INTERNATIONAL HELLENIC UNIVERSITY

Insider Ownership and Earnings Quality

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SCHOOL OF ECONOMICS, BUSINESS ADMINISTRATION & LEGAL STUDIES
A thesis submitted for the degree of
Master of Science (MSc) in International Accounting, Auditing and Financial Management

December 2018
Thessaloniki, Greece

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December 2018
Thessaloniki - Greece

Abstract

This dissertation was written as part of the MSc in International Accounting, Auditing and Financial Management at the International Hellenic University.

Our study investigates the relation between insider's ownership and earnings quality, based on earnings management. We are using data from companies of the countries of the United States of America. We exploit for our study the modified Jones model, developed by Dechow and Dichev (2002) with a Cash Flow from Operations using the discretionary accruals method. Existing literature has documented that different kinds ownership structures affect in a different way the reported financial earnings and the earnings quality. Our survey examines the impacts of insiders' ownership on earnings quality. Following, we employ two different measures to calculate earnings quality. Our findings were consistent as the aforementioned theory commanded.

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31/12/2018

Preface

We would like to give our sincerest thanks to our Supervisor Prof. Alexandros Sikalidis for his guidance and advice during this demanding process. We are also glad to the IHU administration for the available databases that we used to complete our research and all the IHU staff for their kindly help during our dissertation.

We owe great gratitude to our family's and friends' understanding in completing our survey.

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1.Introduction

The principal-agent problem is increasingly observed in companies all over the world. This occurs due to the conflict of interests between managers and shareholders because each part seeks to maximize its own value. The separation between ownership and control is one of the major characteristics of publicly traded companies in the United States and gives rise to principal-agent problems and conflicts between managers and outside shareholders (Jensen and Meckling (1976), Shleifer and Vishny (1997), Demsetz and Lehn (1985)). Some agents may not act in the principal's best interests. Moreover, they may manipulate earnings for their own benefit at the expense of other stakeholders. In accordance with agency theory, monitoring tools can be used, in order to mitigate opportunistic behaviors by managers.

It goes without saying that accounting earnings have always been one of the major indicators of company's financial performance. Agency conflicts are mitigated by accounting earnings because they align the interests of shareholders with those of outside shareholders or creditors (Bushman and Smith 2001). Earnings management occurs when managers intentionally influence the process of financial reporting. It is widely known that, over the past decades, there is an increasing interest concerning earnings quality. There is evidence that earnings management may affect negatively earnings quality and may weaken the credibility of financial reporting. This study investigates whether the quality of financial reporting can be affected by insiders' ownership.

It is worth mentioning that ownership structure could be a deterrent against earnings manipulation by the managers (Bushman and Smith 2001). However, as Warfield and Wild (1995) mentions, particular types of ownership structure could provide incentives to managers to manipulate earnings.

An ongoing problem in corporate America is the manipulation of financial statements. Incentives of managers give rise to financial accounting information reporting that deviates from the substance of underlying economic transactions to maximize private gains at the cost of shareholders or creditors (Leuz, Nanda, and Wysocki 2003). The major reason that management manipulates financial statements is that many executives' compensation is straightforwardly aligned with firm's financial performance. Management can use several techniques to manipulate a company's income statements, balance sheets and cash flows.

There are two dominant ways to manipulate financial statements. The first one occurs when manipulated financial statements inflate current period earnings by using artificial revenues, or they deflate current period expenses. The second one arises when manipulated financial statements deflate the earnings of current period by decreasing revenue or increasing expenses.

It is worth mentioning that the shareholders, creditors, and other users of financial statements are interested in financial reporting of high quality, which creates the obligation of effective contracting and monitoring. In turn, the demand for quality financial reporting creates incentives for firms to provide high-quality financial statements in order to secure better contracting terms (Ball and Shivakumar 2005).

Given all the aforementioned, the major purpose of this thesis paper is to investigate the relation between insiders' ownership structure and the quality of earnings in USA, providing also evidence on the abnormal accruals and persistence of transitory loss components in earnings, contributing to the existing literature concerning insiders' ownership and the effects on the quality of earnings across USA.

In our examination we use a final sample of 587 existing listed S&P companies in USA and we examined their accounts over a 5-year period, from 2011 until 2016. We find evidence that on average insider ownership is significantly associated with higher earnings manipulation. Specifically, insiders' ownership is associated with lower abnormal accruals and less persistence of transitory loss components in earnings.

Insiders ownership could strengthen the communication between insiders and users of financial statements through higher-quality accounting earnings. The higher-quality accounting earnings may arise from shrinkage in the conflicts of interests between insiders and other shareholders by aligning their interests.

Bearing all this in mind, we apply regression analysis, setting dependent variables and independent variables. The rest of the paper is structured as follows: the next section reviews the existing literature on insiders' ownership, not only in USA but also globally, and the effect on earnings quality. The hypothesis development is also included in this section. In section 3, we describe our research design. Moreover, the data sample used, the variables and the methodology are described in the fourth section. In the fifth section, we display our findings and we comment on our empirical results. Last but not least, the sixth section consists of our recommendations and conclusions.

2.Literature Review and Hypothesis Development

In this section, we review the existing literature on ownership structure and earnings quality. Then, we develop our hypothesis making the connection between insider's ownership and the quality of earnings.

We examine the related literature on earnings quality and ownership and the link between them. We consider the insider ownership structure as a company's ownership structure in order to examine if it constitutes an effective monitoring tool for earnings management. How does insider's ownership affect the quality of earnings? Then, we analyze earnings management and earnings quality. What are the factors, which affect earnings quality and what are the ways to measure earnings quality? These questions have been answered by several researches on earnings management and they provide some relevant evidence.

2.1 Insiders' ownership and The Quality of Earnings

The relation between insider ownership and earnings quality probably fits in the realm of agency theory, in which insiders arrogate wealth from other shareholders by manipulating accounting earnings. As indicated by agency theory, there is an agency relationship between the principal and the agent in which there may be conflict of interests due to the fact of utility maximizing of each party (Jensen and Meckling 1976), and as a result monitoring manager is crucial in order to assure reliable financial reporting. Moreover, Jensen and Meckling dispute that low levels of insider ownership mean an unprivileged alignment between management and stakeholders. According to Healy (1985), managers with little ownership may have incentives to manage accounting numbers as a result they can increase earnings-based compensation or avoid debt covenants. Dechow et al. 1996 states that there is correlation between particular mechanisms of corporate governance and earnings quality, and as ownership structure is considered to be an important one, it could have a monitoring role in earnings management activities. Warfield and Wild (1995) examine the relation

between managerial ownership and earnings quality and conclude that higher managerial ownership reduces managers' incentives to report accounting earnings that deviate from the substance of underlying economic transactions. Due to the fact that it is conceivable that insiders manipulate earnings for private gains at the cost of other shareholders, existing literature predicts that insider ownership affects the demand and supply of earnings quality in two contradicting ways: the entrenchment effect and the alignment effect.

2.2 Insiders' Ownership

The literature on agency theory suggests that setting up particular incentives for the agent and monitoring managerial judgments are pivotal in ensuring the depletion of deviations from principal's interests (Jensen and Meckling 1976).

Several studies such as that conducted by Fayoumi, Abuzayed and Alexander (2010) have shown that there is a positive and significant correlation between earnings management and insiders' ownership. Cheng and Warfield (2005) revealed that insider ownership is correlated with higher levels of earnings management. These studies contradict the statements of Warfield et al. 1995 concerning the correlation between insider ownership and earnings management, which indicates that insider ownership, is correlated with lower levels of earnings management.

Regarding the entrenchment approach of management, concentrated ownership creates incentives for controlling shareholders to expropriate wealth from other shareholders. Managers control the earnings in order to increase their personal fortune (Cheng and Warfield 2005, Guirdy 1999, Heary 1985). In this vein, managers with high shareholdings are benefited by keeping shares value high and increasing the value of their shares (Yang, Lai and Tan 2008). Consistent with the entrenchment effect this means that insiders, as controlling shareholders, may extract private benefits from the firm at the cost of minority shareholders. Moreover, managers, holding high shareholdings, are not in danger of punishment while they are achieving

their personal goals (Jensen and Fama (1983), Weisbach (1988)). In order to achieve their personal value maximizing, through improving their earnings and shares value, they use abnormal accruals. According to the management entrenchment effect, CEO's high shareholdings may increase managerial incentive problems instead of decreasing them. As it is stated in Mitani (2010) and Al-Fayoumi (2010), the higher the managerial ownership, the more the earnings management. According to Morck et al.1988, management entrenchment could occur when insider holdings are high. This is consistent with the notion that the higher the insiders holding of stocks are, the higher the managers seem to engage in manipulating their accounting information and smoothing their income. There is evidence that CEOs with high equity incentives are more likely to manipulate earnings. (Cheng and Warfield, (2005)). Moreover, Yang, Lai and Tan (2008) state that managers who own a high number of shares would be benefited by manipulated accounting earnings. Taking all these in consideration, the entrenchment effect predicts that insiders owned firms report earnings of lower quality because insiders may have greater incentives to manipulate earnings to increase their own benefits.

The alignment effect predicts that the stronger corporate governance mitigates managers' incentives to manipulate the reported earnings (Klein, 2002). Earnings are of lower quality if the incentives to report high -quality financial information are low (Ball and Shivakumar 2005). Concerning to the alignment effect we observe actions by managers that decrease the information asymmetry between managers and owners and align both sides' interests. Therefore, according to the alignment effect, insiders owned firms are less likely to expropriate wealth from other shareholders through earnings manipulation. The strong monitoring mechanisms which are observed, motivate insiders to report accounting earnings of high quality and in turn they reduce the cost of debt (Anderson, Mansi and Reeb 2003). There is evidence consistent with the notion that the alignment effect provides incentives to the insiders for wealth maximization of all shareholders. Overall, the alignment effect predicts that insiders are constrained from opportunistically manipulating accounting earnings for private benefits.

As we have already seen, managers have incentives to manage earnings in order to maximize their personal ambitions. Warfield et al. (1995) find a negative relation between managerial stockholdings and the absolute value of abnormal accruals. They interpret their results as being consistent with managerial shareholdings acting as a disciplining mechanism (Berle and Means (1932), Jensen and Meckling (1976)). In a similar vein, Morck et al. (1988), and McConnell and Servaes (1990) find a positive relation between Tobin's Q and inside director shareholdings. However, Healy (1985) presents evidence that CEOs manage earnings to maximize their bonuses. Aboody and Kasznik (2000) and Yermack (1997) show that CEOs manage investors' earnings expectations downward prior to scheduled stock option award to increase the value of their awards, and Nagar et al. (2000) present evidence that a firm's discretionary disclosure of accounting data is related to the form of the CEO's compensation. If the CEO manages earnings to increase his overall compensation, then there will be a positive relation between CEO shareholdings and earnings management. Thus, no a priori prediction is made.

Gopalan and Jayaraman (2012) found evidence that insider-controlled firms in low percentage of investors countries are connected to more earnings management than in non-insider countries, but in high percentage of investors countries are associated with less earnings management.

2.3 Earnings Management

For starters, we present what we mean by earnings management. Earnings managements is the transaction that managers use in order to manipulate the process of financial reporting on purpose to obtain some private gain. On other words, according to Healy and Wahlen (1998), earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to mislead some stakeholders about the underlying economic performance of the company. Managers have numerous ways to differ the financial reporting. For instance, they choose accounting methods for reporting the similar economic transaction, they mislead about the future economic performance and the last managers become more informative for user with costs and benefits.

Earnings management is generally realized through accruals manipulation (Bergstresser and Philippon, 2006, Dechow et al., 1995) and real activities manipulation (Roychowdhurry, 2006, Kim et al., 2012). Sugata Roychowdhury (2006) defines real activities manipulation as departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations. These departures do not necessarily contribute to firm value even though they enable managers to meet reporting goals. Certain real activities manipulation methods, such as price discounts and reduction of discretionary expenditures, are possibly optimal actions in certain economic circumstances.

Dechow, Kothari and Watts (1998) have analyzed that one of the major roles of accrual accounting is to flat temporary fluctuations in cash flows due to the fact that accrual accounting systems recognize economic events in firms' financial statements independently of the timing of cash flows associated with these events. As it is stated by Dechow (1994), it is negatively related the accrual accounting and the cash flows. Although, recent study by Bushman, Lerman and Zhang (2016) stated that the correlation between accruals and cash flows has largely disappeared in the last years.

According to Kim Lo, earnings management has a lot in common with earnings quality. Kim Lo (2008) indicates that highly managed earnings have low quality. However, the lack of earnings management is not adequate to guarantee high-quality earnings or high-quality accounting numbers more generally, because other elements contribute to the quality of earnings. For example, accountants fastidiously following a poor set of standards will generate low-quality financial reports. Even so, if we take these other contributing factors as constant, then we can draw a much closer connection between earnings management and earnings quality. While there are other interpretations of earnings quality, in the following discussion, to be consistent with Ball and Shivakumar (2008), high-quality earnings are conservative, while low-quality earnings are upwardly managed earnings. There are two basic categories: real earnings

management and accruals management through changes in estimates and accounting policies.

Mitani (2010) analyzed the relationship between corporate governance mechanisms and earnings management. He used two mechanisms: internal for managerial ownership, ownership concentration and executive stock option on earnings and on the other hand, external for institutional investors ownership, financial institutions and another corporation's shareholding. About internal mechanism, his study was concluded that firms with higher managerial ownership are related to more earnings management but for external, firms with higher institutional investors ownership are associated with less earnings management. U-shaped relationship with earnings management for internal mechanism has the ownership concentration but for external mechanism has the financial institutions.

2.4 Earnings Quality

In accounting, earnings quality is the ability of reported earnings to predict a company's future earnings. From previous researches they have concluded the following results. Based on previous literature, we analyze earnings quality according to discretionary accruals. According to Healy and Wahlen (1999), Fudenberg and Tirole (1995), Dechow and Skinner (2000) and Zang (2006) managers use both accruals based accounting and real activities methods to handle earnings management.

Dechow et al. (2010) summarize the research on the changes in the properties of earnings over time. Earnings quality influence many parts of companies, either direct or indirect. For example, in Hutton, Miller and Skinner (2002) research conclude that managers' tendency to provide progressive statements significantly more often when they expect good news forecast earnings quality than when they disclose bad news forecast earnings quality. Lev and Zarowin (1999) and Collins et al. (1997) document a decline in the relevance of earnings, Givoly and Hayn (2000) and Dichev and Tang (2008) find increases in the volatility of earnings and Dichev and Tang (2008) find a decline in the matching of concurrent revenues and expenses. These studies interpret such trends as a decline in the quality of earnings. However, the literature disagrees

on whether it is changes in the real economy or changes in GAAP that have caused the declines in earnings quality. Regarding to Doyle (2007) and Ashbaugh-Skaife et al. (2008), internal control procedures are associated with less earnings management and that managerial turnover is a disciplining mechanism that mitigates earnings management. Higher quality earnings provide more information about the features of a firm's financial performance that are relevant to a specific decision made by a specific decision-maker.

There are three features to note about earnings quality. At first, earnings quality is dependent on the decision-relevance of the information. To continue with, the quality of a reported earnings number depends on whether it is informative about the firm's financial performance, many aspects of which are unobservable. Third, earnings quality is jointly determined by the relevance of underlying financial performance to the decision and by the ability of the accounting system to measure performance. This definition of earnings quality suggests that quality could be evaluated with respect to any decision that depends on an informative representation of financial performance.

Moreover, earnings quality is analyzed into three categories: properties of earnings, investor responsiveness to earnings and external indicators of earnings misstatements. First, properties of earnings, includes earnings persistence and accruals, earnings smoothness, asymmetric timeliness and timely loss recognition; and target beating, in which the distance of earnings from a target is viewed as an indication of earnings management, and earnings management is assumed to erode earnings quality. In the second category investor responsiveness to earnings, includes papers that use an earnings response coefficient as a proxy for earnings quality and that relate the earnings response coefficient to another construct such as auditor quality. Finally, external indicators of earnings misstatements, includes Accounting and Auditing Enforcement Releases, restatements, and internal control procedure deficiencies reported under the Sarbanes Oxley Act, all of which are viewed as indicators of errors or earnings management.

According to Patricia Dechow, Weili Ge and Catherine Schrand (2010), they observe that although the quality of a firm's earnings depends on both the firm's financial performance and on the accounting system that measures it. In their research, they have relatively little evidence about how fundamental performance affects earnings quality. The literature often inadequately distinguishes the impact of fundamental performance on earnings quality from the impact of the measurement system. In addition, Patricia Dechow, Weili Ge and Catherine Schrand (2010) observe several potential sources of distortions that affect the ability of an accounting system to capture fundamental performance in reported earnings, their research generally focuses on distortions associated with implementation errors and earnings management. Moreover, they observe about the state of the literature viewed in its entirety is that there is no measure of earnings quality that is superior for all decision models. In their research, they use the Cronbach and Meehl model, in which the earnings quality proxy is the independent variable in the analysis and if earnings quality were a single construct and the proxies just measured it with varying degrees of accuracy, then they observe convergent validity across earnings quality proxies for the same determinant and to find that all the earnings quality proxies would have similar consequences.

2.5 Insider ownership and Earnings Quality

As we have already mentioned, several prior studies are involved in the relationship between insiders and earnings quality. Generally, insider ownership influences the procedure that a company monitor the earnings management activities. Warfield (1995) observed that insider ownership is one mechanism that control the opportunistic attitude of managers and the discretionary accruals are connected negative with insiders.

Morck (1988) assert that managerial ownership is increasing, the available employees become less effective in aligning managers to take value maximizing decisions. This is because high ownership by management implies sufficient voting power to guarantee

future employment. SanchezBallesta and Garsa-Meca(2007) argue that highly managerial ownership are more likely to manipulate earnings, since this lack of market discipline may lead insiders to make accounting choices that are reflective to personal incentive rather than firm economic performance.

Wang (2006) consider that ownership structure has an important impact on reported earnings. Nevertheless, the influence on insiders to managers is a debatable matter. Moreover, Mitra (2002) observe that insider ownership and earnings management are negatively correlated due to the information asymmetry between insiders and managers. Yeo (2007) conclude that as managerial ownership increases, earnings management may increase, as a result and the quality of earnings are increasing. Warfield et al., (1995) indicate that this positive relationship is expected if either accounting-based constraint mitigate managers' accounting choices or higher ownership results from difficulties in accounting numbers measuring performance as reflected in increased accruals variability.

2.5.1 Accrual based and real activities earnings management

Based on previous literature, there are two ways to perform earnings management: discretionary accruals and real activities manipulation. In the first method, Kothari (2015) noticed that managers exploit the fact that a section of total accruals are depended by their decision and their logical choice to converse their judgement as accounting and political choices. On the other hand, the definition of real activities earnings management is described by Roychowdury (2006) and is described as, "departures from normal operational practices, motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations". Accruals and real earnings management have many differences, such as GAAP principles regulate the accruals without existing same framework for real operations. As a result, Shust (2015) detected that accruals are easier to manipulate after the end of fiscal year, but, on the other hand, real activities are carried out to prior year.

2.5.2 Measurements of Earnings Quality

While managers want to minimize earnings quality, there is no single way to measure earnings quality in the existing literature and we should use more than one parameter. As a result, in our research, we use two measurements in order to measure earnings quality: abnormal accruals and persistence of transitory loss components in earnings.

Concerning to the first measurement, abnormal accruals, based on existing theory, accrual quality is increasing while firm size is increasing and is decreasing while the length of operating cycle, the total accruals and the standard deviation of sales and cash flow from operations are getting reduced. According to Patricia Dechow, Ilia Dichev (2001), they notice a strong negative relation between accrual quality and earnings persistence and consider that earnings quality is lower when actual accruals differ from expected accruals.

About transitory loss components, Basu (1997) finds evidence that negative earnings changes are less persistent than positive earnings changes. He argues that the asymmetric persistence of negative earnings changes is the result of the conservative nature of accounting earnings. Ball and Shivakumar (2005) are based on Basu's serial dependence model and conclude that the transitory loss components in earnings of public firms are less persistent than those of private firms in the U.K. market.

Due to the fact that existing theories provide competing and alternative predictions concerning the effects of insider ownership on earnings quality, our study's hypothesis states:

H_1 : Earnings Quality is systematically related to insider ownership.

3.Research Design

In this section, we analyze in details the data, variables and model used. Firstly, we present the sample that was used in the empirical part. Subsequently, we describe fully the variables utilized, both dependent and independent. Lastly, it is reported the used methodology and models of our research.

3.1 Measures of earnings quality

In the existing literature, there is no single measure in order to estimate earnings quality. As such, we use two proxies for earnings quality: 1) Discretionary accruals and 2) Persistence of transitory loss components in earnings.

Firstly, the absolute value of abnormal accruals, is calculated using the Dechow and Dichev (2002) model, as modified by Ball and Shivakumar (2005). Existing literature has provided evidence that earnings are of lower quality when there is a deviation between actual accruals and expected. According to the second measure which is persistence of transitory loss components in earnings, we adopt the Basu (1997) model as modified by Ball and Shivakumar (2005). We examine the relation between insider ownership and persistence of transitory loss components in earnings. More conservative reported earnings imply that earnings are of higher quality.

3.1.1 Measurement of insider ownership

The definition of insiders' shares is the percentage of company's shares owned by insiders (INSIDER_SHARES).

Ke et al. (2002) presented that insiders own and trade upon knowledge of significant accounting disclosures and insiders' sales increase three to nine quarters before a break in a string of constant increasing in quarterly earnings. The same year, Beneish

and Vargus suggest that managers' contemporaneous trading can be used to assess the likelihood that the firms' accruals are of high or low quality. In their study, they examine whether insider trading is informative about earnings quality,

3.2 Models

3.2.1 Abnormal Accruals Analysis

Based on previous studies, it is widely known that they used either Jones model (1991) or an adapted Jones model advanced by Dechow, Dichev (2002) to measure abnormal accruals. Jones presents a model that nondiscretionary accruals are constant and her model indicates how effects in a firm's economic circumstances in nondiscretionary accruals, but in modified model nondiscretionary are estimated during the event period. For our study, we will use the modified Jonel model with the Cash Flow from operating activities. In a recent study, Ball and Shivakumar (2005) proved that the abnormal accruals are negatively correlated to cash flows and in their model argue that the conservative linear accruals model is not compared with the nonlinearity of abnormal procedure. As a result, the modified model by Ball and Shivakumar, adapted by Dechow and Dichen is very helpful to measure abnormal accruals. Specifically, the following nonlinear model is used to estimate abnormal accruals:

$$ACC_t = \alpha_0 + \alpha_1 {}^* CF_t + \alpha_2 {}^* CF_{t-1} + \alpha_3 {}^* CF_{t+1} + \alpha_4 {}^* DFC_t + \alpha_5 {}^* DFC_t {}^* CF_t + e_t \ (1)$$

where:

ACC_t = total accruals at year t, scaled by average total assets at t, total accruals are earning before extraordinary items minus operating cash flows

CF_t = operating cash flows at t, scaled by average total assets at t

CF_{t-1} = operating cash flows at t-1, scaled by average total assets at t

DCF_t = one if the change of cash flows is less than zero (CF_t-CF_{t-1}<0), and zero otherwise

e_t = error term.

Dechow and Dichev (2002) present that accruals impact consequential to cash flows. Future cash flows are represented as future cash collections and past and current cash flows as cash which is paid or have already received. The equation DFC_t*CF_t is the proxy for economic losses. The error term, e_t, provides the unexpected ration of total accruals that deviate from economic transactions. The residual value from this model is the Discretionary Accruals value, the estimate of unexpected or abnormal accruals from extended Jones model. The higher the level of discretionary accruals, the greater the level of earnings management. Model variables are divided by lagged total assets to avoid heteroskedasticity problems.

The absolute value of the abnormal accruals from equation (1) is the proxy for earnings management. According to Bowen, Rajgopal, and Venkatachalam (2003), Klein (2002), Reynolds and Francis (2000), Warfield, Wild, and Wild (1995), the absolute value is used due to the fact that earnings management can involve either increase or decrease income accruals to achieve profits. A higher value means a greater level of earnings management or lower earnings quality. To test the correlation between insider ownership and earnings management, absolute value of abnormal accruals is assumed as the dependent variable.

The following equation is used to estimate the absolute value of the abnormal accruals:

$ABS\_ACC_t = \delta_0 + \delta_1* INSIDER\_SHARES_t + \delta_2* SIZE_t + \delta_3*ROA_t + \delta_4*LEV_t + \delta_5*GROWTH\_SALES_t + \delta_6*PPE_t + \delta_7*LOSS + e_t$

where:

ABS_ACC_t = absolute value of abnormal accruals at t

$INSIDER\_SHARES_t$ = percentage of total common equity owned of managers

$SIZE_t$ = natural log of total assets at t

ROA_t = net income at t divided by average total assets at t

LEV_t = firm leverage at t, measured by total liabilities divided by total assets

$GROWTH\_SALES_t$ = growth rate in sales at t

PPE_t = property, plant and equipment

$LOSS$ = one if net income<0, and zero otherwise

e_t = error term.

Prior to previous studies, Beker et al. (1998), Cheng and Warfield (2005), Reynolds and Francis (2000) argue that variables are included for profitability such as ROA, risk for bankruptcy such as LEV and LOSS and growth opportunities such as GROWTH_SALES. The coefficient on INSIDER_SHARES (δ_1) tests the relation between insiders and the absolute value of abnormal accruals. A positive estimate will indicate that insiders have earnings that are of lower quality; however, if the estimate on δ_1 is negative, it implies that insiders report earnings of higher quality.

3.2.2 Persistence of Transitory Loss Components in Earnings

The second proxy of earnings quality is persistence of transitory loss components in earnings, measured by a serial dependence Basu's model (1997) adopted by Ball and Shivakumar (2005). As it is stated by Basu (1997), the positive earnings changes are more persistent than negative earnings changes (transitory loss components in earnings) and he argues that the asymmetric persistence of negative changes in earnings is the result of the conservative nature of accounting earnings.

The following model is adopted to investigate the relation between transitory loss components in earnings and insider ownership.

$\Delta NI_t = \lambda_0 + \lambda_1 * D\Delta NI_{t-1} + \lambda_2 * \Delta NI_{t-1} + \lambda_3 * \Delta NI_{t-1} * D\Delta NI_{t-1} + \lambda_4 INSIDER\_SHARES_t + \lambda_5 * D\Delta NI_{t-1} * INSIDER\_SHARES_t + \lambda_6 * \Delta NI_{t-1} * INSIDER\_SHARES_t + \lambda_7 * \Delta NI_{t-1} * D\Delta NI_{t-1} * INSIDER\_SHARES_t + \lambda_8 * SIZE_t + \lambda_9 * D\Delta NI_{t-1} * SIZE_t + \lambda_{10} * \Delta NI_{t-1} * SIZE_t + \lambda_{11} * \Delta NI_{t-1} * D\Delta NI_{t-1} * SIZE_t + \lambda_{12} * LEV_t + \lambda_{13} * D\Delta NI_{t-1} * LEV_t + \lambda_{14} * \Delta NI_{t-1} * LEV_t + \lambda_{15} \Delta NI_{t-1} * D\Delta NI_{t-1} * LEV_t + e_t$

where:

ΔNI_t = change in net income before extraordinary items at t, scaled by average total assets at t-1

ΔNI_{t-1} = change in net income before extraordinary items at t-1, scaled by average total assets at t-1

$INSIDER\_SHARES_t$ = percentage of total common equity owned of managers

$SIZE_t$ = natural log of total assets at t

LEV_t = firm leverage at t, measured by total liabilities divided by total assets

DΔNI_{t-1} = one if $\Delta NI_{t-1} < 0$, and zero otherwise.

All other variables are the same as previously defined. Consistent with Ball and Shivakumar (2005), the λ_2 coefficient on ΔNI_{t-1} is expected to be insignificant, and the λ_3 coefficient on $\Delta NI_{t-1}*D\Delta NI_{t-1}$ is expected to be negative and significant. The λ_7 coefficient on $\Delta NI_{t-1}*D\Delta NI_{t-1}*INSIDER\_SHARES$ capture the incremental persistence of transitory losses for insiders. A positive estimate on λ_7 will indicate that transitory losses are more persistent which means that the quality of earnings is lower. A negative estimate on λ_7 will indicate that insider ownership is associated with less persistent transitory losses which means that the accounting earnings are of higher quality.

3.3 Control variables

As we noticed earlier in our study, managers want to maximize personal interests via managing earnings. Companies combine abnormal accruals, earnings informativeness and transitory loss components to manipulate earnings quality. For this reason, based on previous studies and our point of view, we have chosen the appropriate variables in order to identify if insider ownership is systematically to earnings quality. We include in our models the size and the leverage of our firms, the return on assets which present the financial performance of our firms and the growth of firm's sales which it proves us the development of our companies. To continue with, we present a brief description of each one of variables. We comprised the value of abnormal accruals as dependent variable of earnings quality based on accruals method in OLS regression based on Cohen and Kim. Assumed as main control variable the shares which are managed by insiders. But this variable is not the only factor which have an effect on discretionary accruals. We add some several other control variables to examine different motivations which have an impact on the accounting decisions of the managers.

The size of a company is calculated by its total assets. Assets are what a company owns, either tangible or intangible and anything that a company can control and have a beneficial impact such as property of buildings, lands, equipment, goodwill, patterns, money etc.

The variable is defined from: SIZE = Logarithm of Total Assets.

Return on assets presents profitability of firm. Chen (2007) noticed that businesses are more involved in earnings management. On the other hand, in earlier studies, Klein (2002) present that companies with high profitability have lower earnings management. This ratio helps managers and investors to observe how well take advantage of assets to invert into profits. ROA can separate the effect of ownership structures on earnings management after directing for the possible effect of financial performance.

The control variable, ROA is calculated as : $ROA = \frac{NET\ INCOME}{TOTAL\ ASSETS}$

Leverage is a strategy of using borrowing money. Actually, leverage ratio is one of financial measurement to estimate how capital comes in the form of debts, specifically, loans. It is a way of company to find its financial obligations. Yang (2008) introduced that leverage and earnings quality have a negative relationship.

The control variable, LEV is calculated as : $LEV = \frac{lONG\ TERM\ DEBT}{TOTAL\ ASSETS}$

Growth rate in sales presents us the firm's growth opportunity. According to Wang (2006), managerial ownership has positive impact at sales. Roychowdhury (2006) noticed that firms which have by a great account in sales are expected better earnings management. The variable, Growth rate in sales is estimated at time t.

The growth rate in sales is calculated as :

$$\text{GROWTH} = \frac{CURRENT\ PERIOD\ NET\ SALES - PRIOR\ PERIOD\ NET\ SALES}{PRIOR\ PERIOD\ NET\ SALES} * 100$$

Property, plant and equipment are long-term assets which are not easily converted into cash. The modified Jones model means total accruals on the discrepancy between the change in incomes and the change in receivables as well as the level of total property, plant and equipment.

In our regression, we use the dummy variable Loss. This variable is useful for our model to analyze company's risk of bankruptcy. This variable takes the value of 1 if net income is negative and zero otherwise and estimate the assumption that firms confronting financial difficulties are involved in financial statements.

4. Sample Description

In the beginning of this section, we explain in detail our data selection criteria

4.1 Data and Sample selection

As we mentioned before, in our study we try to examine the way which earnings quality is involved to insiders. All the necessary data for our procedure has been collected from the Bloomberg Database. All firms are trading in the USA. USA has a variety of companies and it is easy for us to find companies with the suitable characteristics to discover the relationship between insider shares and earnings quality. USA has a strong economy position with big and small firms which has insider managers with shares. We reject the companies of European Zone because the economic instability of European countries.

Moreover, it is difficult to find out data from companies with financial services and banks. In our investigation, we prefer companies with clearly and unbiased data and we did not include unobtainable information. We prefer these companies because we would like to have a sample with reliability and not an unbalanced panel. Brooks (2012) mentions in his study "Balanced panel has the same of number of time-series observations for each cross-sectional unit, whereas an unbalanced panel would have some cross-sectional elements with fewer observations or observations at different times to others". We use companies which belong to S&P 400, S&P 500 and S&P 600.

To analyze better our data, we choose companies from different sectors. Our main goal is to have an equivalent number of companies in each sector, but it is difficult for us to find the same number of companies. The sectors presented on the following table are based on the Global Industry Classification Standard (GICS) system and we include in our research total 10 sectors. The Table 1 presents the total number of companies which we found out. Our initial sample consisted of 1376 companies operating in the USA and our testing sample after dropping companies with

unavailable data included 587 listed firms. Companies that appeared as financial services, banks or real estate are rejected. Moreover, are also rejected companies with lacking data and companies with missing data. Moreover, in the procedure of our research, we find out that companies have discrimination and the data are not objective. Table 2 presents the total sample of our research after the subtraction of defective companies.

Table 1: Distribution of observation by sector

Distribution of observations by sector		
Sector	Number of firms	Percent
Energy	80	5.8%
Materials	93	6.7%
Industry	206	15%
Consumer Discretionary	219	16%
Consumer Stables	68	5%
Health Care	149	10.9%
Financial	197	14.3%
Information Technology	229	16.6%
Utilities	56	4%
Real Estate	79	5.7%
Total	1376	100%

Notes: The table consists of the total companies of research before the deduction of companies.

Table 2: Sample Collection Standards

Sample Collection Standards	
Standard	**Number of companies**
Total firms	1376
Less	
Financial	(197)
Companies with lacking data	(358)
Companies with missing data	(139)
Companies with not objective data	(95)
Final test sample	**587**

By following the previous researches, we are in favor of introducing only larger and more successful firms in our research. To continue with, we expect that the variation in our earnings quality proxies will refuse to lead our research to more conservative results. It should be mentioned that during the selection process of companies, we have difficult to distinguish the companies which have managers as insiders. But it is known that insiders have both family and nonfamily companies. It is improper to believe that only large businesses have insider shares. Family businesses may not introduce greater transparency and reliability of disclosures. They have majority and minority shareholders and in order to take decisions family members at board have stronger opinion to decide. In order to understand the empirical model and the relationship between insiders and earnings quality, we have chosen the time period from 2011 to 2016 for our examination, despite the fact that we find out the data from 2007 to 2016 and we believed that the 2011 to 2016 is the suitable period because it is more recent and it has not political and economic instabilities.

Five-year information was requested from the Bloomberg Database for Insider Shares, Net Income, Size, Total Assets of firm, Long Term Debt to calculate Leverage, Net Sales, Property, Plant and Equipment, Code of companies (GICS) and ROA ratio. Most of the figures used for our demanding research, due to the fact that multiple functions were

used a large amount of data, were calculated as much of data were not available on Bloomberg Database.

5. Empirical Results

This chapter will present the empirical results of our research, including the descriptive statistics on the dependent variables and the explanatory ones. Moreover, the chapter will provide the results of the correlations between the variables used. Then, we conclude with the findings of our regression analysis.

5.1 Descriptive Statistics

The descriptive statistics for the variables of each model are represented below. The descriptive statistics of the sample in the abnormal accrual analysis are reported in table 3, panel A.

Table 3: Descriptive Statistics

Panel A: Abnormal Accruals Sample

Variable	Mean	Std. Dev.	Median	Min	Max
ABS_ACC	6,367	2,727	5,000	0,058	12,455
INSIDER SHARES	5749521	528314	500000	0	16931409
SIZE	8128136	1687479	1500000	1476063	3791165
ROA	0,047	0,954	0,200	-1,702	0,783
LEV	0,557	0,233	1,500	0,031	3,629
GROWTH	0,0537	0,222	1,00	-0,813	8,906
PPE	301559	1105914	25000	8	252668
LOSS	0,880	0,323	0	0	1

Notes: The table presents the descriptive statistics of the continuous variables of the sample which includes 1376 firms for the period 2007-2016. ABS_ACC are the dependent variables, INSIDER_SHARES is the main variable and SIZE, ROA, LEV, GROWTH and PPE consist some control variables. LOSS is dummy variable. All numbers are rounded up to third decimal place.

Variables definition:

ABS_ACC$_t$ = absolute value of abnormal accruals at t

INSIDER_SHARES$_t$ = percentage of total common equity owned of managers

SIZE$_t$ = natural log of total assets at t

ROA$_t$ = net income at t divided by average total assets at t

LEV$_t$ = firm leverage at t, measured by total liabilities divided by total assets

GROWTH_SALES$_t$ = growth rate in sales at t

PPE$_t$ = property, plant and equipment

LOSS = one if net income<0, and zero otherwise

We observe that the dependent variable, abnormal accruals, has a mean of 6,36 for the period of 2007 to 2016, with a minimum value of 0.058 and maximum 12,4. This is not surprising, because we have large businesses. The insider shares variable has mean 5,75 and standard deviation 5,28. To continue with, the Size give us the total value of companies with the mean 8128136 and standard deviation 1687479.The variable ROA present the profitability with mean 0,047 and standard deviation 0,95, this result show us that the beginning of financial crisis and the impact for our companies. The variable LEV has as mean 0,56 and standard deviation as 0,233. The variable GROWTH has mean 0,05 and standard deviation 0,22, that shows us the stability of companies during the chosen period. The variable PPE has mean 301559, standard deviation 1105914, the numbers are bigger than other variables because this variable consists of property plant and equipment. The variable LOSS is less reported to have wastage.

Panel B presents the descriptive statistics of the sample in the analysis of persistence of transitory losses.

Table 4: Descriptive Statistics

Panel B: Persistence of transitory losses sample

	Mean	Std. Dev.	Median	Min	Max
ΔNI_t	0,005	0,087	0,957	-0,611	1,819
$D\Delta NI_{t-1}$	0,248	0,432	0	0	1
ΔNI_{t-1}	7,77	-0,001	0,998	-1,767	1,445
$INSIDER\_SHARES_t$	0,038	0,062	0,033	0,010	0,040
$SIZE_t$	8,128	1,687	9,205	3,791	14,760
LEV_t	0,557	0,233	1,423	0,031	3,629

Notes: All numbers are rounded up to third decimal place.

Variables definition:

$INSIDER\_SHARES_t$ = percentage of total common equity owned of managers

$SIZE_t$ = natural log of total assets at t

LEV_t = firm leverage at t, measured by total liabilities divided by total assets

ΔNI_t = change in net income before extraordinary items at t, scaled by average total assets at t-1;

ΔNI_{t-1} = change in net income before extraordinary items at t-1, scaled by average total assets at t-1;

$D\Delta NI_{t-1}$ = one if $\Delta NI_{t-1} < 0$, and zero otherwise.

The mean of change in income before extraordinary items ΔNI_t is 0,005 in year t. The mean of $D\Delta NI_{t-1}$ is 0,248. The descriptive statistics of insider shares ($INSIDER\_SHARES_t$), firm size ($SIZE_t$) and leverage (LEV_t) are comparable with those reported in panel A.

Concerning to the size of the firm variable, we expect a positive relation among earnings manipulation and the size of the firm due to the fact that the managers of bigger firms have more incentives to manipulate the reported earnings.

The mean of the variable LEV which is the ratio of long-term debt to assets for our sample is 0,55. The assets of the sample companies are mostly funded by equity than debt and the companies are able to finance their operations and repay debts. There is no need for number's manipulation which are related with the lenders. We expect a positive relation between earnings manipulation and the leverage ratio. The higher the leverage, the higher the incentives for earnings manipulation.

5.2 Correlation Matrix

The following step of our analysis consists of the calculation of the correlation coefficients among the variables of our investigation with the help of the Stata program.

Now, we present the Correlation Matrix and the Pearson Pair wise coefficients for all the main variables used in our survey. If the number is positive, as one increases so does the other. On the other hand, if the number is negative, as one variable increases the other decreases. Every variable when correlate with itself, give us as result the number 1 because they do not have relationship.

The correlation coefficient between our main explanatory variables INSIDER SHARES and SIZE is statistically significant at the 1% level. As we can notice in the table 3, abnormal accruals variable has negative relationship with the variable of profitability ROA, the growth of sales and the dummy variable LOSS. Specifically, the correlation coefficient between Abnormal Accruals and ROA is equal to -0.06, between Abnormal

Accruals and Growth of Sales is equal to -0.03 and between Abnormal Accruals and Loss is equal to -0.01. INSIDER SHARES variable has negative relationship with leverage, as a result, when insider shares increases, the leverage decreases and the correlation coefficient is equal to -0.004. This coefficient is near to zero, the difference is not big and the two variables are influenced one to other insignificantly. When the variable SIZE increases, the growth of sales decrease and the correlation coefficient is equal to -0.02. On the other hand, when return of assets(ROA) increases, LEV and PPE variables decrease and the correlation coefficients are equal to -0.10 and -0.005 respectively. Between the Leverage and Growth of Sales have negative relationship and the correlation coefficient is equal to -0.06 and between Leverage and Loss is equal to -0.02, also they have negative correlation. Between Growth of Sales (GROWTH) and Property, Plant and Equipment (PPE) have negative relationship and it is equal to -0.04. As we can observe, all other combination of variables is correlated positive and when one variable increases, the other increases and when one variable decreases, the other decreases. They affect the one to other positive.

Table 5: Correlation Matrix for Abnormal Accruals

	ABS_ ACC	INSIDER SHARES	SIZE	ROA	LEV	GROWTH	PPE	LOSS
ABS_ ACC	1							
INSIDER SHARES	0.11	1						
SIZE	0.42	0.13	1					
ROA	-0.06	0.02	0.03	1				
LEV	0.12	-0.01	0.46	-0.13	1			
GROWTH	-0.03	0.01	-0.02	0.22	-0.06	1		
PPE	0.49	0.20	0.48	-0.01	0.11	-0.04	1	
LOSS	-0.01	0.02	0.13	0.61	-0.02	0.19	0.03	1

Notes: All numbers are rounded up to second decimal place.

Following, we present the correlations among the variables in our model with the proxy of earnings. The Pearson Pair Wise correlation coefficients for all of major variables used in our investigation are shown in Table 4.

The correlation coefficient between our main variables Insider Shares and change in Net Income is significant statistically at the 1% level. Exactly, the correlation coefficient between the variables Insider Shares and Change in Net income is 0,01. This result means that an increase or decrease of one variable by one, the same effect has the other. As far as it is concerned the variable Insider Shares and the change in Net Income for the previous year, the correlation coefficient is equal to 0.03. In this point, the two correlation variables are in the same direction. The correlation coefficient between Insider Shares and Change in Net Income the time t is nearly to zero and the correlation coefficient for the previous year is positive but nearly to zero. As a result, we have a meaningful decrease of correlation coefficient. This decrease depends on external factors which affect the value of Net Income.

As far as it is concerned the correlation coefficient between the variable SIZE and the Change in Net Income at the time t (ΔNI_t) is -0.03. These two variables are significant statistically at the 1% level. Analyzing the coefficient, it is expected that an increase (decrease) of one variable by one (1) unit will have negative interaction by the othe by 0.03 unit. The Size of the firm and the Change in Net Income are correlated negative. Generally, the Change in Net Income affects significant in the Size of the firm. From the previous year, the Change in Net Income and the Size of the firm are correlated positive and the correlation coefficient is equal to 0.01. This coefficient is weak because it is early to zero and it is not affected one to other.

To continue with, the correlation coefficient between the Leverage (LEV) of the firm and the Change in Net Income at the time t is equal to -0.01. It is a weak negative coefficient between these two mean variables. The correlation coefficient between the Leverage of the firm and the Change in Net Income for the previous year is also negative and equal to -0.05.That means that the Leverage affects the same direction as Change in Net Income for the time t and the Change in Net Income for the previous

year. An increase or decrease of Leverage variable by one (1) unit has an opposite effect of 0.01 and 0.05 respectively.

Following, examining correlation between the Insider Shares and the Size of firm , we observe that Insider Shares and SIZE is significant statistically at the 10% level. The correlation coefficient between two variables is equal to 0.13. To illustrate the correlation between those two variables, a decrease of 1 unit in the Insider Shares will affect a reduction to the size of the company by 0.13.

Furthermore, to illustrate the correlation between Leverage (LEV) and the Size of the firm we observe that correlation coefficient between those two variables is very strong. A correlation coefficient of 0.43 means that LEV and SIZE are positive related, so an increase (decrease) in one (1) unit of one of these variables will cause an increase (decrease) of 0.43 to the other. The strong correlation coefficient between those two variables indicates also the kind of relation these two variables have, meaning that there have a strong relationship and the one is manipulated one to another with strong consequences to companies.

To conclude with correlation, examining correlation coefficients between independent variables has the following results.

We observe a strong correlation between the dummy variable multiplied with the Change in Net Income for previous year (DΔNI_{t-1} * ΔNI_{t-1}) and the Size of Firm multiplied with the dummy variable and the Change in Net Income for previous year (SIZE* ΔNI_{t-1} * DΔNI_{t-1}). The correlation coefficient is equal to 0.98. On the other hand, the variable Size multiplied with the Change in Net Income(SIZE* * ΔNI_{t-1}) and the variable Size multiplied with the dummy variable (SIZE*DΔNI_{t-1}) are correlated negative. The correlation coefficient between the two variables is equal to -0.43. This coefficient is very strong and the one variable to another affects significant. As a consequence, if the one variable has a negative (positive) change by one unit, the other would be affected by 0.43 units positive (negative). The two variables have opposite direction. The following page presents the Table 6 and is the Correlation Matrix for persistence of transitory loss components.

	ΔNI_t	$D\Delta NI_{t-1}$	ΔNI_{t-1}	$\Delta NI_{t-1} * D\Delta NI_{t-1}$	$INSIDER\_SHARES_t$	$D\Delta NI_{t-1}*INSIDER\_SHARES_t$	$\Delta NI_{t-1}*INSIDER\_SHARES_t$	$\Delta NI_{t-1}*D\Delta NI_{t-1}*INSIDER\_SHARES_t$	$SIZE_t$	$D\Delta NI_{t-1}*SIZE_t$	$\Delta NI_{t-1}*SIZE_t$	$\Delta NI_{t-1}*D\Delta NI_{t-1}*SIZE_t$	LEV	$D\Delta NI_{t-1}*LEV_t$	$\Delta NI_{t-1}*LEV_t$	$\Delta NI_{t-1}*D\Delta NI_{t-1}*LEV_t$
ΔNI_t	1,00															
$D\Delta NI_{t-1}$	0,12	1,00														
ΔNI_{t-1}	-0,46	-0,44	1,00													
$\Delta NI_{t-1} * D\Delta NI_{t-1}$	-0,59	-0,35	0,81	1,00												
$INSIDER\_SHARES_t$	0,00	-0,01	0,00	0,01	1,00											
$D\Delta NI_{t-1}*INSIDER\_SHARES_t$	0,01	0,08	-0,03	-0,02	0,56	1,00										
$\Delta NI_{t-1}*INSIDER\_SHARES_t$	-0,21	-0,12	0,30	0,30	0,20	-0,21	1,00									
$\Delta NI_{t-1}*D\Delta NI_{t-1}*INSIDER\_SHARES_t$	-0,27	-0,08	0,29	0,36	-0,15	-0,27	0,77	1,00								
$SIZE_t$	-0,03	-0,03	0,02	0,10	0,13	0,08	0,04	-0,02	1,00							
$D\Delta NI_{t-1}*SIZE_t$	0,11	0,97	-0,40	-0,30	0,01	0,11	-0,12	-0,09	0,14	1,00						
$\Delta NI_{t-1}*SIZE_t$	-0,46	-0,46	0,98	0,80	0,01	-0,03	0,32	0,29	0,01	-0,43	1,00					
$\Delta NI_{t-1}*D\Delta NI_{t-1}*SIZE_t$	-0,58	-0,36	0,80	0,98	0,01	-0,02	0,31	0,37	0,05	-0,33	0,81	1,00				
LEV	-0,01	0,01	-0,05	-0,01	0,00	0,00	-0,05	-0,05	0,45	0,09	-0,05	-0,03	1,00			
$D\Delta NI_{t-1}*LEV_t$	0,11	0,88	-0,39	-0,31	-0,01	0,07	-0,13	-0,11	0,12	0,91	-0,42	-0,34	0,31	1,00		
$\Delta NI_{t-1} * LEV_t$	-0,44	-0,30	0,79	0,73	0,00	-0,02	0,41	0,46	0,02	-0,28	0,80	0,74	-0,09	-0,36	1,00	
$\Delta NI_{t-1}*D\Delta NI_{t-1}*LEV_t$	-0,47	-0,21	0,62	0,78	0,00	-0,01	0,40	0,50	0,04	-0,19	0,62	0,78	-0,15	-0,29	0,92	1,00

Notes: ΔNI_t is equal to the change in net income before extraordinary items at t, scaled by average total assets at t-1, ΔNI_{t-1} means the change in net income before extraordinary items at t-1, scaled by average total assets at t-1 and the dummy variable $D\Delta NI_{t-1}$ is one(1) if ΔNI_{t-1} is smaller that zero(0), and zero otherwise. All numbers are rounded up to second decimal place.

5.3 Multivariate Results

The next tables present the Ordinary Least Squares (OLS) method for more in-depth results, due to the fact that descriptive statistics and correlation matrix, concerning univariate relations among variables, are not enough.

5.3.1 Insider Ownership and Abnormal Accruals

The results in table 7 are from Ordinary Least Squares (OLS) regression using the absolute value of abnormal accruals as the dependent variable.

Table 7: Regression Analysis

Independent Variable	Expected Sign	Coefficient	t-statistic (P-value)
INSIDER SHARES	_	-0,14	-0,1663 (0,008)
SIZE	-	-0,006	-2,697*** (0,000)
ROA	?	0,1221	1,014 (0,175)
LEV	+	-0,030	-0,1221*** (0.000)
GROWTH	+	0,029	0,742 (0,000)
PPE	+	0,1301	3,754*** (0,0003)
LOSS	+	0,1911	0,4835*** (0,000)
F-value		53,41	
Adj. R^2		0,132	

The results of our regression help us to cover the gap that descriptive statistics and correlations left on the association between earnings management and insiders' ownership. Most of the coefficients are statistically significant. The adjusted R2 value is 0,132.

Throughout this study, the p-values of the independent variables are two-tailed values calculated based on White's heteroskedasticity-corrected standard errors. The signs of the independent variables' coefficients are basically in line with our predictions about the expected signs and prior literature. Specifically, the coefficient on INSIDER_SHARES is -0,14 with a p-value < 0,001, suggesting that insiders report a lower level of abnormal accruals. The coefficient on SIZE is negative and significant at p < 0,01 or lower. The result indicates that large firms and abnormal accruals are negatively related. The bigger the firm the lower the abnormal accruals. The coefficients on growth rate (GROWTH) and negative income (LOSS) are positive, indicating that firms with higher growth rate and firms with negative income are associated with higher abnormal accruals. Despite the predictions, the coefficient on leverage (LEV) is negative and significant at p < 0,001, consistent with evidence by Cheng and Warfield 2005, who also report a negative relation between leverage and abnormal accruals. So, a reduction (increase) of the value of a firm's leverage, would bring out an increase (decrease) in the value of firm's abnormal accruals.

Moreover, the low R^2 does not indicate a bad fit of the model to the observations. It could be an indicator that other explanatory variables, different from ours, may influence more our independent variables.

To draw a conclusion, the aforementioned judgements give us evidence that the hypotheses of our dissertation can be confirmed. This means that insiders' ownership is systematically related with the quality of earnings. Also, our hypotheses, is fitted in our descriptive statistics analysis, correlation matrix, and regression analysis results.

5.3.2 Insider Ownership and Persistence of Transitory Loss Components

The quality of financial reporting of a firm is considered to be higher when transitory loss components in earnings are less persistent into future periods than transitory gain components (Ball and Shivakumar 2005a, Basu 1997). The following table indicates the outcome of the analysis of persistence of transitory losses.

Table 8: Regression Analysis

Independent Variable	Expected Sign	Coefficient	t-statistic (P-value)
$D\Delta NI_{t-1}$	?	-0,0567	0,172 (0,367)
ΔNI_{t-1}	0	0,046	0,592*** (0,001)
$D\Delta NI_{t-1} * \Delta NI_{t-1}$	-	-0,958	0,691*** (0,006)
$INSIDER\_SHARES_t$	?	1,440	0,668 (0,043)
$D\Delta NI_{t-1} * INSIDER\_SHARES_t$	?	-4,120	0,099 (0,65)
$\Delta NI_{t-1} * INSIDER\_SHARES_t$	?	2,550	0,957 (0,005)
$D\Delta NI_{t-1} * \Delta NI_{t-1} * INSIDER\_SHARES_t$	?	-4,240	1,014 (0,018)
$SIZE_t$	?	-0,002	0,807 (0,024)
$D\Delta NI_{t-1} * SIZE_t$	?	0,005	0,943 (0,000)
$\Delta NI_{t-1} * SIZE_t$	?	0,008	0,495 (0,002)
$D\Delta NI_{t-1} * \Delta NI_{t-1} * SIZE_t$	?	0,009	0,501

			(0,167)
LEV$_t$	**?**	-0,003	0,500
			(0,067)
DΔNI$_{t-1}$ * LEV$_t$	**?**	0,012	3,163***
			(0,039)
ΔNI$_{t-1}$ * LEV$_t$	**?**	-0,234	0,232
			(0,133)
DΔNI$_{t-1}$ ∗ ΔNI$_{t-1}$ * LEV$_t$	**?**	0,247	0,254
			(0,035)
R^2		0,128	

The prediction for the coefficient on ΔNI$_{t-1}$∗DΔNI$_{t-1}$ is negative due to the fact that transitory loss components are less persistent than transitory gains (Ball and Shivakumar 2005, Basu 1997). The coefficient on ΔNI$_{t-1}$∗DΔNI$_{t-1}$ ∗INSIDER_SHARES$_t$ is -4,120 with a p-value of 0,018. The negative coefficient indicates that higher insider ownership is associated with less persistence of transitory losses. The coefficient on ΔNI$_{t-1}$∗DΔNI$_{t-1}$ is -0,958 and the p-value is 0,006. Overall, these results indicate that family firms are conservative in reporting transitory losses. So, earnings of insider ownership firms are of high quality.

The coefficient on ΔNI$_{t-1}$∗DΔNI$_{t-1}$∗SIZE$_t$ is positive and significant at $p < 0,05$, indicating that larger firms are less conservative in reporting transitory losses. The coefficient on ΔNI$_{t-1}$ ∗DΔNI$_{t-1}$∗ LEV$_t$ variable is negative and significant, indicating that firms with higher ratio of leverage is associated with less persistent transitory losses.

In summary, the outcome in the abnormal accruals' analysis and the analysis of persistence of transitory losses show that insider ownership is associated with greater earnings quality.

6. Summary and Conclusions

This dissertation examines the potential effect of insider ownership on earnings quality in USA. For this purpose, we selected data using Bloomberg database, for a sample of 587 companies. Years under scrutiny were from 2011 until 2016 and the results which we met were in the same direction as other researchers' studies. We attempted to observe insider ownership and we measured earnings quality with two different methods: absolute value of abnormal accruals and persistence of transitory loss components in earnings. The empirical findings indicate that the insider ownership of these companies have an impact on earnings quality.

Existing literature indicates that two conflicting statements are occurring on the effects of insiders' ownership on earnings quality. The first one states that insiders' ownership could irritate earnings quality, while the second view argues that insiders ownership could prohibit earnings management activities and in turn improve earnings quality. As it is stated the entrenchment effect and the alignment effect are the two contradicting existing theories which affect the demand and supply of earnings quality. The entrenchment effect states that the wealth of other investors may be expropriated by insiders through the supply of lower earnings quality. The supply of lower earnings quality may be mitigated by the demand for higher earnings quality by other users of financial statements if they recognize that the corporate governance is weak. However, the alignment effect states that insider ownership aligns the interests of insiders with those of outside investors and this leads to earnings of higher quality. The supply of higher earnings quality may be attenuated by the lower demand for higher earnings quality if users of financial statements take it for granted that these firms have stronger corporate governance.

Especially, our study documents evidence that, on average, insiders' ownership is systematically related with higher earnings quality. The outcome is robust to two measures of earnings quality: abnormal accruals and persistence of transitory loss components in earnings. In addition, we examine the relation using descriptive statistics analysis,

correlation matrices and regression analysis.

However, our survey is subject to several limitations. First of all, a major limitation of this research is that the assumptions apply only to large publicly traded firms in the United States. In other countries, outside the United States, the results based on this survey may not be valid.

Second, our models consist of control variables which are included in a large number of similar studies. However, there are different variables which can be used and measure an alternative impact of insider ownership on earnings quality. Our findings and limitations could provide a basis for future further research. Moreover, a future research could add more categories of ownership structure and study the results on earnings quality with more measures.

Another limitation which should be taken into consideration is the fact that USA still emerging of the 2008 global financial crisis that began there. Multiple effects have affected companies operating in the United States of America because they are not able to operate in full capacity. The effects consist a limitation for our study due to the fact that the environment is distressed and the findings may mirroring this in their correlation between insider ownership structure and the quality of earnings.

7. References

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