"The association between Audit Tenure & Earnings Quality. Evidence from S&P 500 Index"

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I hereby declare that the work submitted is mine and that where I have made use of another's work, I have attributed the source(s) according to the Regulations set in the Student's Handbook.

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Abstract

The issue of unless the quality of financial reporting is stricken by the duration of time that an auditor oblige a client has greeted long drawn attention from researches around the globe. These studies focused on public firms from different markets such as the Europe and US. These studies have had composited results, the plural of them seem to confute the assertion that a elongate auditor client connection negatively influence financial reporting and audit quality. We focus on firms from S&P 500, this business environment is an interesting case because all the private firms compose the plurality of the American economy, business environment that all the private firms encounter with size criteria a statutory regulations. We measure Audit Tenure by the years of professional collaboration between the accounting firm and client (indicator of five years), with the discretionary accruals we measure Earnings Quality and the agency costs related to them being measured with Q-Tobin Formula and Free Cash Flow formula with an ultimate goal to prove manipulated results.. The Earnings quality is measured with discretionary accruals, so them became our accepted proxy for managerial discretion. We use a sample of 392-audit reports from US companies and we conclude that the increasing audit tenure is associate with growth rates of earnings quality thought discretionary but we failed to connect them with manipulation results . Our thesis encountered with limitations, that's it the connection of audit tenure and earnings quality with the tenure of the partner and also we met limitations of confidential information's and information asymmetries about several agency costs.

Keywords: Audit Tenure, Earrings Quality, Discretionary Accruals, S&P 500 , Audit Independence, Going Concern, Agency Theory, Information Asymmetries

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I. Introduction

The breakdown of international corporations such as Enron and WorldCom impose the regulatory agencies and investors to realized that deficiencies exist in the financial statement and also in audit procedures. From that point companies around the world have to adapt to specific requirements regarding the information they publish to third parties. The financial accounting process in which the companies applying including the processes of establishment, recording, classification, aggregation and finally reporting financial actions in accordance with generally accepted accounting principles (GAAP). The requisition of audited financial statement differentiate from country to country, but in the majority of them companies are required to have audited financial statement (A.Eilifsen, W.Messier, S.M.Glover &D.F.Prawitt, 2013).

Auditing is a systematic and irrespective testing of data, statements, records, operations and performances of business for a stated aim. In any auditing procedure, the auditor perceives and recognizes the declarations, collects evidence and finally he or she formulates his judgment, which is transmitted through his audit final reporting (Verma, S.,Gray, S. J. 2006).

Researchers finds that high quality auditors are connected with ameliorated quality and reliability of accounting information's. Monroe G. & Hossain S. (2008) on the other hand published out that higher audit tenure counted by Big four audit firms is connected with raised accuracy and restricted scattering in earnings forecasts subjected by sell-side analysts, the accurate agent by which audit tenure remain on these information's is ambiguous. Late research shows that auditors with a smaller tenure are associates with nether earnings quality that auditors with longer tenure. Myers M.D. (2013) determined auditor tenure as the number of years an auditor is interned by the firm. After that three different exegesis have been procured for this relationship. In order the first is uphold on the deliberation that short tenure auditors lack client-specific sense that is needful to manners a high quality audit. The accounting profession scuffle that short tenure can implicate higher risk for audit washout because entrant auditors with inadequate client specific lore will have to calculate on more weighty assessments and representations made by client firms. The second one is wherefore auditors outgoings lower fees related to audit to get and maintain new clients and then await to redress losses in later years of the audit engagements. This deliberation proposed auditors with short tenure may be more flaccid around the years of the audit and client relationship so that they can retain the business elongate to replace the losses, abut in lower quality audits and lower quality of earnings. The last one is grounded on the discussion that firms with bigger quality earnings are more likely to maintain the auditors, or high quality auditors are more likely to decline hazardous clients that have lower quality earnings something which have lower quality earnings and after that moves to lower tenure audit firms and auditors. A preserved hypothesis in the attachment between auditor's profession area specialization and the shorter auditor tenure earnings quality ratio is grounded on previous studies which represent that auditors sector specialization is followed with ligher earnings quality.. The specialization of audit sector in clauses of the auditor market is a audit firm has the largest allotment of the industry's total clientele. Grounded on this case we anticipate that the relation between lower earnings quality and shorter auditor tenure be thin if the auditors are also sector specialists, ceteris paribus (Balsam, S., Krishnan, J., & Yang, J. S. 2003).

Boone, J. P.et al., (2012), point out that elements such as a) partner rotation, b) audit firm rotation, c) auditor independence d) regulatory changes e) non-audit services between the engagement and finally fragments of auditor and client relationship influence the quality of an audit litigation. The economic history around the years has proven several cases of gaps on the stage of auditor tenure and client occur.

A fair indicator for that topic is the Enron case and the results, which came from that scandal. Audit failure rise when the Arthur Andersen LLP based in Chicago tone to marketing and no auditing services to clients in effort to brag profits. From that point, material conflicts of interest and self-interest emerged. The upper management accused that the audit well know company withholding critical information's about securities exchange between the examine company and a subsidiary called

‘’Chewco’’ to have reported $100bn in revenue and created systemic accounting fraud. The investigation shows that the financial frauds between those two companies had been set up a peculiarity channel of manipulation between the client and auditor violating the rules of auditing. With the intention of deceive the public opinion and investors those two parties destroyed their reputation but they activated the financial institutions for tougher laws.

The case of Lehman Brothers of 2008 also activated the accounting society. Lehman Brothers a global financial services firm with a huge clientele of world know country’s such as USA, GB, Germany, Turkey and Greece hided over 50 billion in loans disguised as sales and led investors and county’s such Greece as previous we mention to bankrupt. The main players in this ‘’game’’ was the Lehman executives and auditors of Ernst & Young, they sold toxic assets to Cayman Island banks with the perception that they would be bought back after all. With that movements created the impression that Lehman had 50 billion more cash and 50 billion less in toxic assets than it really did. Finally Lehman went bankrupt and forced into the largest bankruptcy in US history and the whole word also. SEC didn’t prosecute due to lack of evidence. The weird is that in 2007 Lehman was ranked the number one most admired securities firm by the Fortune Magazine (Pierce, B., & Sweeney, B. 2004).

Previous Studies

Kanellou, A., & Spathis, C. (2011) published the relationship between auditor tenure and absolute discretionary accruals. The results categorized the audit tenure into three categories: i. one up to three years, ii. four up to eight years iii. a long period with nine and more years. The benchmark which they use is the medium tenure and concluded to that the short residency is related with supreme collections, but the long tenure is not something which point out that a long tenure of an audit firm is not associated with the debility in earnings quality.

Chi, W., & Huang, H. (2005) point out that discretionary accruals principally are total negatively correlated with audit firm tenure , but the correlation become positive after the exceeds of tenure of five years. The sample try not to incorporate supreme discretionary accruals and don't separate positive and negative discretionary accruals.

The research of the connection between audit tenure and earnings quality was under investigation by Jackson, A. B et al., (2008) with the measure of discretionary accruals and the current accruals. The discretiotanry accruas was stated out with the Jones Model 1991 the the current accruals was the number by the subtraction of non current assets and the change in current liabilities other than short term debt. The outcome was that the dimension of both discretionary accruals and current accruals debility with longer audit tenure. Also they state out that a longer tenure is connected with smaller income and smaller accruals. Overall they do not make any crucial evidence for any association with audit firm tenure and earnings quality.

Additionally Chi, W.,et al., (2009) examine the partners rotations include the mandatory rotation from 2004 act. They find higher quality auditing but this does not reflect the real picture when these same firms are used as a control on previous studies. At the end, they point out a specimen in response-earnings coefficients. These researches prove that the mandatory rotation increases several audit procedure cost and also expands the last danger of removal in light of the fact that the new auditors must sacrifice vital time to understand the environment of each entity with new estimates for the management and that drops the engagement two steps back. Proponents of mandatory rotation state that all those rotations block the two sides to building any relationships between them and hinder new scandals in auditing area and archive transparency, independence and finally objective audits (Catanach Jr, A. H., & Walker, P. L. 1999).

II. Literature Review and Hypothesis Development

The Association Between Earnings Quality and Audit Tenure

Audit tenure is gaged as the duration of the auditor and client relationship as of the ficxal year end in the financial statements. Studies such as Lowensohn, S., et al (2007) consider the ratio of audit firm tenure and absolute discretionary accruals and he ended up to named three categories of audit tenure: i) long with more of nine years, ii) the median with four to eight years and finally iii) the short with three to two years. The indicator was the medium tenure and they find that minor tenure is associated with major absolute discretionary accruals but elongate tenure is not, something which recommends that long tenure are not associated with losses in quality of earnings. Additionally investigations such as Carcello, J. V., & Nagy, A. L. (2004) explore the ratio between audit firm tenure and two weights of accruals, the current accruals and the discretionary accruals. The discretionary accruals were measured with the Jones 1991 model and their current accruals were peer to the luck of noncash current assets minus the shift in current liabilities other than short-term debt. These research point out the size of both gage of accruals falls with biggest audit firm tenure. They also published that big audit firm tenure is connected with both minor income-increasing and smaller extreme income-decreasing accruals, and that conclude to find out more narrowed evidence of audit firm tenure. In conclusion, they failed to state out crucial evidence that longer audit firm tenure is connected with nether earnings quality. Nagy, A. L. (2005) published a different prospective, the indicator were a huge number of restatements of financial statements to measure the quality and find out that the tenure is not correlated with the resumed statements. Carcello, J. V., & Nagy, A. L. (2004) published out that lurking financial reporting is a mandate of audit quality and those reports are placed in the first three years of audit tenure and again they failed to evidence the above conclusion with a long audit firm tenure. Other researches such as Ghosh, A., & Moon, D. (2005) using the earnings returns and their factors as a mandate of earnings quality and they find a assertive connections between them and audit firm tenure. Also the above research find out that the effect of reported earnings on corporations stocks get bigger with liberalized tenure. All the above studies had to manage limitations about the firm tenure and the quality of earnings, the tenure of audit firm is connected with the tenure of partner and the evidence are related, this limitation is difficult to make any connection or not about firm rotation and any effect on earnings quality.

Researchers and studies around the globe are separated in two groups of opposite opinions. Practitioners argue that base on worries about the auditor awareness that the quality of audit is undermost in the premature years of the relationship of auditor, client and that the quality is much sublime given farther tenure. The independence of auditor is a vital topic of the audit procedure. Sarbanes & Oxley act of 2002 in US tackle audit firms and the services, which they provide as illicit in cases which the partner accouters services for an assured corporation for five serial years. The audit tenure has been defined as total figure of years that the patron has preserved to its audit firm and to lead of the audit procedure. The audit firm tenure and audit partner tenure are thoroughly related such as theory and other studies published. The compromise of progressive acting of learning, immoderate familiarity has been a cost benefit reward in the rotation argue. When the explicit collision of addable learning learn experience minimized at a confident tenure level inordinate habitude would impair audit quality in a lengthy client – auditor relationship. Therefore, to ransack whether the incremental effect of auditors learning knack abate with prolonged audit tenure. Moreover, between client specified sense and the emergence of learning experience with tenure is the same at the layer of audit firm and audit partner layer is a serious topic and accouter a precious cross-reference of legislation (Kaplan, S. E., & Mauldin, E. G. 2008).

Empirical establishments show connections twixt audit firm tenure and auditor efficacy and faculty. Lee, J. W. (1997) publish that firms with elongate audit firm tenure have minimum audit report lag a mandate for auditor's effectiveness. These various opinions ambient the emission of peremptory audit firm rotation and the rivals of audit rotation are anxious about the costs of auditor. These believes state that changing auditors may sway much broad quality of earnings but that creates immoderate habitude. In US the audit report has to be undersign of two partners, these principles equipped with the occasion to research how audit partner tenure and audit firm tenure effect the quality of audit procedure and creates conclusion with the opinion of the audit procedure

Independence of Auditor

The independence of auditor is the sty lobate of the auditing procedure and profession. The independence of auditor has two types: a) independence in any circumstances and b) independence in appearance. Acts around the world claim that auditor have to form and express opinion in the audit report with impartiality, special watcher unprejudiced in any personal bias, expects to dodge status that cause others to conjecture (Porter, M. 2003).

Flint, D. (1988) pointed out that independence of the auditor is tangled in person to person relationship with the client as this may sway their mental posture their mental attitude and final opinion. One vital threat are the extensive tenure. Flint D. point that extensive tenure in audit corporation may drive auditor to evolve "warm relationships" and faith emotional with clients which creates a field where auditor independence is menace. This problem awarded as a duress to auditor independence and constituted that auditors dodged situations that may conclude them to become too much affected or over trusting directors and key management executives which lead to audit procedure and personnel to be more than friendly to the client interest. When those relationships are so close independently of the years, the two parts are under the same cover there is a small chance of professional jugging, and skepticism is a vital reason. The proposal to that issue was the mandatory auditor rotation AICPA (1978) but some argue that audit tenure that may increase the audit final price. The independence of auditor is material to impartial assurance service procured by auditors to shareholders, stakeholders and investors. Criticizers disputed that a long audit tenure can deteriorate the independence and the quality of audit. Evidence from the study of Ouyang, B., & Wan, H. (2013) suggest that a long audit tenure is connected with the stock option of each corporation and the final evidence proposed that the deleterious effect of long audit tenure appears in larger audit clients. Netherless empirical evidence such as Azizkhani, M., et al. (2012) suggest that the quality of financial reporting is abased when auditor tenure is scrub. The exegesis is that it is hard and expensive to get the client knowledge required to generate a aloft quality audit. All these costs need to be overweighed contrary the duress of independence, suggestions for a period of five years have been turned down after the pressure of accounting firms and well-known corporations. All these corporations argues that it is vital to leave the auditor to be a part of the company to understand the environment and a law of five year maybe create an industry of gold-plated audit opinions without substantial meaning. Kanellou, A., & Spathis, C. (2011) published the connection with independence of auditor and the distended tenure something which affected the output of audit procedure. Several risks increasing the independence of audit and after that point if shields are not put in place to control them then conclusion of the audit is not so possible to counted to the users. The explanation of this problem is that the users of financial statements and the audit reports have scrub notion and so this make's the auditing litigation valueless. After that categories of safeguards arise as the follows: i. safeguards created by the occupation and regulation ii. safeguards into audit firm and auditor process iii. safeguards created and holding the client.

Legislation and Audit Firm Rotation in EU & US

A number of accounting scandals in years of financial crisis and previous force the regulators to consider a more efficient way of quality and fully lawful audit. European Union and more specific Italy back in 1975 introduced the mandatory audit rotation in audit firms. In EU in our days is mandatory to audit firm rotation and those changes has made serious institutionalization to the bylaws in accordance to make an efficient and effective path of a seamlessly auditing structure. This movement requires reforms in several rules audit and financials in general with vital results in corporations in different industries. The requirement is in all to public entities including listed companies, banks and insurance corporations. In these cases, the law defines the rotation of auditors every 10 years. Furthermore, EU regulations ban audit firms to serving others non-audit services to their clients such as consulting, tax and advisory services. The banded services are linked to decisions with management and financing capital and with the investment strategy and if an audit firm has any connection with that then the conflict of interest arising. Needless to say, that there is an active ban also for loan agreements which requires by law the audit to be performed by one of the Big Four firms. The law comes into potency on June 2016 and a huge number of regulations and countries adopted them (Tysiac, K. 2014).

In addition, in US the PCAOB like previous we mention tend to mandatory force the rotation in audit. However, for now the state authorities decided to maintain the rotation law without mandatory character. The rule in overall time breaks to time based audit engagements to shun any possible long relationships with auditor and auditing some, which damage the final audit quality. The law intones to five year of mandatory rotation between auditor and auditing but in our days and more specific in 2018 the American Congress start to debate about the two years but without any possible outcome. The Securities Exchange Commission (SEC) make a tremendous research about a potential two-year rotation in traded companies. Considering all the above this rotation in audit firms is a way to enforce the quality of an audit. The independence of the auditor years to year in a possible engagement will be more efficient. When the same firm around the years provide services to the same auditing may that phenomenon create professional routine and the auditor may overlook vital accounting areas, which considered being clear in previous years. In addition, the competition between the auditing firms could reduce with the choice of a non- big audit firm as alternative with fresh changes in accountings policies (M.Cameran, et al 2013).

Comprehending of the Auditors Role

Auditor professional must manage three key roles. The first one is to dispatch the efficient and valid access to financial markets. The roll of the auditor here is to secure that all companies are playing by the same rules and to eliminate misstates and issues against the accounting standards. The second role is to report the results of the check to shareholders and to assure that management is fair and direct in reporting the performance of the corporation. The third role is to obligate as a part of the regulatory mechanism. In this case auditor is an approved expert in reporting and assuring that the corporation financial statement is following the rules and acts of the IASB and the FASB1 (Vander Bauwhede, H., et al. 2003).

One of the main scopes of this research is if the auditor matter opinions modified or unmodified with intention to benefit him or herself in accordance with executives. A sample of 532 corporations, had a 91% unmodified audit opinion while a 9% of this corporations had a modified audit opinion. This number according to other studies evidence that from the US nominate that lesser than 10% of total audit reports present reports with modified going concern opinion. Therefore, less than 10% of sample consist in of modified reports are quite common. The 8.46% of companies received a modified audit report received if for various reasons such as charges and worker benefits paid past the point of no return, depicts the internal control relation to accounting and payment of salaries. Other reasons of modified audit report are the value of organization is reduced that the organization is running under close to home risk for installment stock has low turnover proportion for various years, the evaluate

[1] Financial Accounting Standards Board

can't suggest or counsel against the yearly record. However different reasons are uncertain debts, doubts regarding going concern and illegal loans from the company to the owners of the corporation. Therefore, the are a various number of reasons for why corporations receive a modified audit report from the auditor (Simunic, D. A. 1984).

Agency Theory and the Role of Audit

The auditors in recent years be caused for several miscarriage and been carped for any disclosing information which may protect failures and investors from scandals. The agency theory explain losses of value or wealth when participants acts (as agents) for another. Clash of interest arises when the upper level of management hired to present decisions to benefit their selfs rather than the interest of owners. DeAngelo, L. E. (1981) defines that the size of reputation of the accounting firm is a vital factor that affects the quality and the tenure of audit firm, a big accounting firm includes higher audit quality results. Late researches point out that there is a connection between the type of industry of the client, the specialization of the auditor and the quality of the audit reports. Accounting firm with expert in specific industries can raise up the quality of audit due to the advantage of the knowhow for specific cases and problems. After that each company want to upgrade the wealth for the owners and the upper level of management try's to benefit in any cases from audit procedure. For this reason conflicts of interest between the client and the accounting firm creates problems. One agency model nominate that as an output of information asymmetries and self-interest lacks. By using some vital measurements of accounting perspective (spread, price impact measurements) find that corporations with contrary audit opinions specially with unqualified, show great asymmetry information in the sector. Each corporations wants to maximize profits, have huge market opportunities and connections with other parties that are not relational to principals. The output of these phenomenon's is a tendency for agents be more sanguineous about the path of the economic feature and the performance of the entity. The role of the auditor is vital by testing these actions, choices and results and the auditor impersonate one agent in this scenario. Colbert, G., & Murray, D. (1999) state out that the auditor was to testing the results of upper level of management with policies of management. The shareholders with an audit report are more assured that the information they greet is fairly introduced. This reliance comes at the outgo of an agency cost named the cost of the audit. The external auditors investigate the actions of the management and the BoD since these they are fully responsible for the regulatory despite the client itself. The agency theory affiliated the audit procedure and monitor the management for self interest reasons. The theory says that intercompany members try's to maximize their own and the audit gives assurance that the outside debtholders and stakeholders are good informed about the environment of the examined business, for instance the auditor has to examine an area with vital outstanding debt and the role of the auditor is to keep the creditors well inform. Above we mention that auditors acts as agents to principals when an audit engagement is activated, auditor independence is a great value and is a key factor for a quality audit report, but the working environment of the auditor including relationships the board of directors of the corporation and this close connection led the investors to think about the independence of auditors. The reputation of the accounting frim is a key value in a contract of trust and independence for quality results and a holding independence to secure their fame and help them to expand their clientele. In order to measure the agency costs we use the McConnell, J., & Servaes, H. (1990) formula named Q-Tobin and the Lehn, K., & Poulsen, A. (1989) formula for Free Cash Flow.

Free Cash Flows and Agency Costs

Free cash flows presents the number of cash that a corporation creates after cash outflows to maintenance operations and capital assets. Free cash flow is a measurement of profitability that count out the non-cash expenses of the income and comprises spending on accouterments and assets as well as increases or decreases in working capital. Executives acting as agents of shareholders a relationship with huge interests most of the times with vital collisions. The growth of the corporation is a motivation for a manager because after that the power of each manager increases thought controlling vital areas, the compensation packages are also associated with to the growth. Through cash flow managers making a perfect picture to shareholders about targets of sales which been achieved, perfect controlling procedure which saving money and finally successful financial projects. At this point managers want to maximize their power and shareholders want to maximize their wealth and agency problems arise. Monitoring costs such as the acts of board of directors for the profitability of shareholders, bonding costs like an agreement between the previous manager and the new owner of a corporation after a successful selling and finally residual losses which arises from the different interests between managers (agents) and owners (Jensen, M. C. (1986)).

In order to support our thesis we use the Lehn, K., & Poulsen, A. (1989)formula to measure the free cash flow of our sample in order to create a strong independent variable that is likely to lead us to important results.

Hypothesis Development

Carcello, J. V., & Nagy, A. L. (2004) published a study about the relationship between auditor tenure and absolute discretionary accruals and find out that a small tenure is associated with the larger discretionary accruals, but long tenure is not associate with any decreases in audit quality also he measures audit tenure with two types of accrues the discretionary and the current accruals. That study also informs as about the association of audit tenure with income less increasing fragments, which means that the upper level of management becomes more narrowed as the audit tenure, keeps more. In the end, they do not find evidence that a high audit tenure is correlated with audit quality. The investigation of Mayangsari, S., & Wahyuni, E. S. (2005) point out that there is a serious linear relation between audit tenure and audit quality because of the auditor procedure, but those studies just use the audit tenure with no consideration to audit partner tenure. Also, the tenure and rotation of audit firm and auditor was under investigation of Knechel, W. R. (2007) and they find out increases on discretionary accruals cause of the audit firm rotation but with any effects of auditor rotation. Supporters and abolitionists have their arguments and every side has its own arguments to patronage their believes. The above opinion with the contradiction's arguments about the mandatory audit firm tenure have vital evidence but which of them are grounded or not is an empirical question. Therefore, we focus our hypothesis on audit tenure according to the literature and the above investigations and we formulate our fist hypothesis as follows:

Hypothesis 1: Increased audit tenure has impact on quality of earnings thought discretionary accruals

Watts, R. L., & Zimmerman, J. L. (1983) published that auditors have an impost to reduce the agency costs and the number of asymmetric information which including. Investigating the connection between the strategies of corporations and agency costs of firm and considered the agency costs as a part of the interplay between free cash flows and opportunities, they stated that several agency costs are related to different parties of corporations including also and the cooperation of the audit firm. Therefore, we focus our hypothesis number two at audit tenure in relation with earnings quality and agency costs according to the literature which we mention above and we formulate the following the hypothesis:

H2a: Increased auditor tenure and earnings quality as measured by discretionary accruals in accordance with agency costs may contained manipulated results.

III. Sample & Analysis of Variables

Sample Selection

Our sample includes all of the nonfinancial corporations included in S&P 500. From the sample which mention before we had to exclude observations for several reasons such as missing values or neophyte corporations which are not available during the examiner years. The period starts from 2010 up to 2014, all the required data are acquired from Audit Analytics Database. The sample of S&P 500 includes 505 corporations, we delete 113 corporations and the final sample consists 392 corporations with 1.710 observations. The following table presents in details the sample.

Table 1. Sample Analysis

Industry	Frequency	Percent
Consumer Discretionary	78	19,89%
Consumer Staples	38	9,69%
Energy	19	4,84%
Health Care	60	15,3%
Industrials	43	10,96%
Information Technology	67	17,09%
Materials	14	3,57%
Real Estate	13	3,37%
Telecommunication Services	5	1,27%
Utilities	25	6,37%
Total	**392**	**100%**

In the table above, we illustrate the distribution of our sample by various assortments. This panels demonstrate how our sample is distributed among different sectors with emphasis in the Consumer Discretionary (19,89%) followed by Information Technology (17,09%) and Health Care (15,3%).

Methodology

Discretionary Accruals

Our goal is to concede the association between Audit Tenure and Earnings Quality. We moved by developed a model that can predict how earnings quality is connected with the audit tenure. The Earnings quality is measured with discretionary accruals, so them became our accepted proxy for managerial discretion. The discretionary accruals has been used in several studies, used in order to procure the audit quality issue and earnings management. The formula of Beneish, M. D. (1999) called "The Detection of Earnings Manipulation'' helped us to identify potential manipulations of benefits if they have high deals development, weakening gross edges rising working costs and rising influence. They are probably going to control benefits by quickening deals acknowledgment, expanding cost deferrals, raising accumulations and decreasing deterioration. Beneish presumed that if an organization scored bigger than - 2.22 (for example a less disclaimer or positive number) there was a conceivable likelihood of benefit control. Beneish contended that he could effectively distinguish 76% of controllers, while just inaccurately recognizing 17.5% of noncontrollers. In a further paper in 2007, The Predictable Cost of Earnings Manipulation, he utilized the M-Score as a stock determination strategy from 1993 to 2003. This technique created a supported return of almost 14% per annum. An ensuing paper called, Identifying Overvalued Equity, demonstrated that an overvaluation score (OScore) joining intermediaries for profit exaggeration, merger action, stock issuance, and the control of working exercises could recognize firms with figure strange value decays averaging - 27%. Concerning all the above the formula that was used to calculate accruals quality is the following: ***Beneish M-Score = -4.84 + 0.92*DSRI + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI – 0.172*SGAI + 4.679*TATA – 0.327*LVGI*** These eight ratios are explained as follows:

- ***(DSRI) Day's Sale's in Receivables Index:*** An immense increment in receivable days recommend speeded income acknowledgment to swell benefits
- ***(GMI) Gross Margin Index:*** A aggravating gross margin responds a negative signal about a firm's perspective and creates an incentive to inflate profits
- ***(AQI) Asset Quality Index:*** Increases in long haul resources (capitalization costs) other than property plant and gear with respect to add up to resources bring up that firm has possibly expanded its association in cost deferral to blow up benefits
- ***(SGI) Sales Growth Index:*** High deals development does not mean control, but rather high development organizations are bound to submit money related extortion in light of the fact that their monetary position and capital needs put pressing on directors to accomplish profit targets. On the off chance that development firms confront vast stock costs misfortunes at the primary designation of a stoppage, they may have more prominent inspirations to control income
- ***(DEPI) Depreciation:*** A dropping dimension of deterioration with respect to net settled resources builds the likelihood that a firm has reexamined upwards the registered valuable existence of advantages or received another strategy that is salary expanding
- ***(SGAI) Sales General & Administrative Expenses:*** Investigators may characterize an unbalanced increment in SG&A in respect to deals as a negative sign about an association's prospects, in this manner making an innovative to swell benefits
- ***(LVGI) Leverage Index:*** Use is gaged as all out obligation with respect to add up to resources. An augmentation in use makes a motivator to misrepresent benefits so as to meet obligation contracts

(TATA) Total Accruals to Total Assets: All out gatherings are figured as the varieties in working capital less devaluation with respect to add up to resources. Accumulations mirror the degree to which administrators settle on optional bookkeeping decisions to modify income. A larger amount of collections is, hence, related with a higher probability of benefit control.

Agency Costs

In order to measure agency costs we use the Q-Tobin formula multiplying the free cash flows.

Q-Tobin: measure the performance of management, a high number of management outcome reduces agency costs. McConnell, J., & Servaes, H. (1990) using this formula:

Q-Tobin = *(Market Value + Total Debt) / Total Assets*

Free Cash Flows

For the calculation of free cash flows we use the model of Lehn, K., & Poulsen, A. (1989).

FCF = *(Operating income before removing depreciation – Income Tax – Interest expenses – profits paid to shareholders) / Total assets*

Analysis of Variables

Table 2. Variables Table

Name of Variable	Label	Variable Measurement	Type
Earnings Quality	EQ	Beneish M-Score for discretionary accruals	Dependent
Audit Firm Tenure	ATEN	Tenure equals the number of remains years of same audit firm	Independent
Agency Costs	AGC	Q-Tobin * Free Cash Flow	Independent
Growth of company	GROWTH	Percent Sales Growth (%)[1]	Control
Big Four Accounting Firm	BIGN	0 for a Big Four 1 for a Non-Big Four	Control
Leverage	LEV	Total debt of corporation (%)	Control
Return on Assets	ROA	Return on Assets Ratio (%)	Control
Cash Flows for Operations	CFO	Net cash flows from operations	Control

IV. Empirical Results & Discussion

Linear regression analysis is performed to examine our developed hypotheses. Hence, we use the ordinary least squares (OLS) model to test the effect of audit tenure &

[1] We use the following equation for each corporation in excel : (Current Period Net Sales – Prior Period Net Sales) / Prior Period Net Sales *100

earnings quality variables and a set of control variables. Thus, the model developed is as follows:

$$EQ = a^0 + b^1*ATEN + b^2*AGC + b^3*GROWTH + b^4* BIGN + b^5*LEV + b^6*ROA + b^7*CFO + ye + et$$

Descriptive Statistics

Table 3. Stata Output: Descriptive Statistics

	EQ	ATEN	AGC	GROWTH	BIGN	LEV	ROA	CFO
mean	-1.89	3.47	-.1874	4.81	.09	3.83	1.93	5.07
min	-1.81	1	-.9107	0	0	-29.81	-3.50	-27.11
max	-2.22	5.0	.4606	5.83	1	38.46	2.01	41.98
sd	-1.60	4.19	.5149	1.01	.40	6.08	.64	10.91
med	-1.83	2.55	-.0798	1.55	1.00	3.78	1.08	5.17

From the table above, we can see the descriptive statistics of our model. The table reports the descriptive statistics from our 392 firms. The dependent variable EQ has a mean of -1.89 for the five consecutive years from 2010 to 2014, while standard deviation is -1.60 respectively. Moreover, we observe that the maximum value is -2.22 and the median -1.83. The explanation of those results is that in our sample we have corporations that may include manipulation phenomes because of that maximum value of -2.22. Our independent variable ATEN presents Mean value of 3.47, median of 2.55 and maximum of 5.0 and the standard deviation is 4.19. Our second independent variable YEARSLS presents Mean value of 22.10, median of 24.11 and maximum of 51.09 and a standard deviation of 10.25. Our last independent AGC presents a mean of -.1874, a median of -.798, a maximum .4606 of and finally the standard deviation of .5149.Moreover, the control variable GROWTH, presents a mean of 4.81, a median value of 1.52 and standard deviation of 1.01. Having a positive value of GROWTH is an indicator that most of the firms have achieved an aggressive policy which affects positively the sales with profits. BIGN, which is a control variable of our model, reports a mean value of .09 within the examined period. The results for this variable show us that around the years the corporations have the same audit firm and specifically a big four well known accounting firm A maximum value of 1, the standard deviation is .40. LEV consists one more control variable of our model, with a mean values of 3.83 for the years between 2010 and 2014. The standard deviation is 6.08. From these results we can safely assume that both mean and standard deviation follow the same trend with a max value of 38.46. ROA which is also a control variable has a mean value of 1.93, standard deviation of .64 and a max value of . Those results state out that the corporations around the years have to manage serious debts but with any effects in their audit reports. ROA variable has a mean value of 1.93, a standard deviation of 0.64 which shows that many companies haven't an aggressive strategy to manage their assets efficiently to generate profits from them. The last variable CFO has a standard deviation of 10.91, a mean value of 5.07 and finally a max value of 41.98.

Correlation Matrix

Table 4. Stata Output: Correlation Matrix

	EQ	ATEN	AGC	GROWTH	BIGN	LEV	ROA	CFO
EQ	1.000							
ATEN	0.9800***	1.000						
AGC	0.9892**	-0.470	1.000					
GROWTH	0.1000	-0.0320	0.0099	1.000				
BIGN	0.2200	0.0443	-0.0937**	0.0894**	1.000			
LEV	0.7000	0.0179	-0.0320	-0.0738	-0.0380	1.000		
ROA	0.1033**	0.1027**	0.0552	0.0950	-0.0400	-0.1033*	1.000	
CFO	-0.3900	0.1033*	0.9194	-0.0158	-0.0060	0.1362	0.0220	1.000

The table above represents the correlation matrices for the variables used in our sample giving significance levels at 1%, 5% and 10%.Correlation coefficient between our main explanatory variables BIGN and GROWTH are statistical significant at 5%. The correlation coefficient of those two variables is 0.0894 while the variables of LEV and ROA have correlation coefficient at 1% with a correlation coefficient of -0.1033 and that means that they have different relations from BIGN – GROWTH. A possible decrease or increase of one variable will effect the other variable by -0.1033. The correlations between our dependent and control variables are interesting. From our control variables only the ROA has a correlation coefficient of -0.1033 at 5%. Our two independent variables of ATEN at 1% with coefficient of -0.9800 and AGC at 5% with a coefficient of -0.9892. The conclusion of the above table is that our variables are significant at 5% with each other and less at 1% and 10%. We observe that our variables is well fitted with each other and our model its possible to lead us to accountable results.

Regression Analysis (OLS)

Evidence presented by descripted statistics and the tables of the correlation matrix concerning univariate relations between the variables in not enough. Therefore, we try to utilize Ordinary Least Squares (OLS) regression analysis for more depth results.

Table 5. Stata Output: Ordinary Least Squared

Source	SS	df	MS		
				Number of obs =	1710
				F(6, 502)=	.
Model	28.944611	6	13.494.442	Prob > F=	0.00
Residual	.44088306	1.703	.02062406	R-squared=	0.7995
				Adj R-squared=	0.7995
				Root MSE=	.01439
Total	28.012458	1.709	0.45418892		

EQ	Coef.	Std.Err. T.	t	P>t	[95% Conf.	Interval]
ATEN	.0078223	.0075975	8,94	0.000	.0227603	.0071157
AGC	-.00010	.010110	-0.18	0.080	.0004714	.0001412
GROWTH	.99908	.0011837	1.34	0.000	.9967528	.1001407
BIGN	.006609	533.308	3.30	0.000	1.02207	.1074071
LEV	-.475508	497.706	-0.39	0.092	-9.72106	1820061
ROA	-.27406	.0002651	-0.36	0.062	-.0005184	.0005239
CFO	-.89507	.324406	-4.40	0.083	-5.48106	.7273066

_cons	.1093354	.1108251	-6.50	0.000	.3272354	.1085647

The results of the regression analysis help to eliminate the gap of the association between audit tenure and earnings The R-squared is 0,7995 meaning that approximately 80% of the variability of EQ is accounted for by the variables in the model. The coefficient of ATEN is .0078223, so for a unit increase in ATEN a .0078223 increase in EQ arise holding all the other variables constant. The coefficient of our last independent variable AGC is -.00010, so for a unit increase in AGC a -.00010 unit decrease in EQ arise holding all the other variables constant. The coefficient of GROWTH is .99908, so for every unit increase in GROWTH we expect a close to 1 point increase in EQ. The coefficient of BIGN is .255609 so for every unit increase in BIGN we expect a 2.5 increase in EQ . The variable BIGN is coded with 0 &1 and that means the score of EQ would be 2.5 points greater than for 1 (non-big four accounting firm). The coefficient of LEV is -.475508 so for every unit increase in LEV we have a 0.475508 decrease in EQ. The coefficient of ROA is -.27406 so for every unti increase in ROA we have a .27406 unit decrease in EQ. The last coefficient of CFO is -.89507 so for every unit increase in CFO we have a .89507 unit decrease in EQ. The column with p values used to test the null hypothesis that the coefficient is 0. Using an alpha of 0.05 we have the following results. The coefficient for ATEN is significantly different from 0 because the p value is 0.000, a smaller number than 0.05. The same results we have and for the variables of GROWTH, BIGN and . About the rest of the variables we have p values greater than the 0.05. We observe, that in a model of 1710 observations we have P values of 0.0000, meaning that we used variables that affect one another and all together the dependent variable. From the above table we can assume that our model is quite precise and give as reasonable results for our hypothesis. The variable of AGC is rejected because the p value is bigger than 0.05. The ATEN on the other hand cannot be rejected because we have a p value of 0.000 meaning that earnings quality through discretional accrues are high significant with Audit Tenure (ATEN). In order to test our variables for more vital results we run a OLS robust regression.

OLS Robust Regression

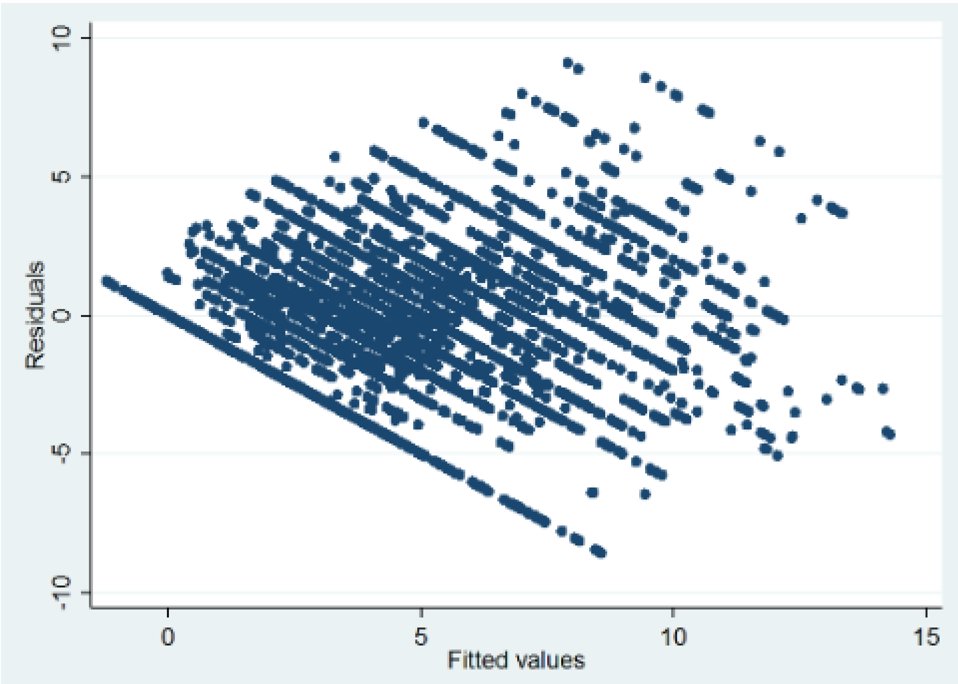
Table 6.Stata output: Robust Regression

Linear Regression	Number of obs	1710
	F(8, 502)	= .
	Prob > F	= 0.0000
	R-squared	= 0.7995
	Root MSE	= .1439

EQ	Coef.	Robust Std. Err.	t	P>t	[95% Conf.	Interval]
ATEN	.0078223	.0057181	1.33	0.000	.0188719	.0036135
AGC	-.00010	3.480200	-0.90	0.071	.700.106	0.999999
GROWTH	.99908	.0018975	6.52	0.000	.9953241	.0027222
BIGN	.006609	2.96130	0.07	0.000	.024.508	.0097532
LEV	-.475508	.0000234	-0.52	0.072	-.0000583	.0000338
ROA	-.27406	.0002871	-0.04	0.047	-.0005754	.0005535
CFO	-.89507	.0036429	-0.16	0.070	-.0077592	.0065622
_cons	.1093354	.0535351	-1.96	0.000	.2103696	.0001495

We decided to run a robust regression in order to take results that are more accurate. The value of R squared have not any changes so the model still fits well in a model of 1710 observations. As we observe in the table above, there are changes mostly in the Standard Error results and in the p values. Furthermore, we observe that the P values of ATEN, GROWTH, BIGN have the same results of 0.000 in accordance with our dependent value EQ meaning that the earnings quality through discretional accruals have correlations with audit tenure, growth of each year and the possibility the audit firm to being a big four. The variable of LEV reports a p value of 0.072, this means that there is not much evidence of correlations between EQ and LEV. The same assumptions applies to other variables such as ROA and CFO. It's vital to highlight that the value of AGC failed also in this test so we don't have evidence about connections of agency costs with earnings quality and audit tenure as we assumed in hypothesis no2. After the results of OLS and Robust Regression we have to point out the variables are in a good shape but some hypothesis needs more deep research with statistical models. Our thesis gives the potentiality for ulterior investigation in the distant future. Also with the Robust Regression, we have the opportunity to investigate for heteroscedasticity suspicions. The following graph illuminates our findings. The graph represent that all random variables have the same finite variance so the null hypothesis of constant variable is not rejected and we observe that we have homoscedasticity in sample variables.

Graph 1. Graph of Variables



Fixed Effects Test

Table 7. Stata Output: Fixed Effects

Fixed-effects (within) regression Number of obs = 1710
Group variable: years Number of groups = 375

R-sq: within = 0.7995 Obs per group: min = 1
between = 0.7998 avg = 4.1
max = 5

overall = 0.7995 F(8,502) = 101.59
corr(u_i, Xb) = 0.0456 Prob > F = 0.0000

EQ	Coef.	Std.Err. T.	t	P>t	P>t [95% Conf.	Interval]
ATEN	.0065089	.00767	1.03	0.000	.0227603	.0071157
AGC	- .037658	.0063423	-1.40	0.455	548.106	.7273066
GROWTH	5.5598	1.72347	1.34	0.000	.9967528	.1001407
BIGN	.000019	.0001257	1.30	0.000	-102.207	.1074071
LEV	-.000019	.0002756	-0.39	0.992	-972.106	1820061
ROA	-.000039	.0000169	-0.36	0.992	-.0005184	.0005239
CFO	- .000660	.0011167	-0.19	0.846	-.0119234	.0013173
_cons	.076023	.105603	-0.90	0.000	.3272354	.1085647
sigma_u	.01426955					
sigma_e	.14384059					
		(fraction of variance due to u, i)				
rho	.00974551					

F test that all u_i=0: F(4, 380) = 0.74 Prob > F = 0.0000

In the table above is reported the results of the Fixed Effects Test that we run in our model. We have a total number of 375 groups (entities) and finally a number of cases (rows) 1710. We have p values of 0.000 meaning that our model is accurate. The output stated that between and overall there are fixed effects and there is no need for further test for random effects.

V. Conclusion & Further Investigation

In our days the goal of the audit procedure is to examine the financial statements of a corporation with independence like a third party. The examination ends up either in an audit opinion the financial statements have been stated fairly or not according to the each reporting framework. Several studies tried to understand what causes problems between the co-operation of accounting firm and client but the majority of them failed to establish results. Also prior studies concluded to same results and stated that there is no significant association between audit tenure and earnings quality. The difference with the prior literature is that we analyzed a huge sample but with a smaller period of time. We measure audit tenure by the years of professional collaboration between the accounting firm and client and with the discretionary accruals we measure the Earnings Quality and the related agency costs, using a sample of 392 corporations from a variety of sectors from S&P 500 index. Our funding is shows that the audit tenure affect the earnings quality. We understand that the audit tenure is correlated with discretional accruals therefore earnings quality when the accounting firm remains for 5 years. We have to investigate two questions 1 increased audit tenure has impact on quality of earnings thought discretionary accruals 2) increased auditor tenure and earnings quality as measured by discretionary accruals in accordance with agency costs may contained manipulated results . Our results point out that audit tenure could have results on quality of earnings in five consecutive years but we failed to define the connection of agency costs with earnings quality and manipulation results. A possible explanation about our failure is that we have to manage a huge number of information for 392 companies in a period of five years with several difficulties. We use the variable of ATEN in order to define the years of the collaboration between accounting firm and client. The results from the descriptive statistics shows that discretionary accruals have an association around the five years with variables such as the growth of each corporation and the possibility that the accounting firm being a Big-Four. The correlation coefficient between ATEN and EQ is .0078223 (0,78%), that means that in a sample of 392 corporations there are 0,78% changes of connections between the audit tenure and earnings quality which lead us to conclude to common trends of increases or decreases between the audit tenure and earnings quality. That 0,78% is a small number and it does not give us the possibility to build a vital association but illuminates the possibility for further studies. A possible explanation of the small percentage of ATEN with EQ Also is because the sample doesn't include the factor of partner tenure. The correlation coefficient between EQ and the AGC point out a small percentage of 0,01% but the p-value lead us to reject this variable. A possible explanation for our failed results is that agency costs including fees and other amounts which is difficult to identified them. After all the hypothesis number one is true and proven with the above data but the hypothesis number two is rejected. Many times we faced with limitations such as private information's about amounts, the lag of information's, financial statements with a different structure, variables that didn't match, gaps in time basis of audit reports. According to the prior investigations and to our results this thesis leaves a blank space for serious investigation on the audit tenure and earnings quality, with the adoption of our second hypothesis a more structured approach of variables in a longer time basis may lead to even more enlightening results.

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