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AUDITOR INDEPENDENCE AND EARNINGS MANAGEMENT

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Abstract

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Title Auditor Independence			
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Abstract <p>This research paper investigates the auditor's independence especially in today's modern age where the role of auditor is becoming more and more important as businesses are developing and more and more use of technology, on one hand limits the use of personnel but on the other hand hides the possible effects of human error makes the job even more difficult. So, this paper investigates that how independent the auditors are in today's world and what are the factors that can affect their independence like non-audit services and what sort of affects, auditor independence can have on earnings management and some suggestions that how the auditors can actually be independent instead of hiding behind the image of being independent when actually they are just a dummy in the hands of the management.</p> <p>I have examined the independence of the auditor by the provision of non-audit services and to what extent auditors independence can allow management to do earnings management or window dressing in Finnish markets by taking the data of the Finnish listed companies. I have used three hypotheses to prove that either the provision of non-audit services does affect the independence or not and to what extent earnings management can be linked with loss of auditor independence. I have used yearly regression model initially and tested the same models with pooled regression models. The yearly tests which I have used suggest that there is a positive relationship between audit and non-audit fees. Though I couldn't find significant results for either of relationship between audit fees and discretionary accruals or non-audit fees and discretionary accruals, a measure of earnings management.</p> <p>When I used pooled regression model, I do find positive relationship between audit and non-audit fees. I also found positive relationship between audit fees and discretionary accruals, when the results were insignificant in yearly regression model. The pooled regression results for relation between non-audit fees and discretionary accruals were insignificant though.</p> <p>So, my findings were not enough to prove that auditors do lose their independence because of provision of non-audit services and that to what extent auditors independence can give room to management for earnings management.</p>			
Keywords Auditor Independence, Non-Audit services, Audit fees, Non-Audit Fees, Earnings management, Window dressing, Discretionary Accruals.			

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CONTENTS

1	INTRODUCTION	7
1.1	Research Design and Its Purpose	8
2	THEORY BUILD UP	12
2.1	Business and Transparency.....	12
2.2	Need of Accounting and Auditing Standards.....	12
2.3	Agency Theory.....	14
2.4	The External Auditor.....	16
2.5	Ethical Paradigm in Audit	17
2.5.1	ICAEW defines fundamental principles of ethics as follows,	18
2.5.2	Threats and Safeguards approach	19
3	MEASURES & CONSEQUENCES OF AUDITOR INDEPENDENCE ...	21
3.1	Measures of Auditor Independence.....	21
3.1.1	Audit Fees	21
3.1.2	Provision of Non-Audit Services (NAS)	21
3.1.3	Auditor Tenure.....	22
3.1.4	Auditor Opinion.....	23
3.1.5	Audit Firm Size.....	24
3.2	Discretionary Accruals & Earnings Management.....	25
4	HYPOTHESIS DEVELOPMENT	27
4.1	Hypothesis 1.....	28
4.2	Hypothesis 2.....	28
4.3	Hypothesis 3.....	29
5	DATA SELECTION.....	30
6	RESEARCH DESIGN.....	32
6.1	Model 1 to test the H1	32
6.2	Discretionary Accruals to Test H2 & H3	33

6.2.1	Model 2 to test H2	34
6.2.2	Model 3 to test H3	35
7	RESULTS	36
7.1	Descriptive Statistics	36
7.2	Pearson Correlation	38
7.3	H1: Audit fees and Non-Audit fees	41
7.4	H2: Audit fees and Discretionary Accruals	42
7.5	H3: Non-Audit fees and Discretionary Accruals	44
7.6	Additional Tests	46
7.6.1	H1: Audit fees and Non-Audit fees	46
7.6.2	H2: Audit fees and Discretionary Accruals	47
7.6.3	H3: Non-Audit fees and Discretionary Accruals	48
8	CONCLUSION	50
	REFERENCES	53

Figure 1. Agency Theory, ‘Separation between Ownership & Control’ (Kaplan Financial, 2012)	14
Figure 2. Potential Ethical Threats to Auditor Independence (Kaplan Financial, 2012)	19
Table 1. Variables gathered and Created	30
Table 2. Descriptive statistics of all the variables.....	37
Table 3. Descriptive statistics of ratio of non-audit fees to total fees paid to auditor 38	
Table 4. Descriptive statistics of ratio of audit fees to total fees paid to auditor.....	38
Table 5. Pearson correlation coefficient for variables used in the model	40
Table 6. Yearly Regression model with Audit Fees as dependent variable.....	41
Table 7. Yearly Regression model with Non-Audit Fees as dependent variable	42
Table 8. Yearly Regression model with Audit Fees as dependent variable and Discretionary Accruals as independent variable	43
Table 9. Yearly Regression model with TAFP as dependent variable and Discretionary Accruals as independent variable	44
Table 10. Yearly Regression model with Discretionary Accruals as dependent variable and Non-Audit Fees as independent variable	45
Table 11. Yearly Regression model with Discretionary Accruals as dependent variable and TNAFP as independent variable.....	45
Table 12. Pooled Regression model with Audit Fees as dependent variable	46
Table 13. Pooled Regression model with Non-Audit Fees as dependent variable	47
Table 14. Pooled Regression model with Audit Fees as dependent variable and Discretionary Accruals as independent variable	48
Table 15. Pooled Regression model with Discretionary Accruals as dependent variable and Non-Audit Fee as independent variable	49

1 INTRODUCTION

In the past, businesses were run and managed by the same people and that's why most of the businesses were either sole proprietor or family owned businesses. In the time of economic growth, people tended to involve outsiders in their businesses who invest money and help in developing a business. Those are known as investors or financiers or shareholders and then the concept of limited liability companies came into existence.

Being the financier, investors do expect certain rights and those rights allow them to choose the best possible management that would not only benefit them but also that creates a sense of security about their investment into corporations, to safeguard returns for themselves (Porta, Lopez-De-Silanes, Shleifer & Vishny, 1998).

First Companies Act was formed in 1800s' according to which the rules were established to form a company and also set out general accounting rules to be followed. Then in early 1900s, introduction of audited balance sheets came on the scene and in 1981, Fourth directive was implemented which is considered as highly valuable in the accounting world and more improvements were initiated later on in the structure of the UK company laws and now we have the modern and efficient reporting framework like the concepts of going concern, prudence, accruals and consistency that is being used all over the world (Roberts, Weetman & Gordon, 2005).

In U.K., there has been a sense of professionalism within the accounting practices and financial reporting was considered to be the most comprehensive. Basic sources of accounting standards are found to be two which are the companies' law and the profession of accounting itself. These standards require the disclosure of profit & loss account, balance sheet, cash flow statements, director's report and statements showing all the recognized losses and gains (Choi and Meek, 2011).

There need to be appropriate and professional personnel to follow the rules and regulations and there are lots of judgement within the accounting profession and that's where the accountants play their part though their accounting practice can sometimes go in the wrong direction as well i.e. either an error or deliberate mis-judgement of

accounting practice which leads to fraud. The profession overall is highly established within U.K. and that auditing of companies is and should be taken seriously and there is a high requirement to follow those practice within the law as well (Roberts et al. 2005). All this leads to an independent opinion that whatever the accountants are doing, they are doing it right and that's where the external auditors are of help.

As far as raising finance is concerned, it can be raised in different ways. One way is to take loan from financial institutions including banks as well or else go to general public and raise finance in the form of shares or bonds. Though the second method gives rise to more owners of the company (Alexander & Nobes, 2001). This whole scenario gives rise to accountability issues because external funds are being used by someone else i.e. the management of the company to whom authority is being given to use and invest the finance to smoothly run the operations of the company and create shareholders wealth (Messier, Glover, Prawitt, & Eilifsen, 2014).

So, the best way is to have an independent opinion on the financial reports, production of which is the sole responsibility of management. That independent opinion is the way to satisfy the lenders of finance that their money is in safe hands and the accounts are transparent and reliable, Spiceland, Sepe & Tomassini (2007), and is the being given by the external auditors.

Despite this independent opinion, the world has already seen the financial scandals like Enron and WorldCom which not only affected the industry but the whole economy collapsed because of these big giants scandals. These collapses have raised questions on the trueness and fairness of financial statements. My research is motivated based on these scandals that where do exactly auditors stand in this whole scenario. Do they should be answerable or not? What were the factors which affected them to not judge these collapses (fraudulent reporting) in the companies? Have they worked independently or not? This gives rise to my research question and the purpose of this study which is discussed in the following section.

1.1 Research Design and Its Purpose

Audit itself is a very vast topic and there are lots of things to consider but the ethical

side of the audit profession is and will always be at the top because if auditors lack moral values then there is no point of having an independent opinion as the purpose of independent opinion is to have the un-biased and totally objective opinion and if that is not the case then where do actually auditing profession stands. My purpose, after studying the Enron and WorldCom scandals, is to test that how we can check the morality of auditors so that I can answer the questions I have raised in the above section.

To narrow down the whole research, my focus will be on the factors that affect or been affected by the auditor independence only (measure and consequences approach). Based on that my research question is that what are the factors that affect the auditor independence and provision of non-audit services is one of the main criteria. So, I designed my research question as

“either the provision of Non-Audit Services (NAS) to auditing clients do affect the auditor’s independence and how the auditor’s independence impairs the earnings management?”

The reason for the research question is that even after earlier audit failures around the world like Enron and WorldCom from US, HIH insurance from Australia, Ahold Delhaize from Netherlands, there has been and will always be a continuous debate in the auditing profession that what are the duties of the auditors and do they actually work ethically or not and how they can lose their independence and the best thing to check is the provision of non-audit services because if auditor is only providing auditing services to the client then client’s bargaining power is not that high as compared to when the auditor is also providing non-audit services because in that case the auditor deemed to rely on the client more and may be affected or influenced by the client and in doing so, to safeguard his own interest i.e. income in this case, will lose his independence. It’s not always the case as auditors can apply safeguards as well, but the risk is much higher. So, if the audit is not an effective exercise then it may result in giving room to management to manage their earnings hence there will be questions on the overall acceptability of auditing profession.

Auditing basically is an assurance service which gives assurance to the stakeholders

like shareholders etc. that the information provided in the financial statements is correct. There has been a vast research on the price being paid to the auditors for their auditing services which is the audit fees like mentioned by Simunic (1980), Taylor and Baker (1981) and Haskin and Williams (1988). So the audit fees charged is basically to provide the assurance service to the client that the financial statements are giving true and fair view and is based on the involvement of personnel and how many hours they need which is established in the planning stage of the audit and fees is charged accordingly. This has been mentioned by El-Gammal (2012) as well and they mentioned that the basic factors which have a direct effect on the audit fees are based on the features related to client and auditor's characteristics.

It's not only the basic fees which has been discussed in prior researches but also the premium which is charged by some higher ranked audit firms which we call as Big 4 (Big 8 in the past). Some argue that bigger auditors do charge a premium like Chan, Ezzamel & Gwilliam (1993), Craswell, Francis & Taylor (1995) and DeFond, Francis & Wong (2000) whereas others denied the fact that there is any such presence of premium like Seetharaman, Gul & Lynn (2002) and Chaney, Jeter & Shivakumar (2004).

This will be tested by using audit fees and other non-audit services fees charged by the auditors. The positive relationship between audit and non-audit fees may suggest that auditors are maintaining their independence because increase in non-audit fees and simultaneous increase in audit fees suggest that auditors are spending more hours hence audit fees is increasing as well. Though if provision of non-audit services to the audit clients don't raise any question on the financial reports i.e. all the opinions are un-qualified, then it might suggest that auditors are losing their independence (Barkess and Simnett, 1994). Though on the other hand it might suggest as well that due to non-audit services most of the tasks are done in the right way already like tax issues etc so there is no need for further qualification in the audit report.

So, once the research question is set, the next important step is to decide the area for which the results should be tested. I had different options like bigger markets such as US and UK etc, but I decided to do that research on Finland because, since I have been

studying in Finland, I have been very much fond of its accounting environment and always wanted to see that how the profession is working in Finland.

Also, I couldn't find enough articles on auditor independence which are based on Finnish companies' data so my results can be of good effect.

So, the overall plan to progress with the thesis is to incorporate following concepts in detail in chapter 2, which overall do affect the audit profession and its quality and do impact on the assurance provided by the auditors which will justifies the independence of the auditors.

- a. Business and Transparency
- b. Need of Accounting and Auditing stanadrds
- c. Agency theory
- d. The external aduitor
- e. Ethical paradigm in audit

Moving on to chapter 3, measures like 'X variables' and consequences like 'Y variables' of auditor independence will be discussed. So, once the above mentioned concepts and related measures along with consequences are discussed in chapter 2 and 3 respectively, the hypothesis will be covered in chapter 4 and then based on the established hypotheses, data collection will be discussed in chapter 5 and chapter 6 will discuss the models to test my hypotheses and based on the models, results will be presented in chapter 7 and then finally in chapter 8, the whole thesis will be concluded.

2 THEORY BUILD UP

2.1 Business and Transparency

From past few decades, transparency is one thing on which the whole world is working on especially transparency in the corporate sector. This means that especially the financial side of the companies do provide each and every transaction clearly to the shareholders and to the general public at large to show that how the invested money is being used by the companies and the main reason is to establish a faith within the society and to attract more and more investors. Transparency means more check and balance on the operations of the company and in order for investors to invest in a company these disclosures play a vital role in helping them understand the current and previous financial situation of the firm and for that purpose the document produced is known as financial reports in which the figures are mentioned in comparison to last year to give a clear picture and understanding of the operations of a company.

Due to the risks associated with the agency theory (explained below in section 2.2 and 2.3), there is a close link between accounting and auditing professions, in-fact all the listed companies in United States are required by law i.e. from Securities and Exchange commission (SEC), to publish their audited financial statements so that more and more confidence can be put on the accounting profession and towards the investors (Carey, Knechel & Tanewski, 2013).

Watts & Zimmerman (1983), emphasized on the above matter also by stating that auditing is required to resolve the conflicts between shareholders and managers which can be developed if the targets of the manager and investors are not aligned in a similar manner (as mentioned below in section 2.3). And Carey, et al. (2013) mentioned that auditing has always played a vital part in order to disclose the above-mentioned concerns and various other relevant information to investors and lenders.

2.2 Need of Accounting and Auditing Standards

Most of the laws are established to cover the investors. As mentioned earlier about the concept of limited liability companies, investors of such companies only invest the

finance, but they hire other people to manage the company. But with all this there were serious concerns over the governance of the company because the owners are different than those of the managers that leads to the agency theory which means that there is a relationship between the shareholders i.e. the owners and their agents i.e. the management. According to Jensen and Meckling (1976), an agency relationship is a contract under which one or more persons (the principal) engages another person (the agent), to perform some services on their behalf which involves delegating some decision-making authority to the agent but the issue that relates to agency theory is that in maximizing their own goals and targets, there is a chance that the agent will not always work in the best interest of the principal and instead of increasing shareholder's wealth, they may start acting in their own best interest (the concept of agency theory is further explained in section 2.3).

To prevent their interest i.e. money, investors or shareholders need some surety that their money is in the best hands and that their agents i.e. the management is actually working in the best interest of shareholders by taking the right decisions that how, when and where they should invest the money to increase the shareholders wealth and not their own. To minimise that risk and to satisfy investors own interest and to make the management to move in the right direction, shareholders or principals do hire external and independent auditors to give them an independent opinion that how the agents are performing, the company's accounts are transparent and each and every transaction is being recorded reliably and relevantly and the money is in safe hands or not and also to attract more investors to enhance the business (Spiceland et al. 2007). For that purpose, the audit profession came into existence so that investors or shareholders get an outside and independent opinion that how the management is managing their finances and company's operations overall.

Though, accounting systems do vary across the world and these differences can be either minor or major and no two countries have similar accounting systems other than UK, Ireland as well as US and Canada and other than general accounting rules, differences can also be found in disclosing information (Roberts et al. 2005).

Also there has been continuous changes in the laws and regulations of accounting profession and as mentioned by Omodero (2015), the accounting profession in the

U.K. is very different especially the professional body of ICAEW has been working very actively towards the development and betterment of the accounting and auditing profession and without their efforts, the current rules and regulations within the accountancy profession (audit is a part of which as well) wouldn't have been the same.

2.3 Agency Theory

I feel like I need to highlight more about the Agency theory, so this section is whole about agency theory that what is agency theory and how it effects the business world. The reason I am emphasizing more and more on Agency theory is because the basis of auditors is actually the agency theory and without that, perhaps there is no need for the auditors hence the independence of auditor will then be out of context.

“Whenever the advance of civilization brought about the necessity of one man being entrusted to some extent with the property of another the advisability of some kind of check upon the fidelity of the former would become apparent” (Brown 1986).

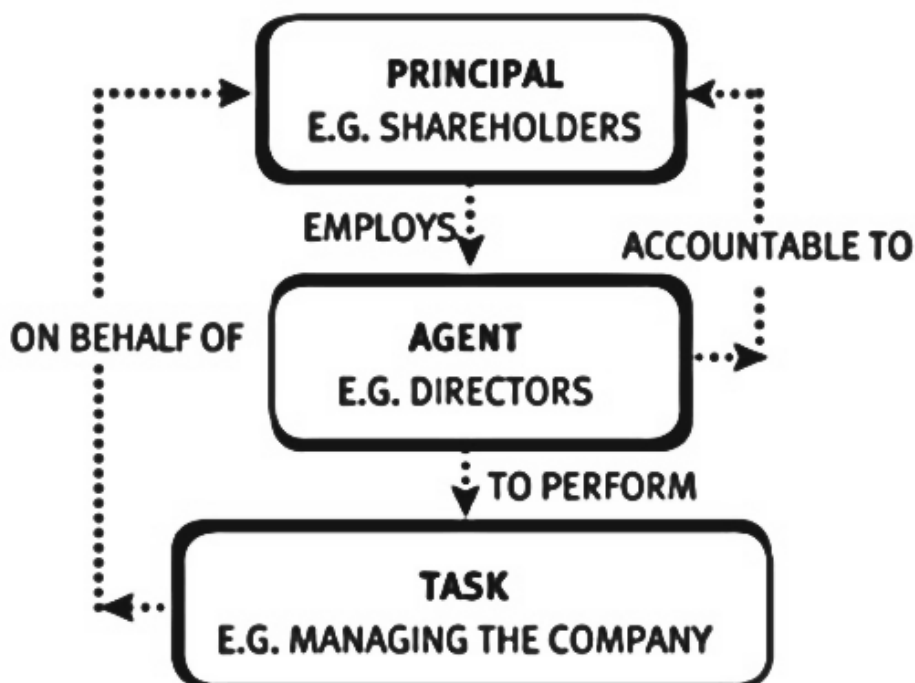


Figure 1. Agency Theory, ‘Separation between Ownership & Control’ (Kaplan Financial, 2012)

The business cannot be operated unless you study the agency theory or I would rather

say that without the concept of agency theory, maybe we don't see businesses run in the same way as we see today (Hillman & Dalziel, 2003). This further emphasized by Daily, Dalton and Cannella, (2003) in their review and stated that the widespread of agency theory in the business world is due to its simplicity which emphasized on the notion that generally humans are self-interested and unwilling to sacrifice their personal interests.

Around two and a half century ago, in 1776, Adam Smith regarded public entities in his article 'The wealth of nations' which was further cited by Jensen & Meckling (1976), as an inefficient form of economic institutions and predicted that they cannot survive because the managers of such organizations, being but the agents of the financiers, will not perform with the same vigilance as they would if the firm belonged to themselves.

Based on the prediction of Adam Smith, in 1976, Jensen & Meckling raised a point in their study that despite the prediction of Adam Smith, we witness today that the corporate form of organization has prevailed as an awesome social invention and is considered the engine of economic growth in today's world, but how? Agency theory gives the direction to think about this.

Professor Bengt Holmstrom, a noble prize winner as well, is one of the main theorists in the principal-agent literature. According to his study when ones privately taken actions effect the welfare of the other party in a risk sharing contract, the problem of the moral hazard arises especially when the actions are not fully observable and thus difficult to contract upon (Hölmstrom, 1979). This further illustrated by Waterman & Meier (1998) and provided two assumptions for principal-agent model (1) conflict of interest between principals and agents and (2) information asymmetry between the agents and the principals.

So, then there is a question that with all these above-mentioned problems associated with the agency theory, how the businesses are still making profits and growing and growing further?

Fama (1980), provided a viewpoint that agency theory should be viewed as a set of contracts among different parties, with each party motivated by its self-interest. He further studied in 1983 and defines the two types of contracts that are the core to any organization (a) contract that defines the nature of residual claims and (b) contracts that defines the role of its agents in the process of decision making (Fama & Jensen, 1983).

Jensen (1983) illustrated in his study that out of his mentioned two branches, the principal-agent branch takes a more mathematical and formal approach in which the emphasis was on designing a compensation model by the principal which motivates the agent to act in line with the principal's interests.

On the other hand, Stiglitz (1989), mentioned that there is that positive theory of agency that mainly focuses on the technology of monitoring and bonding i.e. the social and ethical ways of doing a business. He further emphasized that due to the information asymmetry and difference in the interests of the agent and the principal, the agent will not always behave at the ways that the principal would like him to.

Thus, several key points can be gathered from the above section that in every business because the owners i.e. the shareholders and the operational staff i.e. the management are different so there will always be a principal-agent relationship in which both parties will try to maximise their own interest and the best thing to do is to align those interests by making favourable contracts for the agents (that's not the part of discussion of this paper) and by maintaining check and balance through an independent authority i.e. the external auditor.

2.4 The External Auditor

An external auditor is a person who gives an independent opinion that whether the financial statements are prepared, in all material respects, in accordance with the applicable financial reporting framework and that the financial statements as a whole are free from material misstatement, whether due to fraud or error (IFAC, 2009).

Early years of U.S. auditing profession, from 1850 to the early 1900s auditors primarily were engaged to provide almost absolute assurance against fraud and intentional mismanagement but with the development and increasing trend in the auditing profession, the trend shifted from giving absolute assurance about fraudulent reporting to fairness in financial reporting (Epstein and Geiger, 1994).

Now a days, a phrase known as Big 4 audit firms is very common but before that it was Big 8 which due to some mergers and dissolutions reduced to now Big 4 especially after the requirements mentioned in Sarbanes-Oxley Act (WallStreetMojo, 2019).

Messier et al. (2014), also emphasised on the above mentioned facts that with the expansion of corporations and world economy, the role of auditors has increased as well and the recent trend in this regard suggests that the markets and the investors in general usually trust the financial statements which are audited by the Big 4 audit companies. Eshleman and Guo (2014), second the views of Messier et al. and DeAngelo (1981), by stating that Big 4 audit firms do maintain a high quality of audits and less accounting restatements have been issued once they have been published.

So, the auditor's duty and more importantly how public sees the perception of the auditor is very important for the business world and for that purpose, the independence is one of the main criteria because if the auditors are not independent then their reports can't be relied upon and hence, we have seen the scandals of Enron and WorldCom which not only hampered the image of audit profession but also reduced the investment and the whole financial markets collapsed due to that.

2.5 Ethical Paradigm in Audit

As per International Standards on Auditing, ISA 200, the auditor should follow relevant ethical requirements, especially that relates to his independence in doing financial statements audits (IFAC, 2009).

Now independence itself is a vast term and covers lots of things. Based on its diverse meaning, even in literature, there are various definitions of auditor independence. Though, the International Federation of Accountants divided independence into two

sub-categories: independence in mind and independence in appearance. Independence in mind is defined as “the state of mind that permits the expression of a conclusion without being affected by influences that compromise professional judgment, thereby allowing an individual to act with integrity and exercise objectivity and professional scepticism” (IFAC, 2012 p. 46).

On the other hand, independence in appearance is defined as “the avoidance of facts and circumstances that are so significant that a reasonable and informed third party would be likely to conclude, weighing all the specific facts and circumstances, that a firm’s, or a member of the audit team’s, integrity, objectivity or professional scepticism has been compromised” (IFAC, 2012 p. 46).

Furthermore, International Ethics Standards Board for Accountants’ (IESBA CODE) *Code of Ethics for Professional Accountants*, in part A, gives a conceptual framework for all the auditors to act upon. These fundamental principles by the IESBA Code are:

- a. Integrity;
- b. Objectivity;
- c. Professional competence and due care;
- d. Confidentiality;
- e. Professional behavior.

Based on the above-mentioned codes from IESBA, ICAEW revised code of ethics 2011 further illustrates each section as follows,

2.5.1 ICAEW defines fundamental principles of ethics as follows,

- a. Integrity; To be straightforward and honest in all professional and business relationships (ICAEW, 2011).
- b. Objectivity; To not allow bias, conflict of interest or undue influence of others to override professional or business judgements (ICAEW, 2011).
- c. Professional competence and due care; To maintain professional knowledge and skill at the level required to ensure that a client or employer receives competent professional services based on current developments in practice, legislation and

techniques and act diligently and in accordance with applicable technical and professional standards (ICAEW, 2011).

- d. Confidentiality; To respect the confidentiality of information acquired as a result of professional and business relationships and, therefore, not disclose any such information to third parties without proper and specific authority unless there is a legal or professional right or duty to disclose nor use the information for the personal advantage of the professional accountant or third parties (ICAEW, 2011).
- e. Professional behavior; To comply with relevant laws and regulations and avoid any action that discredits the profession (ICAEW, 2011).

In part B of the IESBA Code, the use of conceptual framework according to specific situations is illustrated. It further illustrates that all the audit engagements should be in the public interest and therefore, the auditor should be perceived as independent of the auditing entity. Illustrating independence, the IESBA Code describes independence which comprise both independence of mind and independence in appearance as explained above (IFAC, 2009).

Because the audit report is a public document so working independently safeguards the auditor's from giving an unbiased opinion about the company's financial statements. Independence further requires the auditor's ability to act with integrity, to be objective and to maintain an attitude of professional scepticism.

2.5.2 Threats and Safeguards approach



Figure 2. Potential Ethical Threats to Auditor Independence (Kaplan Financial, 2012)

Furthermore, the ICAEW revised code of ethics 2011 illustrates the potential threats that a professional accountant or auditor can face.

- a. Self-interest – the threat that a financial or other interest will inappropriately influence the professional accountant’s judgement or behavior;
- b. Self-review – the threat that a professional accountant will not appropriately evaluate the results of a previous judgement made or service performed, on which the accountant will rely when forming a judgement as part of providing a current service;
- c. Advocacy – the threat that a professional accountant will promote a client’s or employer’s position to the point that the professional accountant’s objectivity is compromised;
- d. Familiarity – the threat that due to a long or close relationship with a client or employer, a professional accountant will be too sympathetic to their interests or too accepting of their work; and
- e. Intimidation – the threat that a professional accountant will be deterred from acting objectively because of actual or perceived pressures.

The IESBA Code also gives examples of two types of safeguards in the work environment, some examples are, to train the staff of the possible threats to independence and how to cater them by pointing out the threats to the senior. Another way is audit partner rotation with separate reporting lines like different partners for audit and for other services. The review can be done by a separate or different audit partner as well.

However, these safeguards are not the only one and the IESBA Code states that it is not possible to rely solely on such safeguards and other measures should be adopted based on the circumstances accordingly. Furthermore, in answering to question that what sort of safeguards can be applied to threats to auditor independence, an examiner of ACCA answered that in an article on Tackling ‘Paper P7 questions on ethics’.

3 MEASURES & CONSEQUENCES OF AUDITOR INDEPENDENCE

3.1 Measures of Auditor Independence

There are many different ways in which a loss of audit independence may be measured. Some of these measures are discussed below.

3.1.1 Audit Fees

Audit fee in isolation do provide some points about auditor independence. An auditor charges the fees based on the number of hours the auditor spends at the client and it varies with the client size and how complex the structure is (Choi, Kim, Liu & Simunic, 2008). Higher audit fees from one client means that auditor might rely on one client more which can affect the auditor independence because to save its personal interest, auditors might not work independently and give the wrong opinion when actually financial statements are not giving true and fair view.

My purpose is to show the relationship of these factors in relation with non-audit services. Audit fees in that regard can also be linked with non-audit fees. The reason being that only audit fees will not be enough source of income for the auditors. To earn more, auditors can charge lower audit fees and higher non-audit fees i.e. the loss leader approach (Yu (Elli) Zhang, David Hay and Claus Holm, 2015). But the result can be loss of independence because auditors job is to give an independent opinion, but in that case the auditor might be working under client's influence or his decision may be influenced by the fees charged.

3.1.2 Provision of Non-Audit Services (NAS)

Out of the above-mentioned threats to auditor's independence, my focus area as well, is the provision of non-audit services to auditing clients. The reason for this study is that it directly hits all the threats to independence like self-interest, self-review, advocacy, familiarity, intimidation as mentioned by ICAEW code of ethics 2011.

Auditors do provide non-audit services like book-keeping services, tax services, payroll services etc. to its auditing clients and this topic has been discussed a lot and still under consideration as providing non-audit services to auditing clients may damage the auditor's independence. The reason is that audit is done once a year but non-audit services are for a full year and normally their size and income is much more than audit hence, there is an impression that to retain the clients, auditor may lose its independence while performing audit, and may give un-qualified opinion when the financial statements are not giving true and fair view (DeFond, Raghunandan and Subramanyam, 2002).

Considering the above issue, being a public policy, legislation in Europe got stricter recently. Now it includes a cap of 70% on the amount of fees for non-audit services from auditing clients. There is also a provision of non-audit services which auditors cannot provide to their clients like providing tax and tax compliance services etc as published by PWC in an article on 'Guidance on non-audit services and fees cap' in 2016.

Many studies have already investigated the effect the provision of non-audit services on auditor's independence. The purpose of my study is to add more evidence in this regard by including the effect of non-audit services on auditor independence in Finland.

Finland being a member of EU, it also follows the same rules as required by EU constitution and follow the same IAS and IFRS as by other EU countries. A green paper issued by EU in 2010 gives the updated audit policy to stabilise the financial system after the financial crisis of 2007-2009. According to this paper all limited liability companies are required to conduct the audit.

3.1.3 Auditor Tenure

Another variable to test the independence is the audit tenure that for how many years the auditor is providing auditing services to the client. The longer the auditor provides auditing services, the higher the chances are that auditor will lose its independence because it will be more familiar with the client system and might not work properly.

There has been lots of arguments for and against mandatory rotation of auditors and these arguments are set in different reports. Some says that mandatory auditor rotation provides a 'fresh look' because of familiarity with the systems of the company which might affect the objectivity because due to being familiar with the client auditors might not work with professional scepticism (DeAngelo 1981)

On the other hand, critiques of mandatory auditor rotation argues that it is not cost effective because with every change in the auditor, the new auditor has to spend more time in the start to get familiar with the systems of the company, Geiger and Raghunandan (2000) and due to that with continuous changing auditors will increase the audit cost and also it will be hectic for the management to provide similar information every time to the new auditor that's why it is always recommended to change, at least, the audit partner after 7 years as per IFAC, (2012) to remove any familiarity threat.

Another aspect of looking at independence is the relationship between audit tenure and non-audit services. In case of compromised auditors, when auditors provide non-audit services, they might want to keep the client and they are less likely to resign or be sacked by clients for refusing to compromise their principles, resulting in longer tenure for auditors. As mentioned by Simunic (1984), more independent auditors are more likely to be sacked by management due to their disputes. So higher non-audit fees can be associated with longer tenure in this regard. Though DeBerg, Kaplan and Pany (1991) and Barkess and Simnett (1994) didn't find any relationship between audit tenure and non-audit fees. Also, there is the argument that auditors providing non-audit services to auditing clients will try to retain their clients which can be observed with longer audit tenures.

So overall, audit tenure can be checked in isolation as well as by linking it with non-audit services to see the impact on auditor independence.

3.1.4 Auditor Opinion

Another variable that can be used to test the auditor independence is the opinion given by the auditors as more independent the auditor is, there are more chances of giving

modified opinion when there are discrepancies in the financial statements. The more dependent the auditor is, less likely that he will give modified opinion when the financial statements are not giving true and fair view. This can be linked with the non-audit fees as well. Some studies do find that there is negative relationship between non-audit fees and audit opinion which implies that when there is higher non-audit fees then there are lesser chances of giving modified opinion like found by Wines (1994), Sharma & Sidhu (2001) and Firth (2002).

This was explained by Sharma & Sidhu (2001) that auditors providing non-audit services to their auditing clients can help in managing and improving the clients accounting system which will result in more reliable financial reports. They also found that a qualified opinion based on going concern issue was very unlikely to be issued to clients with higher non-audit fees. So, they concluded that the auditors providing non-audit services do compromise their independence.

The same compromised independence was found by Firth (2002) who suggested that there is a positive relationship between high non-audit fees and clean audit reports. His arguments for the positive relationship were that either auditors are lacking independence or that there is a possibility that non-audit services remove any issues prior to audit and concluded that the possibility of loss of independence do exist when auditors provide non-audit services.

On the other hand, DeFond et al. (2002) found no relationship between non-audit fees and modification in audit reports based on going concern issues. Whereas Geiger and Rama (2003) found that there is a positive relationship between audit fee and modified opinions.

3.1.5 Audit Firm Size

Audit firm size is also one of the main factors in determining the independence of the auditor and the quality of service provided. Generally, it is perceived that auditors from Big 4 audit firms do provide higher quality than non-Big 4 firms as mentioned in previous researches by Dopuch and Simunic (1982), Becker, DeFond, Jiambalvo and Subramanyam (1998) and Francis, Maydew and Sparks (1999). The reason being that

they have more audit partners, more staff to cope with the different situations and more knowledge and skill level. Another aspect is that because of their size, they are in a better bargaining position hence there are lesser chances of loss of independence.

3.2 Discretionary Accruals & Earnings Management

As measures are discussed in the above section, to judge the consequences of auditor independence, following section will discuss one particular affect and that is the earnings management or window dressing and is related to my research question that how the auditor independence impairs the earnings management. To measure the earnings management, discretionary accruals is used.

There are two types of accounting, one is cash accounting and the other is accrual accounting. Cash based accounting means that cash is recorded when received or paid. Though this system is not commonly used and for accounting purposes, we use accrual-based accounting to prepare the financial statements and is required by International Accounting Standards (IAS) 1. In accrual-based accounting, matching concept is used. Matching concept means that revenues and profits are matched with the related expenses incurred in generating those revenues, FinancialAccountancy.org, (2015), and that is the base of accrual accounting which as per IAS 1, states that expenses and revenues should be recorded in the period to which they relate irrespective of when the actual cash has been received or paid, Investopedia. Accruals can be classified as discretionary accruals and non-discretionary accruals. As far as non-discretionary accruals are concerned, these accruals are based on the industry and firm specific circumstances. The other part is under the control of management and is known as discretionary accruals (Teoh, Welch & Wong, 1998). But because it relates to actual event being taking place in future i.e. receiving or paying cash, so it's a subjective thing hence there are chances of manipulation in that by the management to achieve the required results and that's where the term of earnings management or window dressing came into existence which means that management can manage the earnings of the company as required to achieve their personal goals, (Palepu, Healy and Bernard, 2003). That's how discretionary accruals can be used as a measure of earnings management which actually relates that how the auditor's independence affects the earnings management.

There is a very thin but very important line between earnings management and fraud and as explained by Rosner (2003) that earnings management is allowed by GAAP whereas fraudulent reporting is not allowed by GAAP. My point of concern will be the negative side of earnings management which is outside the scope of GAAP and is basically inclined towards fraudulent financial reporting.

Firm's performance is assessed by its financial statements produced at year end and these financial statements are the primary source of information for the investors (Lee and Masulis 2009). An important part of financial statements is the earnings as many performance measures are based on the earnings and also most of the strategic and investment decisions are based on the earnings (Degeorge, Patel & Zeckhauser, 1999). But because there are lots of judgement involved in earnings, so they are more susceptible to manipulation by the management to achieve the desired outcomes, Lin and Hwang (2010) and that manipulation is done because of information asymmetry between management and shareholders as explained in agency theory (Ghosh and Olsen, 2009).

Because of that information asymmetry between management and the shareholders, earnings management is one of the hot topics and researchers have found that there is a great tendency for management to overstate earnings as mentioned by Kinney, William R. Jr, and Roger D. Martin (1994). Later on, in 1997, Burgstahler and Dichev found that large number of firms report increase in earnings and unusually there were very less firms that decrease the earnings and Becker et al. (1998) focused on the use of discretionary accruals to inflate income.

On the other hand, Watts and Zimmerman (1980), argued that mostly larger firms tend to reduce their earnings. The same was found by DeFond and Park (1997) consistent with managers using discretionary accruals to smooth income. They found that managers tend to decrease discretionary accruals when current year's earnings are above expectations and vice versa.

The same goes for longer auditor tenure and higher earnings management and still getting un-modified audit report because in the longer run, auditors being used to the same client may not go deep allowing management for earnings management.

4 HYPOTHESIS DEVELOPMENT

There has been so much debate on auditor independence as the this topic was and has been under debate that, what should be the role of the auditor and in cases of company's insolvency, to what extent the responsibility can be laid on auditor when they have given the un-modified audit opinion. This debate was much high when the world faced the crisis of Enron and WorldCom in which the auditors was claimed to be responsible (as discussed above). and then we see the creation of Sarbanes's Oxley Act 2002 that establish new requirements for all U.S. public companies and public accounting firms.

Another aspect to check is that to what extent the auditors can provide non-audit services to their auditing clients and lot of work has been done already between the complexity of relationship between audit fees and non-audit fees as done by Yu (Elli) Zhang et al. (2015). In 2000, the Securities and Exchange Commission (SEC) revised auditors' independence rules which requires the auditor to disclose the type and amount of non-audit fees received form the auditing client SEC, 2000. Whereas as discussed above, Sarbanes's Oxley Act 2002 moved ahead and even put certain types of restrictions that what sort of services auditors can provide to their auditing client. The argument is based on the belief that auditors may reduce their audit fees to obtain non-audit work from their auditing client i.e. loss leader approach which may impact their independence because in providing non-audit services, they can be under lots of ethical threats to independence like familiarity threat, self-reviewing threat etc and may not go deep enough in their audit work and can give un-modified audit opinion when actually there can be irregularities (Chee Yeow Lim & Hun Tong Tan, 2007).

My study is based on the study done by Yu (Elli) Zhang, David Hay and Claus Holm (2015) study of non-audit services and auditor independence: Norwegian Evidence and they, in their study extended the approach used by Hay, Knechel and Li's (2006): Non-Audit Services and Auditor Independence: New Zealand Evidence. In their model, Yu (Elli) Zhang et al. (2015) used 4 hypotheses whereas 3 hypotheses were used by Hay et al. (2006). I will follow their pattern for hypothesis development and will mention that which hypothesis I am using and which one I am not using and what's the reason for that.

4.1 Hypothesis 1

Generally, in prior studies, researchers found a positive relationship between audit and non-audit fees which means that independence is not jeopardized as shown by Simunic (1984), Palmrose (1986), Beck, Frecka and I. Solomon (1988), Barkess and Simnett (1994), Ezzamel, D.R. Gwilliam and K.M. Holland (1996) and Firth (1997). On the contrary, Krishnan and Yu (2011) who extended the analysis by Whisenant, Sankaraguruswamy and Raghunandan (2003) had found an evidence of negative relationship between audit fees and non-audit fees which was consistent with above argument of negative relationship i.e. that auditor spends less hours because they already knows the client. Some though have found no evidence between audit fees and non-audit fees as shown by Abdel-Khalik (1990), O'Keefe, Simunic & Stein (1994) and Hay et al. (2006), the model which I have used for my regression analysis as well, so it will be interesting to see that what sort of results I will get.

So, form the above discussion, it can be seen that there is a mix response, but more studies find positive relationship between audit and non-audit fees as compared to studies which find no or negative relationship. So, there is still some uncertainty and further work should be done in this regard. Though, the above review of prior studies gives me a direction to come up with my first hypothesis and that is,

H1: There is a positive relationship between audit and non-audit fees.

4.2 Hypothesis 2

As explained above in section 3.2, earnings management, is one of the hot topics especially at year end when management is preparing the financial statements and it involves the choice of accounting principles which management can adopt, Kothari, Mizik and Roy Chowdhury (2012).

One variable to check that whether management has managed the earnings or not is through the use of discretionary accruals. The same variable can also be used to check the auditor independence because generally speaking it can be observed from two ways. One way is to see that if there is involvement of discretionary accruals, then

auditors should adopt auditing procedures accordingly at the planning stage to see that how the management has adopted the principles related to accruals like the useful life of asset etc. In this regard, it can be said that higher the discretionary accruals are, higher will be the auditor fees. This relationship was examined by Gul, Chen and Tsui (2003) and their findings showed a positive relationship between discretionary accruals and audit fees. Later on, Hoitash, Markelevich and Barragato (2007) also found a positive relationship between audit fees and two proxies used i.e. accruals quality and absolute value of performance adjusted discretionary accruals. This gives rise to my second hypothesis i.e.,

H2: There is a positive relationship between discretionary accruals and audit fees.

4.3 Hypothesis 3

The relationship between non-audit fees and discretionary accruals is also interesting to note, because higher non-audit services to the auditing client might let the auditor to keep his client and if there is such tendency, he might lose his independence and management with more bargaining power in this case might use more discretionary accruals for earnings management. This relationship was tested by Frankel, Johnson and Nelson (2002) who found a positive relationship between non-audit fees and absolute discretionary accruals and then by Ashbaugh, LaFond and Mayhew (2003) who reinvestigate the findings of Frankel et al. (2002) and examine the association between audit and non-audit fees with earnings management. Though Ashbaugh et al. (2003) found opposite results as that of Frankel et al. (2002) and found that there is no relationship between discretionary accruals and audit fees. Gul, Jaggi and Krishnan (2007) also investigated the relationship between non-audit fees and auditor independence and found a positive relationship between non-audit fees and discretionary accruals but they make use of the audit tenure as another variable as well. This gives rise to my third hypothesis i.e.,

H3: There is a positive relationship between discretionary accruals and non-audit fees.

5 DATA SELECTION

As explained above that I have worked on Finnish companies registered at Finnish stock exchange. For that matter, Oulu Business School had arranged a dataset, consisting of all the variables included in Financial statements from Thomson Reuters. Another data set consisting of values for audit fees and non-audit fees and the respected audit companies was available. I merged these two data sets according to year and company. The total observations in that dataset were 2550, starting from year 2001 to 2017 for over 150 Finnish companies. All the data available was of Finnish listed companies. From that dataset, I had used some direct data and for some variables I had to create a new column and did some calculations to come up with the required variable. The variables which I had used from the available data set are as follows,

Table 1. Variables gathered and Created

Data gathered directly	Variables created
- Inventory	- Natural log of Audit fees
- Accounts Receivable	- Natural log of Non-Audit fees
- Current Assets	- Total fees paid to auditors
- Total Assets	- Subsidiaries and its square root
- Current Liabilities	- Variable INVREC, explained in Ch.6
- Total Debt	- Variable ROA, explained in Ch.6
- Audit Fees	- Leverage, explained in Ch.6
- Non-Audit Fees	- Current Ratio, explained in Ch.6
- Earnings before Interest & Tax	- Tenure, a dummy variable having value as 0 or 1
	- Discretionary Accruals, explained in Ch.6
	- Total audit fees percentage and total non-audit fees percentage, explained in Ch.6

The above-mentioned variables will be used to test the hypotheses mentioned in chapter 4 through regression models mentioned in chapter 6. The results for 3 years i.e. 2014, 2015 and 2016 were gathered as data for 2017 was not enough. After streamlining the data, I checked for values which are '0'. For that matter, I checked around 58 companies which have no values for the required variables and individual financial statements were checked, and the figures were entered accordingly and all those companies with any missing variables were deleted. Initial sorting of data provided me with 456 observations for 152 companies for years 2014-2016 but once the missing variables companies were deleted, I left with 366 observations for 122

companies for year 2014-2016. That was my final number of observations and all of this sorting and finalizing of data was done on Microsoft excel.

Then I created certain variables which I want to use in my regression models as explained in table 1. There was no data available on number of subsidiaries and for that matter I used financial statements for all 122 companies and then its square root is taken to have the value for SQRTSUB. For variable INVREC, sum of inventory and accounts receivable is divided by total assets to get the desired results. For ROA, ratio of EBIT (earnings before interest and tax) to total assets is calculated. For leverage, ratio of total debt to total assets is calculated. For Current ratio, ratio of current assets to current liabilities is used. For Tenure a dummy variable is created as well. If the company has changed its auditor in 2014, then 1 is assigned to that and 0 to other 2 years and all the companies have been assigned a value in terms of 0 and 1 accordingly. The financial statements were checked for all the companies accordingly to see that in which year from 2013 to 2016 companies have changed the auditor and only 17 companies out of 122 total companies i.e. 13.93% have changed the auditors or on the other hand 86% have not change the auditors. Similarly, 4.64% out of total observations (i.e. 17/366) changed the auditor or on the other hand, 95% use the same auditor.

Lastly, one variable i.e. 'Discretionary Accruals' requires a completely new working and is done according to Jones Model, Jennifer J. Jones (1991). To calculate that, data for another year i.e. 2013 is used because in that model the lagged values should be used. To further support discretionary accruals, I also created two more variables which are total audit fees percentage (TNAF) and total non-audit fees percentage (TNAFP). These variables showed the percentage of total audit fees and total non-audit fees respectively out of the total fees paid to auditors.

That's how I have finalized my data set in which finally I have data for 122 companies for 3 years from 2014 to 2016 i.e. total of 366 observations.

6 RESEARCH DESIGN

This section consists of regression models to prove the above-mentioned hypothesis in section 4. The regression models used are the same as used by Yu (Elli) Zhang et al. (2015) and Hay et al. (2006) but there is a slight difference in certain variables because of limited data but the models are directed towards testing the relationship between the provision of non-audit services and auditor independence and how the auditor independence impairs the earnings management.

6.1 Model 1 to test the H1

To examine the first hypothesis, i.e. there is a positive relationship between audit and non-audit fees, I regress variable audit fees on the desired variable ‘non-audit fees’ along with a set of control variables and the model is tested for yearly basis.

$$\ln (AF) = \alpha + \beta_1 * \ln (NAF) + \beta_2 * \ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio \dots\dots\dots eq.1$$

First hypothesis will be tested with the above method, where,

- *Ln (AF)*: Natural log of audit fees;
- *Ln (NAF)*: Natural log of non-audit fees;
- *Ln (TA)*: Natural log of Total Assets;
- *ROA*: Ratio of EBIT to total assets (EBIT/Total Assets);
- *Loss*: 1 if ROA is less than ‘0’ and 0 otherwise.
- *Tenure*: 1 if the company’s change the auditor in study period, 0 otherwise.
- *INVREC*: Ratio of the sum of inventory and accounts receivable to total assets [(Inventory + Accounts Receivable)/Total assets];
- *SQRTSUB*: Square root of the number of subsidiaries;
- *Leverage*: Ratio of total debt to total assets (Total Debt/Total Assets);
- *Current ratio*: Ratio of current assets to current liabilities (Current Assets/Current Liabilities);

The reason for using natural log (Ln) of audit fees, non-audit fees total assets is to have more normal distribution of these variables which otherwise might be affected by the outliers. Total assets variable is used as it shows the size of the company and is important to control the regression results depending on the size of the company. Similarly, the variable of subsidiary is also a measure of size of the company. In the original model of Yu (Elli) Zhang et al. (2015) and Hay et al. (2006), they include two more dummy variables. First one was the type of audit firm i.e. either it's a 'big 4' or not and they assign '1' if the audit firm is a big 4 and '0' otherwise and the second one was 'opinion' which they assign '1' if a client received qualified opinion and '0' otherwise.

I personally want to add these variables as well especially the 'opinion' variable and I tried to look in individual financial statements of the companies to assign a value to them but for all the companies, the auditor was big 4 and all the opinions were unqualified so even including them in the regression model would be of no use so I skipped these variables.

I run the above-mentioned eq.1 again but with a change in position of dependent variable and independent variable. So, in eq.2 (mentioned below), the Ln (NAF) will be dependent variable and Ln (AF) will be the independent variable to see that is there any impact on the results or not.

$$\text{Ln (NAF)} = \alpha + \beta_1 * \text{Ln (AF)} + \beta_2 * \text{Ln (TA)} + \beta_3 * \text{ROA} + \beta_4 * \text{Loss} + \beta_5 * \text{Tenure} + \beta_6 * \text{INVREC} + \beta_7 * \text{SQRTSUB} + \beta_8 * \text{Leverage} + \beta_9 * \text{Current ratio} \dots \dots \dots \text{eq.2}$$

6.2 Discretionary Accruals to Test H2 & H3

In all the equations from eq.4 to eq.7, the base model is similar to that in eq.1 and all the variables are explained in model 1, variables description. Though the main variable which is included is 'Dis_Accruals' which is basically 'Discretionary Accruals' which is a measure of earnings management and is used to test that how auditor independence impairs the earnings management.

According to Jones model (1991), discretionary accruals are calculated by the following formula.

$$\Delta DA = \Delta NCWC - Dep = (\Delta CA - \Delta CL) - Dep \quad \dots\dots\dots \text{eq.3}$$

Where,

ΔDA : Change in Discretionary Accruals

$\Delta NCWC$: Change in Non-cash working Capital

Dep : Depreciation

ΔCA : Change in Current Assets

ΔCL : Change in Current Liabilities

As per Jones Model (1991), discretionary accruals are calculated as the change in non-cash working capital less total depreciation expense. Jones defined change in non-cash working capital as the change in current assets (without cash and short-term investments) less current liabilities.

The discretionary accruals values, as per eq.3 above, were calculated by using the Stata software. Once discretionary accruals were calculated, they were included in the main dataset and equation 4 to 7, mentioned below are processed accordingly in SAS software to do the regression analysis for model 2 and 3 respectively.

6.2.1 Model 2 to test H2

To test the hypothesis 2, the following model as shown in eq.4 is used, in which discretionary accruals as calculated by Jones Model (1991) is used as main independent variable and natural log of audit fee is used as dependent variable along with other control variables.

The reason being that discretionary accruals do affect the audit fees as explained before that more the discretionary accruals more work should be done, hence increase in audit fees. So, audit fee is dependent on the discretionary accruals.

$$\ln (AF) = \alpha + \beta_1 * Dis_Accruals + \beta_2 * \ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio \dots\dots\dots eq.4$$

Similar to eq.4, another test is done which uses percentage of audit fees out of total fees paid to auditor to compare the results which is shown in eq.5 below. The reason being that this percentage might give more useful information instead of taking audit fees in euros as a variable because taking audit fee will be one variable only but percentage of audit fee out of total fees paid to auditors means that a relation of three variables is used (audit fee, non-audit fee and total fees).

$$TAFP = \alpha + \beta_1 * Dis_Accruals + \beta_2 * \ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio \dots\dots\dots eq.5$$

6.2.2 Model 3 to test H3

To test hypothesis 3, I have used natural log of non-audit fees as independent variable and discretionary accruals is used as dependent variable because discretionary accruals are dependent on non-audit services as explained in hypothesis 3.

$$Dis_Accruals = \alpha + \beta_1 * \ln (NAF) + \beta_2 * \ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio \dots\dots\dots eq.6$$

Similar to eq.6, another test is done which uses percentage of non-audit fees out of total fees paid to auditor to compare the results which is shown in eq.7 below. The reason is same as given for eq.5 that instead of using one variable, non-audit fees in euros, effect of three variables (non-audit fees, audit fees and total fees paid to auditors) will be included and might give more useful information.

$$Dis_Accruals = \alpha + \beta_1 * TNAFP + \beta_2 * \ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio \dots\dots\dots eq.7$$

7 RESULTS

7.1 Descriptive Statistics

Table 2 i.e. 'Descriptive Statistics' is attached below. According to the table, the total number of observations are for 122 companies and for 3 years i.e. 2014-2016 showed separately. The main variables under consideration are, 'total audit fees', 'total non-audit fees' and 'discretionary accruals'. So, the mean audit fees have increased year by year starting from €558,554 in 2014 to €569,801 in 2015 and then to €715,101 in 2016 an overall increase of 28.02%. Whereas the mean total non-audit fees have reduced by 13.29% in three years under consideration starting from €278,164 in 2014, reduced to €243,658 in 2015 and further reduced to €241,179 in 2016. Other statistics like median of total audit fees has also increased from €165,000 in 2014 to €187,500 in 2015 to €200,000 in 2016 whereas median of total non-audit fees has also increased from €76,000 in 2014 to €85,000 in 2015 to 86,000 in 2016. The minimum audit fees in three years under consideration, 2014-2016 was €4,000, €5000 and €11,400 respectively. Whereas minimum total non-audit fees were '€0' in all the three years under consideration. Out of 366 observations i.e. 122 companies for 3 years, 92 observations have audit fees less than 50% of total audit fees i.e. 25% whereas remaining 75% observations have audit fees more than 50% out of total fees paid to auditors as shown in table 3.

According to Table 3 and 4, attached below i.e. 'Descriptive statistics of ratio of non-audit fees to total fees paid to auditors' and 'Descriptive statistics of ratio of audit fees to total fees paid to auditors' respectively, for each of the three years i.e. 2014-2016. It includes 122 observations for each year.

In Table 3, the mean of ratio of non-audit fees to total fees paid to auditors was almost same in 3 years starting from 31.3% in 2014 and reduced to 30.4% in 2016. The minimum ratio of non-audit fees to total fees paid was '0' for firms which are not getting any non-audit services and the maximum ratio of non-audit fees to total fees paid to auditors was as high as 96.9% in 2016 though it was 91.1% in 2014.

Similarly, in Table 4, the mean of ratio of audit fees to total audit fees paid to auditors

was increased in 2015 from 22.7% to 24% but in 2016, reduced again to 21.6%. The minimum ratio of audit fees to total fees paid was as low as 3.1% in 2016 which was 8.9% in 2014 but the maximum ratio of was as high as 100% in all the years for clients which are not getting any non-audit services.

Table 2. Descriptive statistics of all the variables

Variable	N	Year	Std Dev	Mean	Median	Minimum	Maximum
Total Audit Fees (€000)	122	2014	1,521.010	558.554	165.000	4.000	15,400.000
	122	2015	1,616.190	569.801	187.500	5.000	16,600.000
	122	2016	3,045.420	715.101	200.000	11.400	33,100.000
Total Non-Audit Fees (€000)	122	2014	532.112	278.164	76.000	0	3,700.000
	122	2015	501.224	243.658	85.000	0	3,800.000
	122	2016	489.253	241.179	86.000	0	3,400.000
Total Fees to Auditors (€000)	122	2014	1,963.740	839.508	290.000	4.000	19,100.000
	122	2015	1,884.850	817.689	315.000	27.000	18,400.000
	122	2016	3,391.780	958.754	315.000	13.000	36,500.000
SQRTSUB	121	2014	34.182	25.041	13.000	0	185.000
	121	2015	35.512	25.843	13.000	0	195.000
	121	2016	35.792	26.909	14.000	0	189.000
INVREC	122	2014	0.206	0.325	0.318	0	0.850
	122	2015	0.208	0.314	0.284	0	0.850
	122	2016	0.199	0.316	0.293	0	0.850
ROA	122	2014	0.124	0.041	0.052	(0.648)	0.310
	122	2015	0.136	0.041	0.057	(0.648)	0.310
	122	2016	0.133	0.048	0.059	(0.643)	0.310
Leverage	122	2014	0.208	0.290	0.266	0	1.122
	122	2015	0.181	0.271	0.252	0	1.122
	122	2016	0.194	0.272	0.255	0	1.122
Current Ratio	108	2014	1.165	1.617	1.388	0.276	7.318
	108	2015	1.284	1.704	1.413	0.276	7.318
	108	2016	1.059	1.642	1.410	0.276	6.274
TA	122	2014	4,431,351.4	1,755,837.5	245,250.0	7,560.0	34,424,000.0
	122	2015	4,535,056.4	1,814,591.8	276,065.5	5,336.0	35,361,000.0
	122	2016	5,564,156.0	2,035,186.5	260,451.0	7,848.0	39,200,000.0
Dis_Accruals	90	2014	0.0518	0.0538	0.0385	0.0006	0.2685
	88	2015	0.0521	0.0546	0.0393	0.0006	0.2618
	83	2016	0.0688	0.0656	0.0369	0.0006	0.2685

SQRTSUB: Square root of number of subsidiaries; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; ROA: Ratio of EBIT to total assets; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities; TA: Total Assets; Dis_Accruals: Calculated by Jones Model 1991.

Table 3. Descriptive statistics of ratio of non-audit fees to total fees paid to auditor

	2014 NAF/(AF+NAF)	2015 NAF/(AF+NAF)	2016 NAF/(AF+NAF)
N	122	122	122
Mean	0.313	0.300	0.304
Median	0.333	0.296	0.286
Std. Dev.	0.227	0.237	0.217
Minimum	0.000	0.000	0.000
Maximum	0.911	0.950	0.969

N: Number of observations; NAF: Non-Audit fees; AF: Audit Fees.

Table 4. Descriptive statistics of ratio of audit fees to total fees paid to auditor

	2014 AF/(AF+NAF)	2015 AF/(AF+NAF)	2016 AF/(AF+NAF)
N	122	122	122
Mean	0.227	0.240	0.216
Median	0.681	0.693	0.689
Std. Dev.	0.663	0.690	0.698
Minimum	0.089	0.050	0.031
Maximum	1.000	1.000	1.000

N: Number of observations; NAF: Non-Audit fees; AF: Audit Fees.

7.2 Pearson Correlation

Table 5 below shows the Pearson Correlation Coefficients for all the variables I have used in the regression models. The main dependent variables in the regression models are natural log of audit fees, Ln (AF), natural log of non-audit fees, Ln (NAF) and discretionary accruals, Dis_Accruals. In terms of correlations between different variables, table 5 shows the coefficients at the top and their respective p-values at the bottom of each variable.

From the table it can be seen that there is a strong positive relation between audit fees and non-audit fees at 72.8% with 1% significance level. There is also strong positive relationship between audit fees and natural log of total assets, Ln (ta), at 77.4% and significant at 1% suggesting that companies with more assets are bigger in size and because of larger size, auditor tends to spend more time, hence higher audit fees is understood. Whereas the relationship between audit fees and tenure is weak negative relationship at 3.8% with significance level at neither of 1%, 5% or 10%. This could be because that with the new client auditor tends to spend more time so they charge

higher audit fees and with the increasing number of years, the auditor knows the client more and they tend to save their time hence lower audit fees will be charged. The relationship between audit fees and subsidiaries is also strongly positive at 54.2% and significant at 1% level which makes sense because audit fees should be more with more subsidiaries. Though there is a weak negative relationship between audit fees and leverage and audit fees and current ratio at 10.7% and 9.7% respectively. Though with discretionary accruals, the results are bit surprising as there is negative relationship between audit fees and discretionary accruals though it is significant at 1% level.

Similarly, for non-audit fees, there is a strong positive relationship with audit fees as explained above. There is also a strong positive relationship between non-audit fees and total assets at 73.3% and significant at 1% level. Though there is a weak negative relationship with tenure at 13.5% and significant at 5% level. There is also a positive relationship between non-audit fees and subsidiaries at 52% and significant at 1% suggesting that with more subsidiaries, more non-audit services are performed, hence higher non-audit fees. Surprisingly again the relationship between non-audit fees and discretionary accruals is negative as well at 13.5% and significant at 5%.

As explained above there is a negative relationship between auditor tenure and audit fees and non-audit fees. Though there is a positive relationship between auditor tenure and discretionary accruals at 3.57%.

There is negative relationship between discretionary accruals and audit fees, as well as, non-audit fees at 16.1% and 13.5 % respectively as explained above.

But all the above relationships are in isolation and I will be interested to see the results by adding some control variables as well in the regression model below.

Table 5. Pearson correlation coefficient for variables used in the model

	Ln (AF)	Ln (NAF)	Ln (TA)	Loss	Tenure	ROA	INVREC	SQRTSUB	Leverage	Current ratio	Dis_Accruals
Ln (AF)	1	0.72808 <.0001	0.77399 <.0001	-0.15841 0.0024	-0.03857 0.4619	0.16847 0.0012	-0.0048 0.927	0.54227 <.0001	-0.10729 0.0402	-0.09691 0.0815	-0.16195 0.0088
Ln (NAF)	0.72808 <.0001	1	0.733 <.0001	-0.17531 0.002	-0.13593 0.017	0.14433 0.0112	-0.05787 0.3114	0.5198 <.0001	-0.05509 0.3352	-0.09411 0.1162	-0.13547 0.0423
Ln (TA)	0.77399 <.0001	0.733 <.0001	1	-0.29319 <.0001	-0.09378 0.0731	0.26178 <.0001	-0.20246 <.0001	0.59476 <.0001	-0.08298 0.113	-0.12256 0.0274	-0.29828 <.0001
Loss	-0.15841 0.0024	-0.17531 0.002	-0.29319 <.0001	1	0.04254 0.4171	-0.66354 <.0001	-0.00025 0.9962	-0.09908 0.0607	0.2151 <.0001	0.11001 0.0479	0.20904 0.0007
Tenure	-0.03857 0.4619	-0.13593 0.017	-0.09378 0.0731	0.04254 0.4171	1	-0.10241 0.0503	-0.03214 0.5399	-0.06012 0.2559	-0.00489 0.9257	0.00739 0.8946	0.03574 0.5655
ROA	0.16847 0.0012	0.14433 0.0112	0.26178 <.0001	-0.66354 <.0001	-0.10241 0.0503	1	0.17042 0.0011	0.11261 0.0329	-0.31315 <.0001	-0.17544 0.0015	-0.09166 0.1397
INVREC	-0.0048 0.927	-0.05787 0.3114	-0.20246 <.0001	-0.00025 0.9962	-0.03214 0.5399	0.17042 0.0011	1	-0.00924 0.8614	-0.16192 0.0019	-0.09365 0.0924	0.07504 0.227
SQRTSUB	0.54227 <.0001	0.5198 <.0001	0.59476 <.0001	-0.09908 0.0607	-0.06012 0.2559	0.11261 0.0329	-0.00924 0.8614	1	-0.04189 0.4288	-0.02859 0.6121	-0.20704 0.0009
Leverage	-0.10729 0.0402	-0.05509 0.3352	-0.08298 0.113	0.2151 <.0001	-0.00489 0.9257	-0.31315 <.0001	-0.16192 0.0019	-0.04189 0.4288	1	-0.26052 <.0001	0.07957 0.2001
Current ratio	-0.09691 0.0815	-0.09411 0.1162	-0.12256 0.0274	0.11001 0.0479	0.00739 0.8946	-0.17544 0.0015	-0.09365 0.0924	-0.02859 0.6121	-0.26052 <.0001	1	-0.11027 0.077
Dis_Accruals	-0.16195 0.0088	-0.13547 0.0423	-0.29828 <.0001	0.20904 0.0007	0.03574 0.5655	-0.09166 0.1397	0.07504 0.227	-0.20704 0.0009	0.07957 0.2001	-0.11027 0.077	1

Ln (AF): Natural log of audit fees; Ln (NAF): Natural log of non-audit fees; Ln (TA): Natural log of total assets; Loss: 1, if company's ROA is less than 0, otherwise 0.

Tenure: 1, if auditor changes in a year, 0 otherwise; ROA: Ratio of EBIT to total assets; INVREC: Ratio of the sum of inventory and accounts receivable to total assets;

SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities; Dis_Accruals:

Calculated by Jones model 1991.

7.3 H1: Audit fees and Non-Audit fees

Table 6 shows the results of the regression model tested to investigate the relationship between audit fees and non-audit fees with audit fees as the dependent variable and non-audit fees as independent variable. The mean co-efficient for 3 years for natural log of non-audit fees is 0.185 and the p-value is 5.79% which is significant at 10% level. Initially in one to one correlation, as explained above, the positive relationship was much stronger and was significant at 1% level, but with other control variables, the relationship has reduced but still positive and significant. The adjusted R² is at 74.13% suggesting that the regression model is also strong. So, my results do support the hypothesis 1 that there is a positive relationship between audit fees and non-audit fees. My results are consistent with Simunic (1984), Palmrose (1986), Beck et al. (1988), Barkess and Simnett (1994), Ezzamel et al. (1996), Firth (1997) and is also consistent with the results by Yu (Elli) Zhang et al. (2015) and Hay et al. (2006), the base of my model. Though the variables like loss, tenure, ROA etc. are not statistically significant suggesting their lesser effect on the model as compared to the other variables

Table 6. Yearly Regression model with Audit Fees as dependent variable

$Ln (AF) = \alpha + \beta_1 * Ln (NAF) + \beta_2 * Ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current ratio$		
Independent Variables	Co-Efficient	P-Values
Intercept	-1.7097119***	0.0073
Ln (NAF)	0.1852842*	0.0579
Ln (TA)	0.5065344***	0.003
ROA	-1.1539372	0.2156
Loss	0.0749234	0.7041
Tenure	-0.0102028	0.9696
INVREC	0.2763992**	0.0157
SQRTSUB	0.005024	0.8303
Leverage	-0.6044752**	0.0171
Current Ratio	-0.0415517	0.1306
Adj. R ²	74.13%	

Ln (AF): Natural log of audit fees; Ln (NAF): Natural log of non-audit fees; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level shown with * respectively.

On the other hand, I tested the same model with change in the dependent variable and this time I ran the regression model with natural log of non-audit fees as the dependent variable and natural log of audit fees as independent variable. As shown in table 7, the relationship is same as in table 6 with the mean co-efficient of natural log of audit fees for three years of 0.378 but this time the results are significant at 5% level and the adjusted R² this time is 60.81% still suggesting a strong model.

Table 7. Yearly Regression model with Non-Audit Fees as dependent variable

$$Ln (NAF) = \alpha + \beta_1 * Ln (AF) + \beta_2 * Ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	-1.8300812**	0.043
Ln (AF)	0.378275**	0.0392
Ln (TA)	0.3572053**	0.0118
ROA	-0.4959865	0.549
Loss	-0.0958062	0.5224
Tenure	-0.275371	0.2857
INVREC	0.0095852	0.7384
SQRTSUB	0.0400547	0.1888
Leverage	-0.4507456	0.1998
Current Ratio	-0.0026954	0.9753
Adj. R ²	60.81%	

Ln (NAF): Natural log of non-audit fees; Ln (AF): Natural log of audit fees; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level shown with * respectively.

7.4 H2: Audit fees and Discretionary Accruals

In table 5 attached above, the correlation between natural log of audit fees and discretionary accruals was negative and was significant at 1% suggesting that there is strong negative relationship but as mentioned before, those results are in isolation. When put in a model, as shown in table 8 attached below, the results are different. Now the relation between natural log of audit fees and discretionary accruals is positive with mean co-efficient of 1.742 but the p-value is 23.99% which is not significant at any of 1%, 5% or 10% significance level. So, there is no significant association between audit fees and discretionary accruals. The adjusted R² is 63.62% suggesting that the overall model is strong. Hence, I can say that the results are

statistically insignificant and the hypothesis that there is a positive relationship between audit fees and discretionary accruals cannot be accepted. Based on insignificant results, my results do not match with the results by Gul et al. (2003) and Hoitash et al. (2007) who found a positive relationship.

Table 8. Yearly Regression model with Audit Fees as dependent variable and Discretionary Accruals as independent variable

$$Ln(AF) = \alpha + \beta_1 * Dis_Accruals + \beta_2 * Ln(TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	-2.4656072**	0.0101
Dis_Accruals	1.7427971	0.2399
Ln (TA)	0.627735***	0.0003
ROA	-1.6683209	0.1645
Loss	-0.0702254	0.8039
Tenure	-0.1765499	0.6516
INVREC	0.3047346	0.1008
SQRTSUB	-0.000059539	0.9977
Leverage	-0.8025613*	0.0782
Current Ratio	0.0153723	0.5841
Adj. R ²	63.62%	

Ln (AF): Natural log of audit fees; Dis_Accruals: Discretionary Accruals; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level shown with * respectively.

Results of eq.4 are shown in table 9 below and is run to see that how the results differ if total audit fees percentage (TAFP) is used instead of total audit fee in euros.

When eq.5 is run, I found a negative relationship between total audit fees percentage (TAFP) and discretionary accruals as the mean co-efficient is -0.168 but the p-value is quite high at 61.38% so the results cannot be attested at any of 1%, 5 % or 10% significance level, suggesting insignificance statistical results as shown in table 9. So, the hypothesis cannot be proved even with the use of total audit fees percentage instead of total audit fees in euros as mentioned above in the results of eq.3. The adjusted R² is very low as well, even less than 1% so the model overall is very weak as compared to the model when audit fees in euros was used suggesting that the better variable in that case is audit fees in euros instead of audit fees percentage out of total fees paid to auditors.

Table 9. Yearly Regression model with TAFP as dependent variable and Discretionary Accruals as independent variable

$$TAFP = \alpha + \beta_1 * Dis_Accruals + \beta_2 * Ln(TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	0.5341196 ***	0.0001
Dis_Accruals	-0.1684719	0.6138
Ln (TA)	0.0112211	0.1204
ROA	-0.3437998*	0.0662
Loss	-0.0793993*	0.0596
Tenure	0.0401702	0.6235
INVREC	-0.0353302	0.6882
SQRTSUB	-0.0012624	0.7739
Leverage	0.0102488	0.9217
Current Ratio	0.0312751	0.1076
Adj. R ²	0.74%	

TAFP: Total audit fee percentage; Dis_Accruals: Discretionary Accruals; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level shown with * respectively.

7.5 H3: Non-Audit fees and Discretionary Accruals

Again, referring to table 5 attached above, the correlation between natural log of non-audit fees and discretionary accruals was negative and was significant at 5% suggesting that there is strong negative relationship. But these results are in isolation and when put in a model, as shown in table 10 attached below, the results are totally different. Now the relation between natural log of non-audit fees and discretionary accruals is positive with mean co-efficient of 0.005 and the p-value is 11.68% suggesting that the results are statistically insignificant so the hypothesis that there is a positive relationship between non-audit fees and discretionary accruals cannot be accepted. The adjusted R² for this model is 12.7% which is quite weak.

I tested the same hypothesis 3 but I changed independent variable of natural log of non-audit fee with total non-audit fees percentage (TNAFP) to see the impact as shown in Table 11 below, suggesting that there is a positive relationship between discretionary accruals and total non-audit fees percentage but the results are statistically insignificant as the p-value is quite high at 52.4 % so, the hypothesis cannot be accepted at any of 1%, 5% or 10% significance level.

Table 10. Yearly Regression model with Discretionary Accruals as dependent variable and Non-Audit Fees as independent variable

$$Dis_Accruals = \alpha + \beta_1 * Ln (NAF) + \beta_2 * Ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	0.1698651	0.1257
TNAFP	0.0051142	0.1162
Ln (TA)	-0.0105427	0.1351
ROA	0.0224224	0.7247
Loss	0.0339782**	0.0188
Tenure	0.0209226	0.2401
INVREC	0.0224026	0.5154
SQRTSUB	-0.0014508	0.4098
Leverage	0.0250365**	0.0494
Current Ratio	-0.0074934	0.3505
Adj. R ²	12.7%	

Dis_Accruals: Calculated by Jones Model 1991; Ln (NAF): Natural log of non-audit fee; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significant level respectively.

Table 11. Yearly Regression model with Discretionary Accruals as dependent variable and TNAFP as independent variable

$$Dis_Accruals = \alpha + \beta_1 * TNAFP + \beta_2 * Ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	0.1422592*	0.0946
TNAFP	0.0117315	0.524
Ln (TA)	-0.007361	0.1152
ROA	0.0596756	0.1149
Loss	0.0362493*	0.0858
Tenure	0.0026126	0.9387
INVREC	0.0205916	0.5627
SQRTSUB	-0.000965892	0.5322
Leverage	0.0275302*	0.0715
Current Ratio	-0.0063851	0.3237
Adj. R ²	12.08%	

Dis_Accruals: Calculated by Jones Model 1991; TNAFP: Total non-audit fees percentage to total fees paid to auditors, Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significant level shown with * respectively.

7.6 Additional Tests

All the above calculations are on yearly basis which means that the regression models were run at the backend per year and then the mean co-efficient and p-values for three years were mentioned in the results. In this additional test section, I will run the same regression models but as a pool of 366 observations to see that what's the effect on the results.

7.6.1 H1: Audit fees and Non-Audit fees

Table 6 showed the results of the yearly regression model to investigate the relationship between audit fees and non-audit fees whereas Table 12, shows the results of pooled regression model to investigate the same relationship. In pooled regression, the mean co-efficient of natural log of non-audit fees is 0.193 and the p-value is less than 1% so the positive relationship in pooled regression model is much stronger and significant at 1% level. So, even in pooled regression the results do support the hypothesis 1 that there is a positive relationship between audit fees and non-audit fees.

Table 12. Pooled Regression model with Audit Fees as dependent variable

$$\ln(AF) = \alpha + \beta_1 * \ln(NAF) + \beta_2 * \ln(TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	-1.71839***	<.0001
Ln (NAF)	0.19385***	<.0001
Ln (TA)	0.50352***	<.0001
ROA	-1.22378**	0.0301
Loss	0.10134	0.5024
Tenure	0.26725	0.1754
INVREC	0.27056	0.28
SQRTSUB	0.00222	0.9078
Leverage	-0.57511**	0.0358
Current Ratio	-0.03439	0.423
Adj. R ²	74.13%	

Ln (AF): Natural log of audit fees; Ln (NAF): Natural log of non-audit fees; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level respectively.

The same model is run again in Table 13 as was in Table 7 with natural log of non-audit fees as dependent variable and natural log of audit fees as independent variable but this time it is a pooled regression model instead of yearly model and the results are same as above with mean co-efficient of 0.396 and the p-value again less than 1%. So, the results suggest a significant positive relationship between non-audit fees and audit fees at 1% level. Hence, with pool regression model, both of the models suggested that there is a positive relationship between audit and non-audit fees supporting my first hypothesis.

Table 13. Pooled Regression model with Non-Audit Fees as dependent variable

$$Ln(NAF) = \alpha + \beta_1 * Ln(AF) + \beta_2 * Ln(TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	-1.87177***	0.0028
Ln (AF)	0.39605***	<.0001
Ln (TA)	0.35456***	<.0001
ROA	-0.79266	0.3274
Loss	-0.10387	0.6306
Tenure	-0.47311*	0.093
INVREC	0.02111	0.953
SQRTSUB	0.03811	0.1629
Leverage	-0.46341	0.238
Current Ratio	-0.00031465	0.9959
Adj. R ²	60.81%	

Ln (NAF): Natural log of non-audit fees; Ln (AF): Natural log of audit fees; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level respectively.

7.6.2 H2: Audit fees and Discretionary Accruals

In table 14 attached below, the results are for pooled regression model and the results are significant at 5% level with a positive relationship between natural log of audit fees and discretionary accruals. The co-efficient is 1.955 and the p-value is 3.69%. The results in yearly regression model for hypothesis 2 as shown in table 8 suggested that the hypothesis cannot be accepted due to insignificant results whereas in pool regression model, as shown in table 14, the hypothesis can be accepted which states that there is a positive relationship between audit fees and discretionary accruals.

Table 14. Pooled Regression model with Audit Fees as dependent variable and Discretionary Accruals as independent variable

$$Ln(AF) = \alpha + \beta_1 * Dis_Accruals + \beta_2 * Ln(TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	-2.52053***	<.0001
Dis_Accruals	1.95523**	0.0369
Ln (TA)	0.62776***	<.0001
ROA	-1.5596**	0.0193
Loss	-0.03838	0.8382
Tenure	0.1006	0.6543
INVREC	0.42623	0.1456
SQRTSUB	-0.00578	0.786
Leverage	-0.70378**	0.047
Current Ratio	0.01411	0.7847
Adj. R ²	63.62%	
F-Value	49.58	

Ln (AF): Natural log of audit fees; Dis_Accruals: Discretionary Accruals; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level respectively.

Another model similar to one shown in table 9 is run in which the dependent variable used is total audit fee percentage (TAFP) instead of natural log of audit fee. The results suggest that the adjusted R² is only 0.74% suggesting very weak model. Also, the p-value was too high at 54.7% showing statistically insignificant results. Overall with the new variable of total audit fees percentage is not the right variable. The calculations for this are not shown here though.

7.6.3 H3: Non-Audit fees and Discretionary Accruals

In table 15, attached below, the mean co-efficient is 0.0049 suggesting a positive relationship between non-audit fees and discretionary accruals but the p-value is 20% suggesting that the results are not significant at either of 1%, 5% or 10% significance level. So, the results are consistent with the results of yearly regression model suggesting that the results are insignificant so the hypothesis cannot be accepted.

Table 15. Pooled Regression model with Discretionary Accruals as dependent variable and Non-Audit Fee as independent variable

$$Dis_Accruals = \alpha + \beta_1 * Ln (NAF) + \beta_2 * Ln (TA) + \beta_3 * ROA + \beta_4 * Loss + \beta_5 * Tenure + \beta_6 * INVREC + \beta_7 * SQRTSUB + \beta_8 * Leverage + \beta_9 * Current\ ratio$$

Independent Variables	Co-Efficient	P-Values
Intercept	0.1654***	<.0001
Dis_Accruals	0.00498	0.2
Ln (TA)	-0.01044***	0.0033
ROA	0.06251	0.2744
Loss	0.04416***	0.0024
Tenure	0.01651	0.3413
INVREC	0.0215	0.3324
SQRTSUB	-0.00134	0.3991
Leverage	0.01737	0.5058
Current Ratio	-0.00681	0.1234
Adj. R ²	12.7%	

Ln (AF): Natural log of audit fees; Dis_Accruals: Discretionary Accruals; Ln (TA): Natural log of total assets; ROA: Ratio of EBIT to total assets; Loss: 1, if company's ROA is less than 0, otherwise 0. Tenure: 1, if auditor changes in a year, 0 otherwise; INVREC: Ratio of the sum of inventory and accounts receivable to total assets; SQRTSUB: Square root of the number of subsidiaries; Leverage: Ratio of total debt to total assets; Current ratio: Ratio of current assets to current liabilities. 1%***, 5%** and 10%* significance level respectively.

Another model similar to one in Table 11 to show the pooled regression results. The results are similar to that shown in Table 11 suggesting that the hypothesis cannot be accepted when total non-audit fee percentage is used instead of natural log of non-audit fee as independent variable because the results are statistically insignificant.

8 CONCLUSION

In this study, I have tested the auditor independence when they provide non-audit services. To test the independence, different relationships have been tested in three hypotheses mentioned in chapter 4.

The first hypothesis suggested that there is a positive relationship between audit and non-audit fees and the results suggested that there is a strong positive relationship between audit and non-audit fees. Non-audit fees is used as a measure to judge the independence because general perception is that when auditors provide non-audit service to the auditing client, they become much more dependent on the client and to make the client happy the auditor may lose their independence, self-interest threat, explained above. Also, provision of non-audit services may make the auditor think that they have done that work and may not go deep, a self-review threat. So for that relationship, my study suggest that there is a positive relationship between audit and non-audit fees both in yearly regression model and pooled regression model as well suggesting that the independence is not jeopardized because a strong positive relationship means that audit fees and non-audit fees both go up or down together and it can happen when the auditors go deep because more audit fees means that auditors have spent more hours and spending more hours means that they will go deep and in that way they can safeguard their independence.

The second hypothesis suggested that there is a positive relationship between audit fees and discretionary accruals. The reason for this hypothesis was that with discretionary accruals, auditors should spend more time because it's a subjective thing and is upon the discretion of the management and is quite difficult to find that is there any deliberate manipulation in the accounts or not. When auditors spend more time to trace the discretionary accruals, they will charge higher fees. For that purpose, two different variables for audit fees were used, one is natural log of audit fees and the other one as total audit fees percentage. My yearly results for both of these variables as dependent variable suggest that the results are insignificant but when the same models were used as a pooled regression model, I do find a strong positive relationship between audit fees and discretionary accruals when natural log of audit fees is used as dependent variable but the results are insignificant when total audit fees percentage is

used as dependent variable. The pooled regression results with natural log of audit fees do support the hypothesis 2 but all other related tests for hypothesis 2 were not accepted. So only pooled regression results with natural log of audit fees suggest that with more discretionary accruals, auditors tend to spend more time as well, hence maintaining their independence. My results are different from the results found by Gul, et al. (2003) and Hoitash et al. (2007) who find positive relationship between audit fees and discretionary accruals.

My third and the last hypothesis was a positive relationship between non-audit fees and discretionary accruals. For that purpose, I used two different variables for non-audit fees, one is natural log of non-audit fees and the other one is total non-audit fee percentage. The reason for this hypothesis was to see that provision of non-audit services may make the auditor dependent on a client and to keep the client the auditor may lose its independence which also gives room to management to manipulate discretionary accruals and still got undetected by the auditors. So more non-audit fees in this matter means more discretionary accruals. My yearly regression results suggest that the results are statistically insignificant no matter which variable is used for non-audit fees and so are the results for pooled regression model which also showed insignificant results suggesting that more work and change of variables is needed to move further to study this relationship between non-audit fees and discretionary accruals. These results are not consistent either with those found by Frankel et al. (2002) or Gul et al. (2007) who found a positive relationship. The results are not consistent with those found by Ashbaugh et al. (2003) either who found that there is no relationship between two variables.

Some of the results in my study are consistent with prior studies. Though when I started this thesis, I do believe that the auditors do lose their independence when they provide non-audit services, but results showed that it's not correct and if proper safeguards are in place then those threats to independence can be neutralized. So, my results do not prove that provision of non-audit services actually effect the auditor independence.

I do also believe in the start that earnings management is only possible if auditors are lacking independence though my results are insignificant overall suggesting that a

different approach may be more viable to study that relationship of earnings management and how it is affected by the auditor independence.

Though there are limitations in my study as well. First of all, the data was limited to only public companies and I found that in Finland all public companies do get un-modified audit reports which in itself is a bit surprising given the found results because most of the results regarding earnings management are insignificant so this variable can be of great help to judge the relationship in a better way but still every single company getting an un-modified audit report is a bit surprising though. Because, while going through the financial statements, I came across many companies who went closed within the given time frame, still they get an un-modified audit report when their report should be modified with going concern paragraph suggesting that may be the audit was not done as efficiently as it should be or the auditors didn't judge the upcoming closing down when they should be. Also, the data on dummy variables for tenure was very limited as only 17 companies out of 122 change the auditor.

Further research should be done to investigate other possible methods to find the results as having large portion of non-audit fees still raise questions over the independence and these questions needs to be answered.

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