependent variable. In the second part of my analysis, I divide the ownership structure into family and non-family controlled firms. My findings show a positive impact of family ownership on firm's performance when Net income to total assets ratio is used as dependent variable, although that correlation is not significant. Moreover, when the dependent variable is expressed as the ratio of EBITDA to total assets, then the correlation between family concentration and firm performance is negative and insignificant. In both analyses the results are contradicting and robustness tests are used to clear the direction of that relation. The tests show a positive impact of ownership concentration on firm's profitability when there is a blockholder and a negative correlation when there is family ownership. Taking my analysis, a step further, I examine whether ownership concentration affects firm's risk level or not. Using firm's leverage level in order to measure for the risk level, I find a significant decrease in the leverage ratio when the firm is controlled by a family and that decrease is even greater when there is an individual blockholder. Some robustness tests are used again in order to enhance the validity of my results.

2. Previous Literature & Hypotheses

2.1 Ownership Structure and Agency Problems.

Many large companies in Europe are owned by Shareholders but are run by managers, this is a typical Principal-Agency relationship. The shareholders, which play the role of the principal in this case, legally appoint the managers, which play the role of agency here, to act on their behalf. The agent should act on the best behalf of the principal without having a conflict of interest when carrying out the act. Although, sometimes the managers act in ways that maximize their own personal wealth and power without caring for the best interest of their principal. This is the point where agency costs start to arise for the company.

Previous literature has shown that ownership structure plays a very determinant role on the extent of agency costs for the company. Berle & Means (1932) show on their study that ownership concentration has an impact on the conflict of interest between management and the outside investors, which affects firm valuation as well. Another study made by Ang et al (2000), examines the correlation between ownership structure and equity agency costs for the firms. In their study, the researchers collected information from more than 1700 U.S corporations in the year of 1992. Agency costs were measured as the difference on the efficiency between a perfectly aligned firm, which was a firm that had no agency costs, and an imperfectly aligned firm. The ownership structure was divided into 4 main categories: firms controlled by an individual, firms controlled by a family, firms with shareholders that are no managers and firms which are managed by a shareholder. Their findings suggest that agency costs are higher when an outsider manages the firm and vary inversely with the number of shares a manager owns. They also show that agency costs increase with the number of non-shareholder managers. All of their findings suggest that companies managed by outsiders have higher agency costs and lower profitability.

Another study made by Jensen and Meckling (1976) highlights the conflict of interest between the principal and the agent. Their main findings suggest that if there were enough 100 percent owner-managers to run all the firms in an industry, then the agency costs in that industry would be zero. When the ownership separates from management then the agency problems start to arise. Their paper brought in a new concept known as “agency theory” and until today a

lot of studies in finance and corporate governance use their theory framework. Consistent to these findings, Singh and Davidson (2003) using slightly different measures of agency costs, suggest that higher inside ownership aligns principal's and agent's interests and decrease agency problems in a research made on large American corporations.

An alternative approach on the agency theory was made by La porta et al (1999). The presence of a blockholder reduces the agency problems that is prevalent under dispersed ownership because controlling shareholders have more incentives to monitor the managers and also they often participate in the management as well. Despite the benefits from monitoring, concentrated ownership leads to another conflict of interests between the controlling shareholders, which have incentives to extract private benefits, and the minority shareholders. In a study made on companies across the 27 wealthiest economies based on 1993 per capita income, the researchers show that top management is part of the controlling shareholders and at the same time they have both power and incentives to expropriate wealth at the expense of the minority shareholders. These wealth extraction is even greater in countries where there is no good legal protection for the minority shareholders.

2.2 Ownership Structure and Firm Performance

A lot of previous papers in the past have showed the positive correlation between ownership concentration and firm performance. A study made by Lins et al (2013) on global firms (excluding U.S firms) suggests that, during the financial crisis period 2008-2009, the firms which are controlled by at least one individual blockholder will perform better than the widely held firms. In a seminal study, Morck et al (1988), show a non-linear correlation between firm ownership and performance. In a cross-section of 1980 fortune 500 firms, using a piecewise linear regression, they show that firm performance is positive correlated with ownership structure for board ownership range from 0% to 5%, then firm performance decreases as board ownership rises further to 25%, and then performance will rise again with a lower rate as board ownership increases beyond 25%. These results suggest that in low and high ownership concentrations the incentive effect for managers might lead to firm outperformance. McConnell et al (1990), in a study made in 1976 and 1986, find a strong curvilinear relation between Tobins'Q and the

fraction of shares owned by insiders. Their results show that in higher levels of insider ownership the relation with firm's Q is negative. On the other hand, on lower level of insider ownership is observed a positive correlation with firm's Tobin's Q. Consistent to these findings, Kapopoulos and Lazaretou (2007), show a significant and positive relation between higher ownership concentration and firm performance, in a study they did on 175 Greek listed firms during the year 2000.

A different approach on the ownership structure and how it affects firm performance was made by Demetz and Vilallova (2001). In their paper the researchers examine whether the shareholder's ownership has impact on corporation's performance, if ownership is made multi-dimensional and is also treated as an endogenous variable. The study was made on 511 U.S firms from all sectors of the economy during the 1976-1980 period and focus on two main aspects of ownership structure which are the shares owned by the shareholders and the shares owned by the managers. The results from the OLS regressions suggest that ownership structure does not have a significant impact on firm performance. These findings are consistent with the idea that greater diffuseness in ownership, despite it increases agency problems, gives some compensating advantages on firms that choose ownership diffusion. Other findings show that managers shareholdings will be greater affected by firm performance.

Another study made by de Miguel et al (2004) on 135 Spanish quoted companies, for the period ranging from 1990 to 1999, show that ownership concentration has a non-linear effect on firm's value. These results are in contrast compared to other countries such as USA and United Kingdom where the effect is linear. Claessens et al (2002) in a study they made on 1,301 publicly traded corporations, across eight East Asian countries, found that there is a positive and significant correlation between the firm value and the cash flow ownership of the largest shareholder. These findings suggest that firm value increases when the cash-flow ownership of an individual investor increases. Although, their results show that there is a negative relation between the controlling rights of the largest shareholder and the firm valuation. This means that when controlling rights are increased for the largest shareholder then the firm value will decrease.

A paper that was published in 1985 by Demsetz and Lehn tried to give some answers on the way that corporate ownership structure influence value maximization for the firms. The researchers used a sample of 511 U.S firms from major sectors of the economy. In contrast with many other studies in the past, they included regulating utilities and financial institutions. The ownership was measured based on the percentage of shares owned by the most important shareholders and the accounting profits were used to measure firm performance. In addition, the authors of the paper used some variables to explain the variation in ownership structure. Among the variables that were used, are firm size, instability of profit rate and the industry of the company. The results of the OLS regressions show no significant correlation between ownership concentration and accounting profits. These findings lend no support on Berle and Means thesis which indicated that ownership affects positively firm performance.

In this line, another study made by Thomsen et al (2006) tries to find out if there are any differences in the relation of ownership structure and firm value between the European and U.S companies. The data is consisted of 489 Anglo-American companies and 276 companies from continental Europe during the 1990-1998 period. A "Granger" (Granger,1969) causality test is used in the research in order to examine the causal relationship between ownership and firm performance which is measured by firm value and firm profitability. The results show a surprisingly low ownership concentration on the Anglo-American companies and a higher blockholding concentration among European companies. Moreover, the paper's findings show no significant correlation between ownership concentration and firm performance on the U.S firms. On the other hand, in the Continental Europe high ownership concentration shows a significant negative effect on firm value and profitability. These results can be attributed to the fact that blockholding concentration levels has exceeded the point which maximizes firm performance from the viewpoint of minority shareholders.

Contrary to Thomsen et al (2006) findings, a study made by Earle et al (2005) suggests that the size of the largest blockholder increases firm profitability, but on the other hand the effects of total blockholdings are smaller and not statistically significant. The study, based on Shleifer and Vishny (1986) paper that indicates ownership concentration might increase profitability by increasing the monitoring effect on the management, tries to provide evidence

on the positive effects of concentrated share ownership on firm's performance. The researchers, collected financial information and ownership data from all the firms that are listed on the Budapest stock exchange during the 1996-2001 period for their study. The ownership concentration is divided into four main categories based on the number of blockholders in the firm and the profitability is measured by firm's return on equity (ROE) and operating efficiency (OE). An interesting finding on the data used, was that about one third of the companies in the sample have less than four blockholders. This fact proves one more time the higher ownership concentration in the European firms compared to the U.S companies. The results show a positive a significant correlation between higher ownership concentration and firm profitability. More specifically, when there is only one large blockholder in the company, then the dependent variable, which is firm's ROE and OE in this case will increase by a significant percentage. Although, when the number of blockholders increases, then the correlation becomes insignificant and shrinks. These findings suggest that different forms of concentration may have different impacts on company's performance, indicating that the relationship of ownership and profitability it is not monotonic.

Another paper, published by Gedajlovic and Shapiro (1998), suggests that the relationship between ownership concentration and firm profitability differs in a systematic way across countries with different regulations on corporate governance. The researchers used data from five different countries (Canada, France, Germany, United States and United Kingdom) in order to find the cross-nation differences. Their sample consists of 1030 medium to large firms from 11 industry sectors for a six-year period 1986-1991. The ownership concentration is measured by the shares outstanding owned by the largest shareholder and ROA is used as dependent variable to measure firm profitability. The results show that there is a negative and significant correlation between ownership concentration and profitability on the U.S companies. On the same line, but with lighter correlation, behave the German companies. On the other hand, the results show no significant relation for U.K, France and Canadian companies. These findings suggest that country effects exist in the ownership concentration-performance relationship. Those effects can be attributed to regulation and institutional differences across countries and should not be skipped.

2.3 Ownership Concentration and Firm Risk

Many times in the past, ownership concentration has been linked with the amount of risk a firm is taking. Agency theory implies that a utility maximizing agent may take actions which are inconsistent with their principal's benefits. One of these specific actions may be the issuing of the firm with a large amount of debt. This strategy may be very profitable for the managers, but on the other hand increases the probability of the firm going bankrupt. Ownership concentration might be a way to restrict the managerial power and as a result reduce the amount of risk a firm is taking.

Previous studies have focused their analysis in the existence and the extent of this relation. Rossetto and Stagliano (2016), in a study they made on U.S. listed firms over the period of six years (1996-2001), they show that firms controlled by one big blockholder will have significantly lower risk exposure compared to firms controlled by multiple shareholders. These findings are in consistence with the general idea that concentrated wealth in one firm may force the blockholder to conduct business from a more risk averse position. In the same line, McConaughy et al (2001) in a research they did on 219 U.S. firms, they find that firms controlled by families will have less debt and higher market to book value. This can be explained by the fact that families who have greater stock ownership in a firm, have also greater risk exposure and for that reason they may choose a more conservative finance policy.

On the other hand, there is an alternative theory suggesting that the largest blockholders may choose to expropriate wealth from the minority shareholders by taking a lot of risk and issuing the firm with more debt. A study made by Zhang (1998) examining the effect of capital structure on investment decisions when the firm is controlled by a large shareholder, show a positive relationship between firm leverage and ownership concentration. This means that the higher the position owned by the controlling blockholder, the higher will be the firm's leverage ratio. In the same line, a study made by Paligorova (2010) investigates if shareholders with a substantial ownership concentration can advocate conservative investment policies due to greater exposure to firm risk. The researcher study used information from 21,755 listed companies across 38 countries during the 2003-2006 period. The results show a positive and significant correlation between ownership concentration and risk-taking decisions. These

findings are in contrast to the general idea that blockholders may act more conservative due to greater risk exposure.

2.4 Ownership Concentration in Europe

One of the major differences between U.S and European corporations, is the level of ownership concentration owned by the largest shareholders. On average the U.S companies have a higher number of shareholders compared to the other countries, and also the largest blockholders do not own a very big stake in the firm. On the other hand, European corporations are characterized by their increased ownership concentration on individuals (Gedajlovic et al 1998, Becht et al 1999). In Western Europe, the majority of publicly-owned firms is controlled by families (Faccio et al 2002, La porta et al 1999). Moreover, broadly speaking previous literature has identified one more mayor difference on the corporate governance between U.S and Europe. United States' corporations are characterized by relatively passive stakeholders, that are weak affiliated in the company governance, and a less independent BOD of managers (Roe 1994). In contrast to that, European companies are characterized by more active shareholders that get involved in the management and a higher level of independent BOD towards the manager. As a result of these two major differences in the corporate governance between companies in the two continents, firm performance and profitability gets affected in various ways.

In a study made by Maury (2005) on Western European corporations, the correlation of ownership structure and firm performance was examined. More specifically, the author collected information from 1672 non-financial firms from 13 Western European countries. The ownership structure was divided into two major categories, the family controlled and the non-family controlled firms. Firm's Tobin's q and Return on Assets were used to measure the profitability as well. The papers results showed that family ownership decreased classical agency problems and furthermore in companies where the family member hold also a top management position, the profitability had a positive and significant increase.

In the same line, Bianco and Casavola 1999, investigate the relationship between corporate governance and performance in Italy. The researchers use information from 1000 large Italian firms during the year of 1996. Pyramidal group structures are used in the study to examine

the correlation between ownership and control. The results show that although the pyramidal group structures may help in the financing of several group projects, the perceived risks of expropriation for the minority shareholders, may cause some limits on the overall performance of the firm. These findings suggest that high ownership concentration may reduce agency problems, but also increases the risk of wealth expropriation from the minority shareholders by the blockholders. This risk can have a negative impact on firm performance and profitability overall.

Another paper published by Pedersen and Thomsen (2003), takes into examination the potential correlation between ownership structure and firm value for the European firms. The study, collected financial and ownership information from the largest European corporations during the 1992-1995 period and investigated if the largest shareholder's identity has an impact on firm performance and value. The blockholders were divided into 4 main categories: financial, family, corporate and government ownership. Firm's market to book ratio is used to measure firm's value and some control variables including industry and country fixed effects are added to enhance the validity of the results. The findings, in contrast to the authors' hypotheses, show that financial and corporate ownership increase firm value. On the other hand, family ownership does not have any significant effect on company's performance and government ownership affects in a negative way the firm value. Moreover, their results show a multicollinearity effect between the dependent and the independent variables, suggesting that ownership and value are highly correlated.

Kapopoulos and Lazaretou (2007), in a study they did on Greek corporations, investigated the inverse relationship of ownership concentration and firm performance, which was first challenged by Demsetz (1983). Their paper was one of the first academic studies that focused specifically on the Greek firms which are characterized by a great ownership concentration on individuals or families and only a small percentage of those firms are widely controlled. The researchers collected their observations from 175 listed firms on the Greek stock exchange during the year 2000. Accounting profits and firm's Tobin's q were used to measure the performance, the ownership structure was divided into two main categories, the number of shares owned by the management and the number of shares owned by the outside investors.

The results, similar to many previous studies, showed a linear and positive relationship between ownership structure and firm profitability. These findings suggest that the greater the level of shares concentration is in the hands of an individual inside or outside investor, the more effectively will the management be monitored resulting in better firm performance.

2.5 Hypotheses

Based on the previous literatures findings, my first hypothesis follows the ownership concentration-monitoring effects theory and predicts a positive correlation between blockholders and firm performance.

Hypothesis 1: Firms which are controlled by a blockholder will have higher ROA compared to widely held firms.

My second Hypothesis focuses on the financial decisions that blockholding firms take and how they differ from the widely held firms. More specifically, I am going to focus on the company's debt decisions and search for a potential correlation between ownership concentration and firm's leverage level. Based on signaling theory, blockholders have higher incentives to monitor managerial opportunistic and as a result reduce the firm's leverage level.

Hypothesis 2: Firms which are controlled by a blockholder, will have lower leverage ratio compared to widely held firms.

In the second part of my analysis I am taking ownership structure a step further and divide it into two categories, firms controlled by a family and non-family controlled firms. The effect of family blockholders on firm performance is still a subject of debate. Previous studies have shown that family ownership may have a positive effect on firm profitability (Anderson and Reeb 2001, Maury 2006). This can be explained by the fact that a controlling family tends to be undiversified with its wealth tied up in the firm it controls. As a result, the monitoring effect is stronger and the agency costs are reduced. Based on that theory my third hypothesis predicts a better performance for family firms compared to non-family firms.

Hypothesis 3: Firms controlled by a family will have higher ROA compared to non-family firms.

My last hypothesis focuses on the risk that family and non-family firms choose to take. The amount of risk is measured by the company's leverage ratio. In accordance to signaling theory, which indicates that blockholders have higher incentives to monitor managerial opportunistic combined with the stronger monitor effect that families provide, I predict that family controlled firms will have a lower leverage level.

Hypothesis 4: Firms controlled by a family will have lower leverage ratio compared to non-family controlled firms.

3. DATA & Methodology

I begin my sample construction by collecting ownership and performance information from the Orbis database. The sample contains Large and Very Large companies across three Mediterranean countries, Spain, Italy and Greece. The observations are collected during the ten-year period 2008-2017 and financial firms are excluded similar to Vins et al (2013) paper[1]. The firms are collected based on their BvD Independence Indicator. Missing observations for the main dependent variables are dropped from the sample. The final sample consists of 7,747 firms and 15,993 unique firm-year observations.

3.1 Descriptive Statistics

Table 1 provides descriptive statistics for all the variables I use in my analysis. All non-binary variables are winsorized at 1st and 99th percentiles. The median firm in my sample is not considered very large with total assets of 78 million. Firms do not have a large amount of debt, with a median of long-term debt 2.03 million and total loans of 1.36 million. The leverage ratio for the median firm is also quite small with a value of 5.16%. The performance ratios show that firms are profitable with a median of ROE of 11.17%. Median return on assets based on net income and firm's EBITDA are also positive with values of 2.46% and 3.45%. The last two variables show that median firm does not have many employees and the revenue per employee ratio is also somewhat small.

[1] I exclude the financial firms from my analysis because according to Fama and French (1992) the high leverage that is normal for these firms probably does not have the same meaning as for nonfinancial firms, where high leverage more likely indicates distress.

Table 1

Descriptive Statistics of the main variables

	Mean	p25	Median	p75	St.Dev
Total_Assets	445.618	25.51	78.024	230.738	2341.693
Leverage_Debt	12.575	0	5.158	17.944	17.841
Leverage_Loans	0.0804	0	0.0271	0.1207	0.1226
Long_Term_Debt	70.423	0	2.032	17.603	334.276
Loans	16.055	0	1.363	10.085	52.855
ROE	15.243	2.762	11.173	24.685	36.862
ROA_EBITDA	4.94	.624	3.447	8.11	9.01
ROA_Net_Income	3.479	.342	2.455	5.997	7.323
NumberEmployees	716.796	46	170	554	2247.585
Emlpperevenue	16.351	5.302	12.128	21.12	16.174

Summary statistics for the main variables used in subsequent regression analyses. Total Assets, Long term debt and loans are in millions of US dollars. Total Assets are the sum of fixed and current assets. Loans are firm's short term financial obligations (including part of Long term financial debts payable within the year, bonds, etc.). The leverage_Debt is measured by the ratio of long term debt to total assets and multiplied by 100. The leverage_Loans is measured by the ratio of total loans to total assets and multiplied by 100. ROE is defined as the ratio (Net income / Shareholder funds) multiplied by 100. ROA_EBITDA and ROA_Net_Income are measured as the ratio of (Profit before interest, tax, depreciation and amortization / Total assets) and (Net income / Total Assets) multiplied by 100 respectively. The number of employees is the total number of employees for each firm. The employee per revenue is measured by the total number of employees divided by the total revenues and multiplied by 100.

3.2 Ownership Concentration

The main key to my analysis is the identification of whether a firm has a major blockholder or it is widely held. I use the BvD Independence Indicator to divide the firms into 2 main categories. The first category contains firms with an "A", "A-" or "A+" Independence Indicator. These firms are characterized as "Independent firms" with no shareholder having more than 25% of direct or total ownership. The second category contains firms with a "D" BvD Independence Indicator. These firms are labeled as "directly majority owned" and have one shareholder recorded with more than 50% of direct ownership. Next, I use the BvD independence Update in order to identify the last year that one firm was categorized as "Independent" or "majority owned". Observations during and after the last year of the update are maintained in the data and the rest are dropped. Table 2 provides information about the observations in each country.

Table 2

Tabulation of independence indicator by country

Independence Indicator	Country of Firm			Total Firms
	Spain	Italy	Greece	
A	64	9	-	73
A+	522	2.144	11	2.677
A-	427	87	9	523
D	1.265	3.173	36	4.474
Total	2.278	5.413	56	7.747

Blockholder statistics by country as of December 2017 for the full sample of 7,747 firms. The first column contains information about the firm's ownership concentration based on the BvD Independence Indicator. The next three columns show the number of firms in each category based on the country. The last column shows the total number of firms contained in each category respectively.

Table 3

Importance of firms with one blockholder

Panel A Group of Firms	Number of firms (% Total)		Average of Total Assets (in thousands)	Average of Leverage ratio
Firms with no controlling owner	3,273	(42.2)	250.90	13.07
Firms with one controlling owner	4,474	(57.8)	576.81	12.24
Total	7,747	(100)	445.62	12.58

This table reports the total number of firms in the sample with (i) no controlling shareholder and (ii) one controlling owner. The second column shows the mean of Total assets for blockholded and widely held firms, while the third column shows the average leverage ratio for each firm category.

Panel B Group of Firms	Number of firms (% Total)		Average of Total Assets (in thousands)	Average of Leverage ratio
Non-family controlled firms	4,284	(95,8)	579.95	12.48
Family controlled firms	190	(4,2)	516.26	7.50
Total	4,474	(100)	576.81	12.14

The first column of the table shows the number of family controlled and non-family controlled firms. The second column, similar to the previous table, shows the average Total assets for family and non-family firms while the last column shows the mean of leverage ratio for each firm category.

The final sample consists of 7,747 firms, 5,143 of which are from Italy, 2,278 are Spanish and the rest 56 are from Greece. The majority of the firms are controlled by a blockholder, 4,474 firms (58%) and the rest 3,273 (42%) are widely held. These findings are consistent to the general rule that ownership concentration is higher in European countries. A dummy variable, called Blockholder, will be used as the independent variable in my hypotheses. Blockholder takes value 1 if the firm has an Independence Indicator "D", that means that the firm is controlled by a major shareholder and value 0 when a firm has an Independence Indicator equal to "A", "A+" or "A-".

For the second part of my analysis, I divide the firms with higher ownership concentration into family and non-family controlled. I do that by using the "GUOName" variable which indicates the controlling shareholder's name. GUO names which have the word family, famille, familia, etc... are identified as family owned firms. The rest of the firms are identified as non-family controlled. A dummy variable called Family will be used as the independent variable in the 3rd and the 4th hypotheses. Family takes the value 1 if the firm is controlled by a family member and 0 otherwise.

3.3 Firm Performance and Leverage ratio

Firm performance is used as the dependent variable in the first and third hypotheses respectively and is measured with two alternative ways. In one approach, I take EBITDA divided by the book value of total assets. Barton et al (2010) have shown in their study that Earnings Before Interest Taxes Depreciation and Amortization is a very reliable way of measuring firm performance and profitability. In the second approach I use net income divided by the book value of total assets. This method has been used as a performance measurement in many papers in the past (Gedajlovic et al 1998, Lehmann et al 2000, Thomsen et al 2006). The difference between the two alternative methods used to control for firm performance is that EBITDA shows the calculation of profit generated by the company without deducting any expenses like interest, tax, depreciation, and amortization. On the other hand, Net income is expressed as calculations of total earnings of the company after reducing all the expenses. EBITDA focuses more on the sales and the cost of sales the company generates while Net income focuses more on the Revenue minus the cost of doing business. Leverage ratio will be the dependent variable on my second

and fourth hypotheses. I am going to use debt ratio to measure the leverage of each firm. Debt ratio is defined as the ratio of long term debt to total assets similar with Al-Shubiri et al (2012) paper. Table 3 provides information about the size and leverage ratio of blockholded and the family owned firms.

3.4 Control Variables

A set of various variables will be used in my regression analysis in order to control for firm characteristics and enhance the validity of the results. The logarithm of total assets will be my main variable to control for firm size. This method is broadly accepted for measuring the size of a firm and was used by many studies in the past (Demsetz and Villalonga 2001, Agrawal and Knoeber 1996). The rate of employee per revenue will be used in order to control for the efficiency of the company in comparison with its employees. The variable Inside Ownership will be used in order to control for managerial ownership. This variable examines if the blockholder of the firm is also a manager or not. A lot of previous studies in the past have argued that ownership structure should be treated as an endogenous variable that affects firm performance in various ways Demsetz and Lehn (1985), Demsetz and Villalonga (2001). The theory behind this approach suggests that as the managerial stake rises then the agency costs for the firm will shrink. According to convergence-of-interest hypothesis, firm's market value will increase with management ownership. Farrer and Ramsay (1998), tried to examine various factors that influences firm profitability and managerial ownership relation. In their study they show that on some circumstances there is a positive relationship between director ownership and firm performance but the results differ significantly according to the performance and the shareholder ownership measures that are used. Country-industry fixed effects will be added as well in order to control for cross-country and industry differences. Previous papers in the past have shown that country differences affect firm performance in various ways (Wan and Hoskisson 2003). Furthermore, year fixed effects will be also added in my analysis in order to reduce any endogeneity problems in the research. The time frame of my data starts on January of 2008 and ends at December of 2017. During that 10-year period a lot of economic events happened, like 2008-2009 financial crisis and 2010-2013 European debt crisis. These economic crises might have affected both firm performance and ownership concentration in various ways.

Lins et al 2015, in a study on non-US corporations, have shown that blockholded firms outperformed widely held and family controlled firms during the 2008-2009 financial crisis. The year-fixed effects will pick up any variation in the outcome that happen over time and that is not attributed to my other explanatory variables.

3.5 Correlations

Table 4 provides information about the correlation between the main variables that I am going to use in my analysis. The correlations that should be noted are the 0.675 correlation between ROA_EBITDA and ROA_Net_Income, the two alternative measures of firm performance, one based on Earnings Before Interest Taxes Depreciation and Amortization and the other based on accounting profit rates. The leverage ratios as we can see from the matrix are not highly correlated with any variable. Firm's size is highly correlated with Loans and Long term debt as expected. Concerning the other performance measure, ROA_EBITDA and ROA_Net_Income have a correlation of 0.563 and 0.450 with ROE respectively. The correlation matrix shows a high correlation between number of employees and the rest of the variables. For this reason, I am going to exclude the Number of employees from my regressions. The last variable controls for managerial ownership. As we can see from the correlation matrix's results there is not a worth noted correlation between the inside ownership and the rest of the variables.

Table 4

Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Size	1.000										
(2) Emlpperevenue	-0.003	1.000									
(3) Long_Term_Debt	0.413	-0.011	1.000								
(4) Loans	0.410	0.006	0.553	1.000							
(5) ROE	-0.061	-0.094	-0.035	-0.026	1.000						
(6) ROA_EBITDA	-0.060	-0.082	-0.055	-0.071	0.563	1.000					
(7) ROA_Net_Income	-0.049	-0.079	-0.045	-0.068	0.450	0.675	1.000				
(8) NumberEmployee	0.396	0.214	0.553	0.585	-0.010	-0.019	-0.020	1.000			
(9) Leverage_Debt	0.201	0.065	0.326	0.118	-0.143	-0.196	-0.178	0.084	1.000		
(10) Leverage_Loans	-0.150	-0.088	-0.069	0.243	-0.055	-0.170	-0.164	-0.057	0.011	1.000	
(11)Inside_Owners	0.044	-0.046	-0.014	0.047	0.016	0.044	0.039	0.001	0.002	0.098	1.000

The variables are the following: Size is defined as the logarithm of Total Assets, Employee per Revenue equals the ratio of the number of employees to the total Revenue of the firm, firms long term debt, firm's total loans, Return on Equity defined as earnings before taxes to total equity ratio, Return on Assets measured as Earnings Before Interests Taxes Depreciation and Amortization (EBITDA) to total assets ratio, Return on Assets measured as the ratio of Net Income to total assets, Number of employees (NumberEmploy), leverage ratio based on long term debt to total assets ratio, leverage ratio based on total loans to total assets ratio and inside ownership which equals 1 if the manager of the firm is also the main shareholder and 0 otherwise.

3.6 Model Specification

I am interested in examining the relationship between the variation in ownership concentration and firm performance. I am also interested in examining if that variation affects firm's leverage decisions. Finally, I want to investigate if the separation of ownership into family and non-family controlled affects firm profitability and firm leverage ratio. To this end I choose a random sample of 7,747 firms from three different European counties, Greece, Italy and Spain.

The model that I am going to use for my analysis is the ordinary least squares. Specifically, the estimating equations are as follows:

$$Firm\ performance = \beta_0 + \beta_1 * Blockholder_i + \beta_2 * X_i + \lambda_{ci} + \varepsilon_i \quad (1)$$

$$Leverage\ Ratio = \beta_0 + \beta_1 * Blockholder_i + \beta_2 * X_i + \lambda_{ci} + \varepsilon_i \quad (2)$$

The main objective is to discover if important ownership concentration is systematically related to firm performance and leverage ratio. For this purpose, a dummy named "Blockholder" is used in both cases as an explanatory variable for my study. This dummy takes values equal to 1 if the firm is controlled by a major shareholder and 0 otherwise. Firm performance and leverage ratio are used as dependent variables. Firm performance is measured by two ways. The first one is by calculating firm's Return on Assets using net income and the second one is by calculating firm's Return on Assets using EBITDA. The leverage ratio is measured by calculating the ratio of firm's long term debt to total assets. X_i refers to a set of firm-specific control variables which include firm size (measured by the logarithm of total assets), employee per revenue, firm risk which is controlled by the ratio of total long term debt to total assets and inside ownership, λ_{ci} are industry-country and year fixed effects respectively.

In the second part of my analysis, I am going to examine if blockholder's characteristic affects firm performance and leverage ratio. To achieve that, I divide the blockholders into family and non-family members. The model that I am going to use in my analysis is again Ordinary Least Squares. Specifically, the estimating equations are as follows:

$$Firm\ performance = \beta_0 + \beta_1 * Blockholder_i + \beta_2 * Blockholder * Family + \beta_3 * X_i + \lambda_{ci} + \varepsilon_i \quad (3)$$

$$Leverage\ Ratio = \beta_0 + \beta_1 * Blockholder_i + \beta_2 * Blockholder * Family + \beta_3 * X_i + \lambda_{ci} + \varepsilon_i \quad (4)$$

Now, the coefficient of interest is β_2, which examines the impact of family ownership on firm performance and firm leverage respectively. The explanatory variable will be a dummy named "Family" which takes values equal to 1 if the firm is controlled by a family and 0 otherwise. Again, the firm performance is going to be measured by ROA using net income and ROA using EBITDA and the leverage ratio by the debt to total assets ratio. Similar to the formula used before X_i refers to a set of firm-specific control variables which include firm size (measured by the logarithm of total assets), employee per revenue, firm risk which is controlled by the ratio of total long term debt to total assets and inside ownership, λ_{ci} are industry-country and year fixed effects respectively.

4.Regression results

In this section I present and discuss the central findings of my study. The OLS regression is used in my analysis.

4.1 Ownership Concentration, Firm performance and Leverage ratio.

The results from estimating firm performance with two different specifications of the dependent variable and one specification of ownership concentration are shown in Table 5.

Prior literature suggests that ownership structure plays a very determinant role in the firm performance and profitability. When a firm is controlled by a main shareholder, information asymmetry and agency costs can be reduced and that will result in a better corporate management and a higher profitability for the firm. In line with this assumption, the first hypothesis of my study states that firms with higher ownership concentration will outperform the widely held firms. Table 5 uses two different ways to measure firm performance. The first way takes ROA measured by the rate of Net income to Total Assets rate while the second way defines ROA as the rate of Earnings Before Interest Tax Depreciation and Amortization to Total Assets. The independent variable here is the dummy Blockholder, which equals to one when the firm is controlled by a major shareholder and 0 otherwise. Firm size, leverage ratio and Employee per Revenue ratio are used to control for firm characteristics. In the regressions 3 and 6 I have

added one more variable as a control variable. Inside ownership is a binary variable that equals 1 when the blockholder is also the manager of the firm and 0 otherwise. A lot of previous studies

Table 5

Ownership Concentration and firm Performance

$$\text{Firm performance}_{it} = \beta_0 + \beta 1 * \text{Blockholder}_{it} + \beta 2 * X_{it} + \lambda c_{it} + \varepsilon_{it}$$

	Return on Assets (Using Net Income)			Return on Assets (Using EBITDA)		
	(1)	(2)	(3)	(4)	(5)	(6)
Blockholder	0.636***	0.687**	0.542	1.198***	1.281***	1.108**
	(3.94)	(0.046)	(1.56)	(6.81)	(3.08)	(2.56)
Size	0.139***	0.217***	0.198***	0.290***	-0.398***	-0.375***
	(-2.65)	(-3.55)	(-3.42)	(-5.41)	(-5.06)	(-5.03)
Leverage	-0.080***	0.091***	0.091***	0.104***	-0.113***	-0.113***
	(-17.82)	(-14.70)	(-15.00)	(-25.30)	(-15.93)	(-16.21)
EmployeeperRevenue	0.031***	0.046***	0.045***	0.038***	-0.056***	-0.054***
	(-7.91)	(-6.63)	(-6.57)	(-8.82)	(-6.08)	(-6.01)
Inside Ownership			1.396***			1.665***
			(3.31)			(2.99)
Fixed Effects	No	Yes	Yes	No	Yes	Yes
Constant	6.205***	7.417***	7.207	9.473	10.718***	10.467***
	(11.92)	(6.99)	(6.99)	(17.29)	(8.96)	(8.99)
R-squared	0.049	0.063	0.065	0.057	0.067	0.068
Observations	15,178	15,178	15,178	15,174	15,174	15,174

This table reports results of regressing firm performance on corporate ownership. Return on Assets is either EBITDA or Net income divided by Total Assets. Blockholder is a binary variable that equals one when a shareholder owns more than 50% of the firm's shares. When the firm is widely held, Blockholder equals to 0. Size is measured as the logarithm of Total Assets. Leverage is difined as the Debt to Total Assets ratio. Employee per Revenue is measured as the ratio of total number of Employees to Total Revenue. Inside Ownership variable is a binary variable that equals to 1 when the blockholder of the firm is also a manager and 0 otherwise. Year and country-industry Fixed Effects are used in some of the regressions. The number in parentheses show the t-statistic for each coefficient respectively. *, **, *** indicate statistical significance at 1%, 5% and 10% respectively

In the past have shown that inside ownership has an impact on the way a firm operates. When the blockholder is also the manager of the firm, then information asymmetry and agency costs are reduced in a very significant level. The variable Inside Ownership comes to control for that

impact on the firm's performance. Year and country-industry fixed effects are used also in order to control for year differences, cross-country and cross-industry differences as well.

Table's results show a positive and significant correlation between firm's return on assets and blockholding concentration. More specifically, the first column shows that companies which are controlled by a major shareholder will have a higher ROA by 0.636% compared to the widely held firms given a t-statistic of 3.94. The estimated coefficient is statistically different from zero at the 1% level. In the second column year and country-industry fixed effects are added in the regression. The results show a slightly increase in the coefficient of interest and a change in the sign of some explanatory variables like firm size and leverage ratio. That change can be explained by the fact that the variance reduction is even more severe when multi-way fixed effects are imported or by the Simpson's paradox[2]. In the third column the variable Inside Ownership is included in the regression. The results again show a positive correlation between ROA and Blockholded ownership, although that correlation is not significant. That can be attributed to the fact that inside ownership has a higher impact on firm performance compared to the rest of blockholded firms. In the columns 4,5, and 6 the dependent variable is Return on Assets using EBITDA. The results again, similar to the previous regressions show that ownership concentration will increase firm's ROA in a significant level. More specifically, the first column shows that ROA will increase by 1.198% when a shareholder controls the firm. That increase in the ROA will be even higher, 1.281%, when fixed effects are added as well. The sixth column again shows a positive and significant increase in firm's performance, even when inside ownership variable is added in the regression.

Table 6 examines the correlation between blockholding ownership and leverage ratio. The dependent variable is firm's leverage ratio which is measured by the ratio of long term debt to total assets and the independent variable remains the same dummy Blockholder.

In accordance to the second hypothesis, my findings show a negative and significant relationship, with the estimated coefficient being statistically different from zero at 1% level,

[2] Simpson's paradox (or reversal paradox) is a phenomenon in statistics in which a trend appears in different groups of data but does not appear or even reverses when there is a combination of these groups. Simpson tried to shed light in this phenomenon with an academic paper in 1951.

between the leverage ratio and the blockholder dummy. More specifically, in a sample of 15,174 firm-year observations, the results suggest that when a firm is controlled by a major shareholder

Table 6

Ownership concentration and Leverage ratio

$$\text{Leverage Ratio}_{it} = \beta_0 + \beta 1 * \text{Blockholder}_{it} + \beta 2 * X_{it} + \lambda c_{it} + \varepsilon_{it}$$

	Leverage Ratio (Using Debt to Total Assets Ratio)		
	(1)	(2)	(3)
Blockholder	-5.940***	-4.890***	-5.118***
	(-16.92)	(-6.76)	(-6.81)
Size	2.837***	2.231***	2.258***
	(28.17)	(6.54)	(6.65)
ROA	-0.388***	-0.393***	-0.395***
	(-25.30)	(-9.18)	(-9.26)
EmployeeperRevenue	0.047***	-0.038	-0.037
	(5.59)	(-1.52)	(-1.46)
Inside Ownership			2.262***
			(3.79)
Fixed Effects	No	Yes	Yes
Constant	-15.102***	-5.412***	-5.723***
	(-14.24)	(-1.71)	(-1.82)
R-squared	0.099	0.080	0.081
Observations	15,174	15,174	15,174

This table reports results of regressing firm Leverage level on corporate ownership. Leverage ratio is calculated as the rate of Total Debt divided by Total Assets. Blockholder is a binary variable that equals one when a shareholder owns more than 50% of the firm's shares. When the firm is widely held, Blockholder equals to 0. Size is measured as the logarithm of Total Assets. Return on Assets is defined as the EBITDA to Total Assets ratio. Employee per Revenue is measured as the ratio of total number of Employees to Total Revenue. Inside Ownership variable is a binary variable that equals to 1 when the blockholder of the firm is also a manager and 0 otherwise. Year and country-industry Fixed Effects are used in some of the regressions. The number in parentheses show the t-statistic for each coefficient respectively. *, **, *** indicate statistical significance at 1%, 5% and 10% respectively

then the leverage ratio will drop by 5.940% given a R2 of 0,099. Year and country-industry fixed effects do not change significantly the regression results in the first column. In the third column the results show again a negative and significant correlation between Debt ratio and ownership concentration. More specifically, firm's leverage ratio will drop by 5.198% when there is a

controlling shareholder, given a significant level of 1%. One interesting result that we can notice in the third column is that inside ownership seems to increase firm's leverage ratio. These findings suggest that when the controlling shareholder is also the manager of the firm, then the firm is taking more risks by increasing the its total Debt. Firm size, as expected, has a positive impact on leverage ratio. Return on Assets and Employee per Revenue in column 3 show a negative correlation with firm's Debt ratio.

4.2 Family ownership, Firm performance and Leverage ratio.

In the second part of my analysis I divide the blockholders into two main categories. The first category contains firms controlled by individual blockholders and the second category contains firm owned by families. The results from estimating firm performance with two different specifications of the dependent variable and two specifications of ownership concentration are shown in Table 7.

Table 7 examines the relationship between family ownership and firm performance. In these regressions the dependent variable is measured again with two different ways, return on assets using Net income and return on assets using EBITDA. The main independent variables are Blockholder and Family. The findings in the third column, based on a sample of 15,178 firm-year observations, show a positive and insignificant correlation between family ownership and firm's return on assets, measured by net income, while the non-family ownership has a positive and significant influence on the dependent variable. More specifically, when a firm is controlled by a family then the return on assets will increase by 0.409% given a t-value of 3.25. The regression in the second column uses year and country-industry fixed effects. The results suggest that family ownership will have a positive impact on firm's ROA, although that impact is again insignificant. Similar to table's 5 results, the sign of some explanatory variables changes. In the third column the variable Inside ownership is added as well. Similar to the previous findings family ownership will increase ROA by 0.389% but that increase is insignificant. Columns 4,5 and 6 use ROA measured by EBITDA to Total Assets ratio. In contrast to the previous findings, the results in column 4 show a negative but insignificant correlation between ROA and family ownership. Column five shows the regression's results when fixed

effects are added. The findings again, suggest that family ownership will increase firm's ROA by 0.086%, although that increase is not considered significant. The last column shows the findings

Table 7

Family ownership concertation and firm ROA

$$\text{Firm performance}_{it} = \beta_0 + \beta1*\text{Blockholder}_{it} + \beta2*\text{Blockholder}_{it}*\text{Family}_{it} + \beta3*X_{it} + \lambda_{it} + \varepsilon_{it}$$

	Return on Assets (Using Net Income)			Return on Assets (Using EBITDA)		
	(1)	(2)	(3)	(4)	(5)	(6)
Blockholder	0.647***	0.650***	0.524***	1.201***	1.277***	1.097**
	(4.00)	(4.05)	(3.25)	(6.80)	(3.16)	(2.61)
Blockholder*Family	0.409	0.416	0.389	-0.080	0.086	1.316
	(1.03)	(1.05)	(0.99)	(-0.20)	(0.13)	(1.45)
Size	0.138***	0.146***	0.131***	0.289***	0.398***	-0.376***
	(-2.63)	(-2.77)	(-2.52)	(-5.40)	(-4.99)	(-4.76)
Leverage	-0.08***	0.081***	0.081***	0.104***	-0.133**	-0.113***
	(-17.82)	(-17.69)	(-17.75)	(-25.27)	(-16.04)	(-16.34)
EmployeeperRevenue	0.031***	0.031***	0.030***	0.038***	-0.055**	-0.054***
	(-7.90)	(-7.99)	(-7.85)	(-8.82)	(-6.07)	(-6.01)
Inside Ownership			1.239***			1.677***
			(4.61)			(2.98)
Fixed Effects	No	Yes	Yes	No	Yes	Yes
Constant	6.198***	6.869***	6.722	9.471***	10.72***	10.474***
	(11.96)	(8.49)	(8.37)	(17.28)	(9.01)	(9.04)
R-squared	0.049	0.053	0.054	0.057	0.067	0.068
Observations	15,178	15,178	15,178	15,174	15,174	15,174

This table reports results of regressing firm performance on corporate ownership. Return on Assets is either EBITDA or Net income divided by Total Assets. Blockholder is a binary variable that equals one when a shareholder owns more than 50% of the firm's shares. When the firm is widely held, Blockholder equals to 0. Family is also a binary variable that equals to 1 when the firm is controlled by a family and 0 otherwise. Size is measured as the logarithm of Total Assets. Leverage is defined as the Debt to Total Assets ratio. Employee per Revenue is measured as the ratio of total number of Employees to Total Revenue. Inside Ownership variable is a binary variable that equals to 1 when the blockholder of the firm is also a manager and 0 otherwise. Year and country-industry Fixed Effects are used in some of the regressions. The number in parentheses show the t-statistic for each coefficient respectively. *, **, *** indicate statistical significance at 1%, 5% and 10% respectively

when inside ownership variable is added in the regression. In line with the previous findings, family control increases firm performance, but that it is considered as insignificant. These findings are consistent to Maury (2005) study which showed that family ownership concentration would

Table 8

Family ownership concentration and leverage ratio

$$\text{Leverage Ratio}_{it} = \beta_0 + \beta1*\text{Blockholder}_{it} + \beta2*\text{Blockholder}_{it}*\text{Family}_{it} + \beta3*X_{it} + \lambda c_{it} + \varepsilon_{it}$$

	Leverage Ratio (Using Debt to Total Assets)		
	(1)	(2)	(3)
Blockholder	-5.462***	-4.692***	-4.04***
	(-16.15)	(-6.42)	(-6.44)
Blockholder*Family	-4.942***	-4.414***	-4.249**
	(-6.25)	(-2.48)	(-2.39)
Size	2.847***	2.248***	2.272***
	(28.30)	(6.54)	(6.664)
ROA	-0.387***	-0.392***	-0.394***
	(-25.27)	(-9.11)	(-9.20)
EmployeeperRevenue	0.047***	-0.038	-0.037
	(5.59)	(-1.49)	(-1.43)
Inside Ownership			2.307***
			(3.38)
Fixed Effects	No	Yes	Yes
Constant	-15.203***	-5.585***	-5.858***
	(-14.36)	(-1.77)	(-1.87)
R-squared	0.101	0.082	0.082
Observations	15,174	15,174	15,174

This table reports results of regressing firm Leverage level on corporate ownership. Leverage ratio is calculated as the rate of Total Debt divided by Total Assets. Blockholder is a binary variable that equals one when a shareholder owns more than 50% of the firm's shares. When the firm is widely held, Blockholder equals to 0. Family is a binary variable that equals to 1 when a firm is controlled by a family member and 0 otherwise. Size is measured as the logarithm of Total Assets. Return on Assets is defined as the EBITDA to Total Assets ratio. Employee per Revenue is measured as the ratio of total number of Employees to Total Revenue. Inside Ownership variable is a binary variable that equals to 1 when the blockholder of the firm is also a manager and 0 otherwise. Year and country-industry Fixed Effects are used in some of the regressions. The number in parentheses show the t-statistic for each coefficient respectively. *, **, *** indicate statistical significance at 1%, 5% and 10% respectively

increase firm's performance. That increase in profitability can be attributed to the fact that agency problems are more likely to decline when the controlling shareholder is a family. Firm size

has a positive and significant impact on firm's ROA in most of the regressions while inside ownership is also considered to increase firm's performance in a significant level.

In table 8, I assess whether family-controlled firms have different policies regarding their leverage decisions compared to the other firms. In these regressions, the ratio of long term debt to total assets is used again as dependent variable in order to measure the firm's leverage level.

The two independent variables remain the same dummies Blockholder and Family. The regression's results show a negative and significant correlation between family ownership and firm's leverage ratio. In the first column, the coefficient of interest is statistically different form zero at 99% significant level given a t-statistic of -6.25. In terms of economic significance, the findings show that firms controlled by families will have 4.942% lower leverage ratio compared to widely held firms. In the second column, where fixed effects are added, the results will remain the same. Family ownership again, will have a negative impact on firm's debt to total assets ratio. In line with the previous findings, the third column's result show again a negative and significant correlation between family control and leverage ratio. In terms of economic significance, when family dummy equals to one, then the leverage ratio will drop by 4.249%.

4.3 Robustness Tests

In this section I consider two alternative measurements for firm performance and leverage ratio in order to enhance the validity of my results. First, I use the firm's Return on Equity (ROE) as an alternative performance measurement. My previous regressions' results, using firm's ROA and based on EBITDA and Net Income as dependent variables provided some contradictory findings. Return on Equity is another financial ratio that measures a company's profitability and the efficiency with which its capital is employed. ROE is defined in my sample as the ratio of (Income Before Taxes) / (Total Equity) multiplied by 100. Second, I use the ratio of total loans to total assets as an alternative way to measure firm's leverage ratio. Although my first findings of ownership concentration on firm's leverage were very strong, I use this alternative measurement in order to enhance the reliability of my results. Table 9 presents the effect that ownership concentration has on firm's ROE. The results in the first, second and third column show a positive and significant correlation between blockholding ownership and firm profitability. The coefficient

of interest is statistically different from zero on a 99% level. These findings, in line to my first regressions' results where I use ROA as dependent variable, confirm my first hypothesis stating that ownership concentration affects positively firm profitability. In the columns 4, 5 and 6 I include family ownership variable in the regression as well. The findings, in contrast to my third

Table 9

Ownership concentration and firm ROE

	Return on Equity (Using Income before taxes to Total Equity)					
	(1)	(2)	(3)	(4)	(5)	(6)
Blockholder	9.296***	10.085***	10.218***	9.440***	10.190***	10.343***
	(12.57)	(7.44)	(7.51)	(12.70)	(7.54)	(7.63)
Blockholder*Family				-3.369**	-2.526	-2.635
				(-1.96)	(-1.10)	(-1.15)
Size	2.450***	3.146***	-3.164***	-2.437***	-3.132***	-3.152***
	(-10.84)	(-9.29)	(-9.21)	(-10.78)	(-9.15)	(-9.10)
Leverage	0.257***	0.284***	-0.283***	-0.259***	-0.285	-0.284***
	(-13.48)	(-10.37)	(-10.35)	(-13.56)	(-10.24)	(-10.23)
EmployeeperReven	0.182***	0.249***	-0.250***	-0.182***	-0.249***	-0.250***
	(-10.05)	(-5.31)	(-5.38)	(-10.04)	(-5.32)	(-5.39)
Inside Ownership			-1.219			-1.359
			(-1.07)			(-1.20)
Fixed Effects	No	Yes	Yes	No	Yes	Yes
Constant	43.462	5-.991***	51.090***	43.353***	50.786***	51.004***
	(18.88)	(12.27)	(12.21)	(18.83)	(12.16)	(12.13)
R-squared	0.040	0.045	0.045	0.040	0.045	0.045
Observations	14,752	14,752	14,752	14,752	14,752	14,752

This table reports results of regressing firm performance on corporate ownership. Return on Equity is Income Before Taxes divided by Total Assets. Blockholder is a binary variable that equals one when a shareholder owns more than 50% of the firm's shares. When the firm is widely held, Blockholder equals to 0. Family is also a binary variable that equals to 1 when the firm is controlled by a family and 0 otherwise. Size is measured as the logarithm of Total Assets. Leverage is defined as the Debt to Total Assets ratio. Employee per Revenue is measured as the ratio of total number of Employees to Total Revenue. Inside Ownership variable is a binary variable that equals to 1 when the blockholder of the firm is also a manager and 0 otherwise. Year and country-industry Fixed Effects are used in some of the regressions. The number in parentheses show the t-statistic for each coefficient respectively. *, **, *** indicate statistical significance at 1%, 5% and 10% respectively

hypothesis show a negative correlation between firm ROE and family ownership. More specifically, in column 4 the coefficient of interest is negative and significant from zero on a 95% level. In economic terms, the findings show that when a firm is controlled by a family, then the

Return on Equity will drop by 3.37%. In columns 5 and 6 I include year and country-industry fixed effects and inside ownership as control variable respectively. The findings again show that family ownership will have a negative Impact on firm performance, although that impact is not considered statistically significant.

Table 10

Ownership concentration and leverage ratio

	Leverage Ratio (Using Total Loans to Total Assets)					
	(1)	(2)	(3)	(4)	(5)	(6)
Blockholder	-0.026***	-0.026***	-0.033***	-0.025***	-0.025***	-0.031***
	(-10.80)	(-4.95)	(-7.53)	(-10.19)	(-4.73)	(-7.32)
Blockholder*Family				-0.030***	-0.027**	-0.022
				(-5.03)	(-2.03)	(-1.64)
Size	-0.070***	-0.050***	-0.050***	-0.070***	-0.050***	-0.050***
	(-9.34)	(-5.79)	(-4.98)	(-9.27)	(-5.56)	(-4.80)
ROA	-0.020***	-0.020***	-0.020***	-0.020***	-0.020***	-0.020***
	(-20.72)	(-7.30)	(-7.64)	(-20.69)	(-7.43)	(-7.78)
EmployeeperRevenu	-0.010***	0.010***	-0.010*	-0.010***	-0.010*	-0.010*
	(-12.33)	(-1,91)	(-1.76)	(-13.34)	(-1.92)	(-1.76)
Inside Ownership			0.063***			0.062***
			(8.06)			(7.74)
Fixed Effects	No	Yes	Yes	No	Yes	Yes
Constant	0.200***	0.201***	0.193***	0.199***	0.200***	0.192***
	(26.55)	(14.89)	(14.01)	(26.49)	(14.77)	(13.93)
R-squared	0.063	0.057	0.069	0.065	0.059	0.070
Observations	15,174	15,174	15,174	15,174	15,174	15,174

This table reports results of regressing firm Leverage level on corporate ownership. Leverage ratio is calculated as the rate of Total Loans divided by Total Assets. Blockholder is a binary variable that equals one when a shareholder owns more than 50% of the firm's shares. When the firm is widely held, Blockholder equals to 0. Family is a binary variable that equals to 1 when a firm is controlled by a family member and 0 otherwise. Size is measured as the logarithm of Total Assets. Return on Assets is defined as the EBITDA to Total Assets ratio. Employee per Revenue is measured as the ratio of total number of Employees to Total Revenue. Inside Ownership variable is a binary variable that equals to 1 when the blockholder of the firm is also a manager and 0 otherwise. Year and country-industry Fixed Effects are used in some of the regressions. The number in parentheses show the t-statistic for each coefficient respectively. *, **, *** indicate statistical significance at 1%, 5% and 10% respectively.

In Table 10, I use the ratio of total loans to total assets in order to control for firm's leverage level. The results in the columns 1,2 and 3, similar to my second regression where I use long term debt to total assets as dependent variable, show that firms controlled by a major shareholder will choose to have a lower leverage ratio than widely held firms. The coefficient of interest in column 3, where fixed effects and inside ownership variable Is used, is statistically different from zero on a 99% level given a t-statistic of -7.53. These results come to confirm my second hypothesis which indicates that ownership concentration reduces firm's leverage ratio. Similar to the first part of my study, I repeat the robustness tests for the second part of my analysis where the firms are divided into family and non-family controlled. Columns 4, 5 and 6 in accordance to my previous findings, show that family controlled firms will have a lower total loans to assets compared to widely companies. These results come to enhance even more my fourth specification stating that family controlled firms choose less risk by lowering the amount of total loans.

5. Conclusion and Discussion

My thesis examines and reviews some existing theory and empirical evidence about the influence of the ownership concentration on the firm performance and firm risk in Greek, Italian and Spanish companies during the ten-year period of 2008-2017. Agency theory is the main fundamental in which I based my research. I use three types of ownership structure, blockholder ownership, family ownership and dispersed ownership and I try to form some implications on firm performance and firm leverage level. I find a positive and significant correlation between ownership concentration and company performance. Although my findings show no significant correlation between family controlled firms and Return on Assets. Moreover, I show that ownership concentration is also correlated with firm's leverage level. More specifically, I find a significant decrease in company's leverage ratio when the firm is controlled by a blockholder. That decrease is also significant when the main shareholder is a family.

Of course my thesis has some limitations. The first one is that I treat ownership structure only as an exogenous variable and not as an endogenous too. Some studies in the past have argued that ownership structure of a corporation should be treated as an endogenous (Demsetz

and Lehn 1985, Demsetz 1983) variable in order to determine the impact on firm's profitability. My second limitation comes to the fact that I do not examine if the percentage of ownership concentration affects my results. Previous papers, (McConnell et al 1990, Demsetz and Lehn 1985), has shown that the relationship between ownership structure and firm performance is not linear but is differs based on the percentage of shares a blockholder owns.

A strategy for future research may be to split the ownership structure into inside and outside ownership. The impact of blockholders being also members in the board of directors and the percentage of management shareholdings may affect firm performance in various ways. Furthermore, future studies can focus on finding other firm characteristics that may affect the relation between ownership structure and firm profitability. Some of these characteristics might be the stock-based managerial income and the size of the minority shareholdings.

6. References

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of financial and quantitative analysis*, *31*(3), 377-397

Al-Shubiri, F. N. (2012). Debt ratio analysis and firm investment: evidence from Jordan. *International Journal of Economics and Financial Issues*, *2*(1), 21.

Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: evidence from the S&P 500. *The journal of finance*, *58*(3), 1301-1328.

Ang, J. S., Cole, R. A., & Lin, J. W. (2000). Agency costs and ownership structure. *the Journal of Finance*, *55*(1), 81-106.

Barton, J., Hansen, T. B., & Pownall, G. (2010). Which performance measures do investors around the world value the most—And why?. *The Accounting Review*, *85*(3), 753-789.

Becht, M., & Röell, A. (1999). Blockholdings in Europe: An international comparison1. *European Economic Review*, *43*(4-6), 1049-1056.

Berle, A., & Means, G. (1932). Private property and the modern corporation. *New York: Mac-millan*.

Bianco, M., & Casavola, P. (1999). Italian corporate governance: Effects on financial structure and firm performance. *European Economic Review*, *43*(4-6), 1057-1069.

Claessens, S., Djankov, S., Fan, J. P., & Lang, L. H. (2002). Disentangling the incentive and entrenchment effects of large shareholdings. *The journal of finance*, *57*(6), 2741-2771.

Dang, C., Li, Z. F., & Yang, C. (2018). Measuring firm size in empirical corporate finance. *Journal of Banking & Finance*, *86*, 159-176.

De Miguel, A., Pindado, J., & De La Torre, C. (2004). Ownership structure and firm value: New evidence from Spain. *Strategic Management Journal*, *25*(12), 1199-1207.

Demsetz, H. (1983). The structure of ownership and the theory of the firm. *The Journal of Law and Economics*, *26*(2), 375-390

Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of political economy*, *93*(6), 1155-1177.

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of corporate finance*, *7*(3), 209-233.

Earle, J. S., Kucsera, C., & Telegdy, Á. (2005). Ownership concentration and corporate performance on the Budapest stock exchange: Do too many cooks spoil the goulash? *Corporate Governance: An International Review*, *13*(2), 254-264.

Faccio, M., & Lang, L. H. (2002). The ultimate ownership of Western European corporations. *Journal of financial economics*, *65*(3), 365-395.

Fama, E. F., & French, K. R. (1992). The cross-section of expected stock returns. *the Journal of Finance*, *47*(2), 427-465.

Farrer, J., & Ramsay, I. (1998). Director share ownership and corporate performance–evidence from Australia. *Corporate Governance: An International Review*, *6*(4), 233-248.

Gedajlovic, E. R., & Shapiro, D. M. (1998). Management and ownership effects: Evidence from five countries. *Strategic Management Journal*, 533-553.

Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica: Journal of the Econometric Society*, 424-438.

Hall, M., & Weiss, L. (1967). Firm size and profitability. *The Review of Economics and Statistics*, 319-331.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, *3*(4), 305-360.

Kapopoulos, P., & Lazaretou, S. (2007). Corporate ownership structure and firm performance: evidence from Greek firms. *Corporate Governance: An International Review*, *15*(2), 144-158.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The journal of finance*, *54*(2), 471-517.

Lehmann, E., & Weigand, J. (2000). Does the governed corporation perform better? Governance structures and corporate performance in Germany. *Review of Finance*, *4*(2), 157-195.

Maury, B. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance*, *12*(2), 321-341.

McConaughy, D. L., Matthews, C. H., & Fialko, A. S. (2001). Founding family controlled firms: Performance, risk, and value. *Journal of small business management*, *39*(1), 31-49.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of financial economics*, *20*, 293-315.

Paligorova, T. (2010). *Corporate risk taking and ownership structure* (No. 2010, 3). Bank of Canada Working Paper.

Pedersen, T., & Thomsen, S. (2003). Ownership structure and value of the largest European firms: The importance of owner identity. *Journal of Management and Governance*, *7*(1), 27-55.

Roe, M. J. (1994). *Strong managers, weak owners* (Vol. 11). Princeton: Princeton University Press.

Rossetto, S., & Stagliano, R. Ownership Concentration and Firm Risk. Evidence from the US.

Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of political economy*, *94*(3, Part 1), 461-488.

Simpson, E. H. (1951). The interpretation of interaction in contingency tables. *Journal of the Royal Statistical Society: Series B (Methodological)*, *13*(2), 238-241.

Thomsen, S., Pedersen, T., & Kvist, H. K. (2006). Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate finance*, *12*(2), 246-269.

Wan, W. P., & Hoskisson, R. E. (2003). Home country environments, corporate diversification strategies, and firm performance. *Academy of Management journal*, *46*(1), 27-45.

Zhang, G. (1998). Ownership concentration, risk aversion and the effect of financial structure on investment decisions. *European Economic Review*, *42*(9), 1751-1778.